

APPENDIX H

Transportation Analysis

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California State University Monterey Bay 2020 Master Plan Draft Transportation Analysis

Prepared for
**California State University, Monterey Bay and
Dudek**

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Table of Contents

EXECUTIVE SUMMARY	I
Project Description.....	i
CEQA Impacts and Mitigation Measures.....	iv
Operations Analysis Results.....	vi
1. INTRODUCTION AND PROJECT DESCRIPTION	1
Purpose.....	1
Project Description.....	6
Recent Changes to CEQA Transportation Analysis	13
SB 743 VMT Assessment Methods Decisions.....	13
Operations Analysis Study Area and Scenarios (For Information Purposes Only).....	18
Report Organization	22
EXISTING CONDITIONS AND RELEVANT PLANS	24
2. EXISTING CONDITIONS.....	25
Existing Campus Parking and Transportation Demand Management	25
Existing Street System.....	29
Existing Truck Routes	31
Existing Pedestrian Facilities.....	32
Existing Bicycle Facilities	34
Existing Transit Service	37
Existing Intersection Operations.....	42
Existing Freeway Segment Operations.....	50
Existing Freeway Ramp Operations	51
Field Observations.....	52
3. SUMMARY OF RELEVANT REGIONAL CIRCULATION AND TRANSPORTATION PLANS.....	56
AMBAG Regional Transportation Plan	56
Seaside General Plan	57
Marina General Plan	60
Monterey County General Plan.....	61

	TAMC Congestion Mangement Program	63
	2018 Monterey County Active Transportation Plan.....	63
	Fort Ord Reuse Authority Act.....	64
	Monterey-Salinas Transit Designing for Transit.....	65
	CEQA SIGNIFICANCE CRITERIA, VMT ANALYSIS METHODS, IMPACTS AND MITIGATION.....	66
4.	SIGNIFICANCE CRITERIA AND VMT ANALYSIS METHODS.....	67
	Significance Criteria	67
	Traffic Forecasting Methods.....	71
5.	CEQA SIGNIFICANT IMPACTS AND MITIGATION.....	77
	Plan Conflicts Analysis	77
	SB 743 VMT Analysis	85
	Hazards Evaluation Analysis	87
	Emergency Access Analysis	87
	Construction Impact Analysis	87
	PARKING MANAGEMENT AND TDM.....	89
6.	PARKING MANAGEMENT AND TDM.....	90
	Main Campus Parking Evaluation.....	90
	Main Campus Inbound AM peak Hour Mode Share	96
	Project PDFs to reduce Project Vehicle Trips and VMT.....	98
	OPERATIONS ANALYSIS (FOR INFORMATION PURPOSES ONLY)	102
7.	OPERATIONS ANALYSIS AND PROJECT TRAFFIC FORECASTING METHODS (FOR INFORMATION PURPOSES ONLY)	103
	Traffic Analysis Methods.....	103
	Project Traffic Volumes.....	107
8.	EXISTING WITH PROJECT CONDITIONS (FOR INFORMATION PURPOSES ONLY)	116
	Existing with Project Intersection Levels of Service.....	116
	Existing with Project Freeway Levels of Service.....	117
	Existing with Project Ramp Analysis.....	119

9.	CUMULATIVE WITHOUT EASTSIDE PARKWAY CONDITIONS (FOR INFORMATION PURPOSES ONLY)	121
	Cumulative without and with Project and without Eastside Parkway Conditions Traffic Volumes	121
	Cumulative without and with Project and without Eastside Parkway Conditions Roadway Improvements	121
	Cumulative without and with Project and without Eastside Parkway Conditions Intersection Levels of Service	126
	Cumulative without and with Project and without Eastside Parkway Conditions Freeway Levels of Service	126
	Cumulative without and with Project and without Eastside Parkway Conditions Ramp Levels of Service	129
10.	CUMULATIVE WITH EASTSIDE PARKWAY CONDITIONS (FOR INFORMATION PURPOSES ONLY)	131
	Cumulative without and with Project and with Eastside Parkway Conditions Roadway Improvements	131
	Cumulative without and with Project and with Eastside Parkway Conditions Intersection Levels of Service	132
	Cumulative without and with Project and with Eastside Parkway Conditions Freeway Levels of Service	133
	Cumulative without and with Project and with Eastside Parkway Conditions Ramp Levels of Service	135
11.	TRANSPORTATION FACILITY DEFICIENCIES AND POTENTIAL IMPROVEMENTS (FOR INFORMATION PURPOSES ONLY)	137
	Deficiencies Criteria	137
	Deficiencies Analysis and Potential Improvements	138

Appendices

- Appendix A: CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates
- Appendix B: California State University, Monterey Bay Master Plan EIR – Transportation Study Area Locations
- Appendix C: Existing Parking Inventory
- Appendix D: Existing Traffic Counts
- Appendix E: Intersection Level of Service Calculations
- Appendix F: Association of Monterey Bay Area Governments Travel Model Validation
- Appendix G: VMT Analysis for Greenhouse Gases and VMT Forecasting Outline
- Appendix H: CSUMB Draft Parking Supply Scenarios
- Appendix I: Parking Demand and Supply Calculations
- Appendix J: California State University, Monterey Bay Housing and Parking Management Guidelines
- Appendix K: Intersection Volume Figures
- Appendix L: Intersection Level of Service Tables
- Appendix M: Freeway Analysis
- Appendix N: Intersection Signal Warrant Analysis
- Appendix O: Intersection with Improvements Level of Service Calculations

List of Figures

Figure 1	Project Location	3
Figure 2	Project Location and Study Intersections	4
Figure 3	Project Location and Study Freeway Segments	5
Figure 4	CSUMB Proposed Bicycle Network	10
Figure 5	CSUMB Proposed Pedestrian Network.....	11
Figure 6	CSUMB Campus Streets and Parking Lots.....	12
Figure 7	Academic Parking Occupancy from 7:00 AM to 7:00 PM	27
Figure 8	Residential Parking Occupancy from 7:00 AM to 7:00 PM.....	27
Figure 9	Existing CSUMB and Regionally Planned Pedestrian Facilities.....	33
Figure 10	Existing CSUMB and Regionally Planned Bicycle Facilities	35
Figure 11	Existing Transit Service to CSUMB.....	41
Figure 12	Existing Conditions Peak Hour Traffic Volumes and Lane Configurations	47
Figure 13	Signalized Intersection Level of Service Examples	104
Figure 14	Parking Area Ingress/Egress Routes for External Trips.....	114
Figure 15	Parking Area Ingress/Egress Routes for Internal Trips	115

List of Tables

Table ES-1: CSUMB Population Type By Housing Location.....	ii
Table ES-2: Intersection Deficiency and Improvement Summary.....	vii
Table ES-3: Freeway Segment Deficiency and Improvement Summary.....	x
Table 1: CSUMB Population Type By Housing Location.....	7
Table 2: Existing Parking Spaces.....	26
Table 3: Existing Parking Demand Rates.....	26
Table 4: Existing Weekday MST Transit Service Summary.....	39
Table 5: Average Weekday MST Boarding Factors.....	40
Table 6: Existing Intersection Levels of Service.....	43
Table 7: Existing Freeway Segment Levels Of Service.....	50
Table 8: Existing Ramp AM Peak Hour Volumes and Capacities.....	51
Table 9: Existing Ramp PM Peak-Hour Volumes and Capacities.....	52
Table 10: Existing CSU TISM VMT Significance Thresholds.....	67
Table 11: Project Generated VMT Threshold Based on Existing Conditions for Monterey County.....	70
Table 12: Project’s Effect on VMT (Boundary VMT) Threshold based on Cumulative Conditions for Monterey County.....	70
Table 13: Roadway Improvements For Cumulative Conditions.....	73
Table 14: Service Populations.....	76
Table 15: Main Campus Transit Ridership Summary.....	79
Table 16: East Campus Transit Ridership Summary.....	79
Table 17: Weekday Peak Hour Bus Route Capacity Analysis.....	80
Table 18: Project Generated VMT for SB 743 VMT Assessment.....	86
Table 19: Project’s Effect on VMT (Boundary VMT) for SB 743 VMT Assessment.....	87
Table 20: Future Academic Parking Supply By Parking Zone – Base Scenario.....	93
Table 21: Future Residential Parking Supply By Parking Zone – Base Scenario.....	93
Table 22: Existing and Future (Base Scenario) Parking Supply Summary.....	94
Table 23: Future Parking Supply By Parking Zone (Land Area Allocation and Base Scenarios).....	94
Table 24: Future Parking Supply Summary (Future Parking Supply Base Scenario, Land Area Allocation Parking Supply Scenario, and Master Plan Vision).....	95
Table 25: AM Peak Period Inbound Person Mode Share for All CSUMB Students, Faculty and Staff.....	96
Table 26: AM peak period Inbound Person Mode Share for CSUMB Students, Faculty and Staff Residents of East Campus And Off-Campus.....	98



Table 27: Signalized Intersection Level of Service Definitions.....	105
Table 28: Unsignalized Intersection and Roundabout Level of Service Definitions.....	106
Table 29: Freeway Segment Level of Service Definitions.....	107
Table 30: Existing Conditions Vehicle Trip Generation for CSUMB Campus	109
Table 31: CSUMB Campus Vehicle Trip Generation for Project Conditions.....	110
Table 32: CSUMB Campus Vehicle Trip Generation Results.....	111
Table 33: Distribution of CSUMB External Vehicle Trips to Nearby Communities (AMBAG Model).....	112
Table 34: CSUMB Main Campus Total Daily Vehicle Trips	113
Table 35: Existing without and with Project Conditions Freeway Segment LOS.....	118
Table 36: Existing without and with Project Conditions Ramp AM Peak Hour Volumes and Capacities.....	119
Table 37: Existing without and with Project Conditions Ramp PM Peak Hour Volumes and Capacities	120
Table 38: Cumulative without and with Project and without Eastside Parkway Conditions Intersection Improvements.....	122
Table 39: Cumulative without and with Project Conditions Freeway Segment Level of Service	128
Table 40: Cumulative without and with Project Conditions Ramp AM Peak Hour Volumes and Capacities	129
Table 41: Cumulative without and with Project Conditions Ramp PM Peak Hour Volumes and Capacities	130
Table 42: Cumulative without and with Project and with Eastside Parkway Conditions Freeway Segment Level of Service.....	134
Table 43: Cumulative without and with Project, and with Eastside Parkway Conditions Ramp AM Peak Hour Volumes and Capacities.....	135
Table 44: Cumulative without and with Project, and with Eastside Parkway Conditions Ramp PM Peak Hour Volumes and Capacities.....	136
Table 45: Existing with Project Conditions Intersection Improvements Summary.....	140
Table 46: Cumulative with Project and without Eastside Parkway Conditions Intersection Improvements Summary.....	145
Table 47: Roundabout Improvements Intersection Level of Service	148
Table 48: Cumulative with Project and with Eastside Parkway Conditions Intersection Improvements Summary.....	151

EXECUTIVE SUMMARY

This report presents the results of the transportation analysis (TA) conducted for the *California State University, Monterey Bay (CSUMB) 2020 Master Plan*, also referred to as the Project. The purposes of the TA are two-fold:

- To present the transportation analysis for compliance with the California Environmental Quality Act (CEQA), including analysis of the Project’s vehicle miles traveled (VMT), the identification of significant impacts and mitigation, where applicable, for inclusion in the Environmental Impact Report (EIR),¹ and
- To present a traffic operations analysis for informational purposes only, intended to inform the reader of potential roadway operational deficiencies² resulting from the addition of Project traffic, and potential transportation improvements to reduce the identified deficient operations.

The analysis presented in this report was conducted based on the *California State University Transportation Impact Study Manual* (2019) to evaluate the effects of the Project on the transportation system on and near the campus.

PROJECT DESCRIPTION

The Project consists of the proposed CSUMB 2020 Master Plan, including Project Design Features (PDFs), as described in the Project Description (Chapter 3) of the CSUMB Master Plan Draft Environmental Impact Report (EIR) (Master Plan Draft EIR). Project elements that would affect the transportation system include the proposed increase in student enrollment and associated increase in faculty and staff; the added on-campus housing for students, faculty, and staff; and a Main Campus street and parking system that facilitates and prioritizes walking, bicycling, and transit use over vehicle travel.

¹ VMT refers to “Vehicle Miles Traveled,” a metric that accounts for the number of vehicle trips generated plus the length or distance of those trips. This report uses total VMT and boundary VMT metrics for specific geographic areas, which are defined in **Chapter 4**.

² Deficiencies are the Project’s potential effects to the study area’s transportation system and determined by the criteria described in **Chapter 11**.



CAMPUS POPULATION

Upon buildout, the Project would accommodate an increase in campus enrollment from the existing 6,634 full-time equivalent (FTE) students³ and 1,024 FTE faculty/staff,⁴ to 12,700 FTE students and 1,776 FTE faculty/staff. Based on academic year 2016-17, achieving this growth would result in an increase of approximately 6,066 FTE students and 752 FTE faculty/staff over existing levels.

LAND USE/CAMPUS HOUSING

Upon buildout, the Project is forecast to house at least 60 percent of enrolled students and 65 percent of faculty and staff on campus (refer to PDF-LU-5 and PDF-LU-6, as described in Chapter 3, Project Description, of the Master Plan Draft EIR).

Table ES-1 summarizes the number of students, faculty, and staff presently residing on- and off-campus (Existing Conditions), and the number forecasted to reside on- and off-campus under Project Conditions when FTE student enrollment and FTE faculty/staff employment reach a total of 14,476.

TABLE ES-1: CSUMB POPULATION TYPE BY HOUSING LOCATION

Population Component	Existing Conditions (FTE Students or Faculty/Staff) ¹	Project Conditions (FTE Students or Faculty/Staff) ¹	Change (Project – Existing) ²
Student Population	6,634	12,700	+6,066
Faculty/Staff Population	1,024	1,776	+752
Student, Faculty, and Staff Population (Campus Population)	7,658	14,476	+6,818
Campus Population with Community Housing Partners	7,938	14,542	+6,604

Notes:

1. FTE = Full-time equivalent students or faculty and staff
2. Change (Project - Existing) = Project Conditions column – Existing Conditions column.

Source: Fehr & Peers, 2019.

³ Full-time equivalent (FTE) is the unit of measurement used to convert class load to student enrollment. At CSUMB, one FTE is equal to 15 units. Thus, one FTE student is equal to one student enrolled in 15 units or three students each enrolled in 5 units. A related unit of measurement is “headcount.” In the case of one student taking 15 units, the headcount is 1; in the case of three students collectively taking 15 units, the headcount is 3.

⁴ According to CSUMB Institutional Assessment and Research, 1 FTE faculty/staff = full-time faculty or staff headcount + part time faculty or staff headcount then divided by 3. The faculty and staff category also includes affiliates, which are companies that have been contracted by the University Corporation at Monterey Bay or “Corporation” to provide services that the auxiliary has been asked to provide by the university (e.g., dining, bookstore, etc.), and the affiliate’s employees work full-time on campus in that capacity. They are also referred to as contractors. The auxiliary includes staff of the Corporation, Student Union, and Foundation.



As shown on **Table ES-1**, the total on-campus housed population (i.e., the number of students, faculty, and staff residing in either Main Campus or East Campus housing) is forecasted to increase from the existing 58 percent (4,443 of 7,658) to 61 percent (8,774 of 14,476). In terms of actual on-campus housing facilities, the Project would provide housing to accommodate an increase in student population from approximately 6,634 to 12,700 FTEs, and an increase in employees (i.e., faculty and staff) from approximately 1,024 to 1,776 FTEs.

CAMPUS TRANSPORTATION NETWORK

The Project includes modifications to existing campus parking and transportation facilities in order to create a more pedestrian- and bicycle-oriented campus core. Specific elements of the key PDFs identified in Chapter 3 of the Master Plan Draft EIR that influence existing and future vehicle traffic in and near the CSUMB campus include:

- Parking will be consolidated and relocated to select areas on the periphery of the campus core (PDF-MO-1[c]).
- Vehicle access will be limited to CSUMB students, faculty, and staff vehicles on General Jim Moore Boulevard between Eighth Street and Fifth Street (PDF-MO-3).
- Vehicle travel through the campus core will be restricted to shuttles, transit vehicles, service vehicles, and emergency vehicles at Inter-Garrison Road between General Jim Moore Boulevard and Sixth Avenue, Divarty Street between General Jim Moore Boulevard and Seventh Avenue, Fourth Avenue between Divarty Street and Inter-Garrison Road, Fifth Avenue between Divarty Street and Inter-Garrison, A Street between Divarty Street and Seventh Avenue, Sixth Avenue between B Street and north of Divarty Street, and Butler Street between Sixth Avenue and Seventh Avenue (PDF-MO-3).
- Seventh Avenue between Colonel Durham Street and Butler Street will be converted to one-way for vehicles traveling north from Colonel Durham Street to Inter-Garrison Road (PDF-MO-3).

PARKING MANAGEMENT AND TRANSPORTATION DEMAND MANAGEMENT

In addition to consolidating and relocating existing campus parking lots, parking management (PDF-MO-1[c]) would be aligned with the expansion of the existing transportation demand management (TDM) strategies (PDF-MO-1), as indicated in the PDFs in Chapter 3 of the Master Plan Draft EIR, to make parking more efficient and remove non-essential lots from the campus core. The TDM plan would address parking management and complement other multimodal infrastructure investments (PDF-MO-2), vehicle restrictions (PDF-MO-3), transit mobility (PDF-MO7 to -11), and active mode (bicycle and pedestrian) mobility (PDF-MO-12 and -13).



The trip generation and parking demand analysis presented in this report uses observed data (refer to **Appendix A**) and assumes the existing Parking Management and Transportation Demand Management (TDM) measures remain in place on the CSUMB campus, and those measures continue to be as effective in reducing vehicle trip-making and encouraging the use of other modes based on observed existing travel characteristics. The analysis furthermore assumes no increased effectiveness or growth in TDM and parking measures despite plans to expand these programs (refer to **Chapter 6** for TDM and parking demand reduction potential).

CEQA IMPACTS AND MITIGATION MEASURES

Recent legislation in California, Senate Bill (SB) 743, has changed the metric by which significant transportation impacts under CEQA are assessed from level of service, or LOS, to vehicle miles traveled, or “VMT.” In response to this recent legislation, the CSU Office of the Chancellor recently issued the *2019 California State University Transportation Impact Study Manual (2019 CSU TISM)*. The *2019 CSU TISM* establishes the following significance criteria for use in an environmental impact analysis in identifying a project’s potentially significant transportation-related impacts:

- **Plan Conflict:** The Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- **VMT Impacts:** The Project would result in a VMT-related impact in accordance with the CSU’s project-level or cumulative VMT Significance Thresholds.
- **Hazard Impact:** The Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- **Emergency Access Impact:** The Project would result in inadequate emergency vehicle access.

Each of these is further described below.

PLAN CONFLICTS

The Project’s consistency was evaluated against the relevant circulation and transportation plans considered. This evaluation is summarized by travel mode below.

- **Existing or planned transit systems** will not be significantly impacted by the Project. The Project does not propose changes to the transit system that will impact the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)* goals of expanding the role transit plays in meeting the region’s mobility needs such as investments in bus rapid transit, expansion of local services, and planned rail projects. Internal circulation changes will support core regional transit travel within the Campus. The Project is not anticipated to create demand for public transit



above the existing capacity, and therefore, the Project would not have an adverse effect on transit ridership and facilities, and no additional improvements would be required.

- **Existing or planned roadway facilities** will not be significantly impacted by the Project. The Project proposes to design Campus parking lots and local streets to promote a “park once” policy that limits vehicle circulation on local streets on or near the CSUMB campus. Parallel transportation improvements will serve the shifts in regional and local traffic through the CSUMB campus. The street modifications also would support a more walkable, bikeable, and transit-oriented Main Campus core.
- **Existing or planned bicycle facilities** will not be significantly impacted by the Project. The Project will not conflict with existing or planned bicycle facilities. The Project proposes to increase bicycle connections between the existing and planned facilities.
- **Existing or planned pedestrian facilities** will not be significantly impacted by the Project. The Project would enhance pedestrian circulation within the Main Campus core and connections to adjacent land uses, a beneficial effect on pedestrian circulation and access. Therefore, the Project would not interfere with existing or planned pedestrian facilities or conflict with applicable non-automotive transportation plans, guidelines, policies, or standards.

VEHICLE MILES TRAVELED (VMT)

The VMT impact analysis presented in this report considers the Project’s direct impacts relative to Project-generated VMT per service population, as well the Project’s long-term effect on VMT using boundary VMT per service population evaluated under Cumulative Conditions.

Project Generated VMT (Project Analysis)

The significance threshold for determining the Project generated VMT impact is a Total VMT per service population rate of 23.91, which is 15 percent below the Existing Conditions VMT per service population for Monterey County of 28.12. Under the Existing with Project Conditions, the CSUMB campus total VMT per service population rate of 20.30 is below the applicable threshold of 23.91. Therefore, the CSUMB campus total VMT per service population rate would not exceed the applicable thresholds under Existing with Project Conditions and the impact is less than significant.

Projects Effect on VMT (Cumulative Analysis)

This analysis evaluated whether the Project would result in an increase in the countywide boundary VMT per service population from “Cumulative Conditions” to “Cumulative with Project and without Eastside Parkway Conditions” or “Cumulative with Project and with Eastside Parkway Conditions.” The regional impact threshold for the Project’s effect on VMT is the Monterey County Cumulative Conditions boundary VMT per service population of 14.07.



The Project's effect on VMT under Cumulative with Project and without Eastside Parkway Conditions of 13.98 is below the threshold of 14.07. Therefore, the Project would not exceed the applicable thresholds relative to the Project's effect on VMT under Cumulative with Project and without Eastside Parkway Conditions and the impact is less than significant.

Under conditions assuming the Eastside Parkway is in place, the Project's effect on VMT under Cumulative with Project and with Eastside Parkway Conditions of 13.98 is below the threshold of 14.07. Therefore, the Project would not exceed the applicable thresholds under this scenario and the impact is less than significant.

HAZARDS

The Project would have a significant impact if it would substantially increase hazards due to a roadway geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). While the Project does include modifications that will change the design of parking lots and local streets and intersections, these modifications would not create hazards such as sharp curves or include otherwise dangerous features. Therefore, the impact is less than significant.

EMERGENCY ACCESS

For this analysis, a significant impact would occur if the Project or an element of the Project would result in inadequate emergency access. Future parking facilities and streets will be designed to accommodate emergency vehicles. Emergency and service vehicles will continue to have access to the campus and ability to circulate through streets restricted to other vehicles. Therefore, the impact is less than significant.

OPERATIONS ANALYSIS RESULTS

Operational deficiencies and improvements of intersections and freeway segments within the Project study area were analyzed not to determine environmental impacts within the meaning of CEQA but rather for informational purposes. Deficiency criteria presented in the California State University *Transportation Impact Study Manual* (2012) are used to identify the Project's deficiencies with a refinement to the freeway deficiency criteria: the criteria used is based on Caltrans guidance.

INTERSECTIONS

Intersections with deficiencies and improvements are summarized below in **Table ES-2**, along with a determination as to whether the intersection deficiency is addressed by the improvement.



TABLE ES-2: INTERSECTION DEFICIENCY AND IMPROVEMENT SUMMARY

Intersection ¹	Deficiency Identified?			Improvement	Deficiency Addressed?		
	Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions		Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions
3 SR 1 Southbound Ramps and Imjin Parkway (Cal)	Yes	Yes	Yes	Add WBL. Convert off-ramp to loop ramp equivalent	Yes	Yes	Yes
5 Second Avenue and Imjin Parkway (M)	No	Yes	Yes	Add third NBL, second NBR. Add third WBL, two WBT, and convert shared WBTR to WBR. Add second SBL, second SBT, convert shared SBTR to SBR. Add second EBL, third EBT, convert shared EBTR to two SBR	N/A	Yes	Yes
10 Imjin Road and Imjin Parkway (M)	No	Yes	No	Add second WBL	N/A	Yes	N/A
12 Reservation Road and Imjin Parkway (M)	No	Yes	Yes	Add third SBT	N/A	No	Yes
14 Inter-Garrison Road and Reservation Road (MC)	No	Yes	Yes	Add second NBL	N/A	Yes	No
16 Second Avenue and Eighth Street (M)	Yes	No	No	Signalize intersection and optimize signal timings	Yes	N/A	N/A
22 Eighth Avenue and Inter-Garrison Road (CSUMB)	Yes	Yes	Yes	<u>Option 1</u> - Signalize, optimize signal timings, and add two WBL	Yes	No	Yes
				<u>Option 2</u> - Add second circulating lane to roundabout and add WBL	Yes	No	Yes



TABLE ES-2: INTERSECTION DEFICIENCY AND IMPROVEMENT SUMMARY

Intersection ¹	Deficiency Identified?			Improvement	Deficiency Addressed?		
	Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions		Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions
23 Abrams Drive and Inter-Garrison Road (MC)	Yes	Yes	No	Existing Conditions Improvement: Signalize intersection, optimize signal timings, and add SBL Cumulative Conditions Improvement: Add second EBL	Yes	Yes	N/A
25 East Garrison Road and Reservation Road (MC)	No	Yes	Yes	Signalize intersection optimize cycle length and splits	N/A	Yes	No
28 Davis Road and Reservation Road (MC)	No	Yes	Yes	Add second EBL	N/A	No	No
29 Second Avenue and Divarty Street (M)	Yes	No	No	Convert NBR and SBR to shared NBT/R and SBT/R	Yes	N/A	N/A
33 General Jim Moore Boulevard and Lightfighter (S)	No	Yes	Yes	<u>Option 1</u> - Add third NBL, second NBT. Add SBR and overlap phase. Add second WBL and second WBT. Optimize cycle length and splits	N/A	Yes	Yes
				<u>Option 2</u> - Roundabout design	N/A	Yes	Yes
39 General Jim Moore Boulevard and Gigling Road (S)	No	Yes	Yes	<u>Option 1</u> - Add second WBL	N/A	Yes	Yes
				<u>Option 2</u> - Roundabout design	N/A	Yes	Yes



TABLE ES-2: INTERSECTION DEFICIENCY AND IMPROVEMENT SUMMARY

Intersection ¹	Deficiency Identified?			Improvement	Deficiency Addressed?		
	Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions		Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions
46 General Jim Moore Boulevard and Normandy Road (S)	No	No	Yes	Add third NBT, third SBT, optimized cycle length and splits	N/A	N/A	No
47 General Jim Moore Boulevard and Coe Avenue (S)	Yes	Yes	No	Signalize intersection and optimize signal timings	Yes	Yes	N/A

Notes:

1. Intersection jurisdiction and associated LOS threshold applied.
 - i. City of Marina = M
 - ii. City of Seaside = S
 - iii. California State University, Monterey Bay = CSUMB
 - iv. Monterey County = MC
 - v. Caltrans = Cal

Source: Fehr & Peers, 2019.



FREEWAY SEGMENTS

Freeway segment deficiencies are summarized in **Table ES-3** below. These deficiencies on SR 1 would remain, as there is no assurance that funding will be available for the one planned improvement (widening SR 1 to six lanes from Fremont Boulevard-Del Monte Boulevard to Canyon Del Rey Boulevard), and there are no other planned widening improvements that would address the remainder of the deficiencies. Therefore, there are no feasible improvements available and the deficiencies in **Table ES-3** would remain.

TABLE ES-3: FREEWAY SEGMENT DEFICIENCY AND IMPROVEMENT SUMMARY

Freeway Segment	Deficiency Identified?		
	Existing with Project Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions
Northbound SR 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	No	Yes	Yes
Southbound SR 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	Yes	Yes	No
Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	Yes	Yes	Yes
Southbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	Yes	Yes	Yes

Source: Fehr & Peers, 2019.

FREEWAY RAMPS

Freeway ramps analysis was conducted for the Existing with Project Condition and Cumulative with Project and without and with Eastside Parkway Conditions to assess changes in peak hour ramp volumes with the addition of Project traffic and its effects on freeway and local street operations. The freeway study ramps include the on- and off-ramps at SR 1 and Imjin Parkway, and SR 1 and Lightfighter Drive. The volumes for all the with Project conditions scenarios are expected to increase at each of the ramps without exceeding the ramp capacities, with the exception of the SR 1 and Imjin Parkway southbound on-ramp and the SR 1 and Imjin Parkway northbound off-ramp; therefore, no deficiencies were identified. Volumes are expected to decrease for the SR 1 and Imjin Parkway southbound on-ramp and the SR 1 and Imjin Parkway northbound off-ramp. Decreases in volumes under the with Project conditions are due to the displacement and reassignment of traffic when the Project volume is added to the roadway network.



1. INTRODUCTION AND PROJECT DESCRIPTION

This report presents the results of the Transportation Analysis (TA) conducted for the proposed *California State University, Monterey Bay (CSUMB) 2020 Master Plan* (the “Project”). The Project consists of the proposed Master Plan and Project Design Features (PDFs), as described in Chapter 3, Project Description, of the Master Plan Draft EIR. The trip generation and parking demand analysis presented in this report assumes the existing Parking Management and Transportation Demand Management (TDM) measures remain in place on the CSUMB campus, and those measures continue to be as effective in reducing vehicle trip-making and encouraging the use of other modes based on observed existing travel characteristics. It furthermore assumes no increased effectiveness or growth in TDM and parking measures despite plans to expand these programs (refer to **Chapter 6** for TDM and parking demand reduction potential). Therefore, this TA bases Project trip generation, parking demand, and roadway operations changes on observed data to the greatest extent possible.

The CSUMB Main Campus is located within the geographic boundaries of the cities of Marina, Seaside, and Monterey County, and is generally bounded by Eighth Street, Inter-Garrison Road, Eighth Avenue, Colonel Durham Street, Lightfighter Drive, and Second Avenue. The East Campus open space and housing is located east of Eighth Avenue on either side of Inter-Garrison Road. **Figure 1** shows the location of the Project site (Main Campus and East Campus) and the surrounding transportation network. **Figure 2** shows the Project site with study intersections. **Figure 3** shows the Project site (Main Campus and East Campus) and the surrounding transportation network with the freeway study segments.

This chapter discusses the report purpose, Project description, recent changes in the California Environmental Quality Act (CEQA) regarding transportation analyses, the study area/analysis scenarios/methods used in the operations analysis and the criteria used to identify deficiencies, and report organization.

PURPOSE

The primary purpose of this report is:

- To present the transportation analysis for compliance with the CEQA, including analysis of the Project’s vehicle miles traveled (VMT), the identification of significant impacts and recommended mitigation, where applicable, for inclusion in the Environmental Impact Report (EIR),⁵ and

⁵ VMT refers to “Vehicle Miles Traveled,” a metric that accounts for the number of vehicle trips generated plus the length or distance of those trips. This report uses total VMT and boundary VMT metrics for specific geographic areas, which are defined in **Chapter 4**.

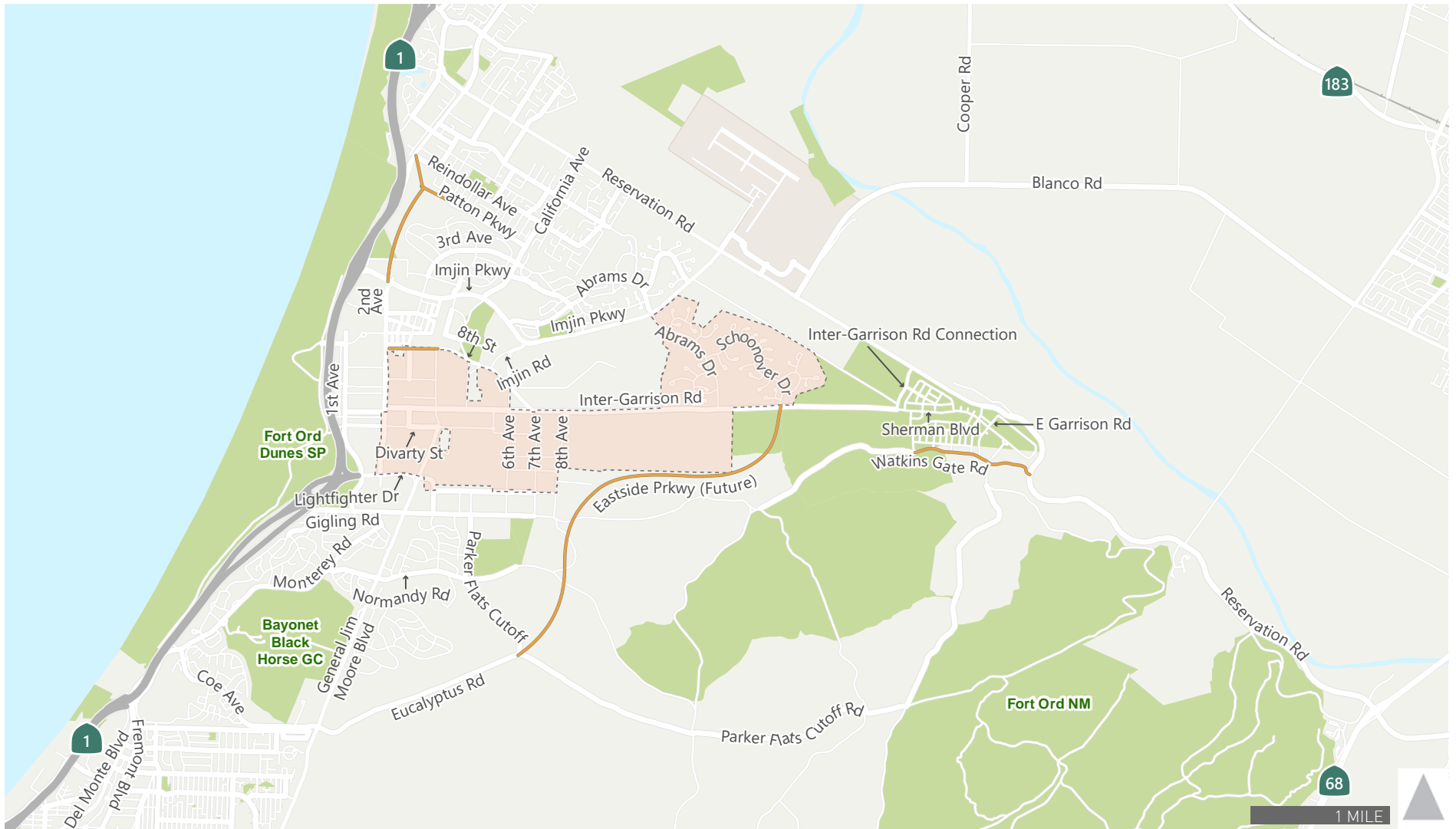


- To present a traffic operations analysis for informational purposes only, intended to inform the reader of potential roadway operational deficiencies⁶ resulting from the addition of Project traffic, and potential transportation improvements to reduce the identified deficient operations.

This TA addresses the Project's effects on the roadway system and on the nearby bicycle, pedestrian, and transit networks. Project effects on the environment were evaluated following the CEQA Guidelines and the *California State University Transportation Impact Study Manual* (2019), which provides guidance on how to evaluate the effects of projects on the transportation system on and near a CSU campus. Guidance from the City of Marina, City of Seaside, Monterey County, and Caltrans was also considered.

⁶ Deficiencies are the Project's potential effects to the study area's transportation system and determined by the criteria described in **Chapter 11**.







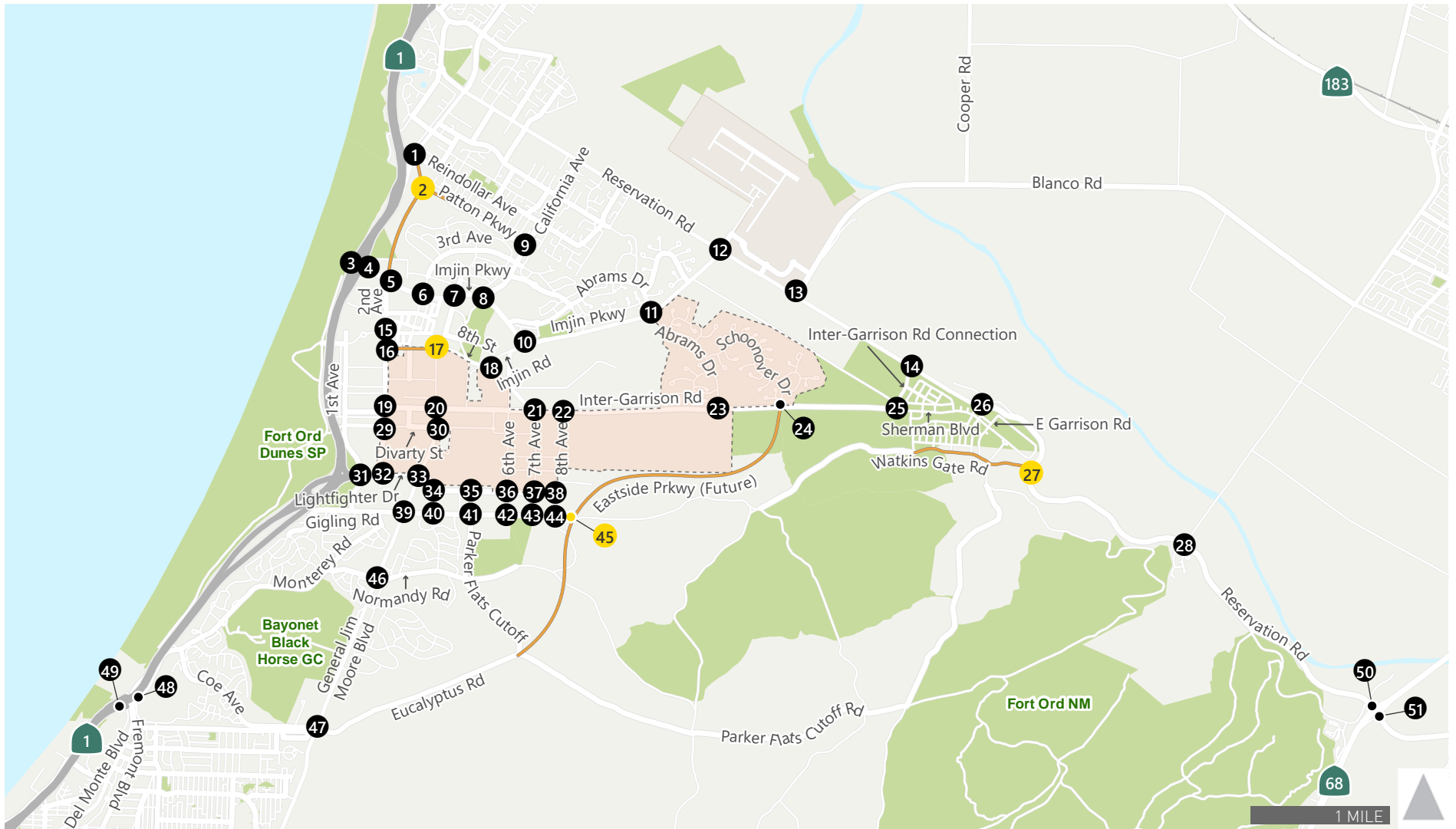
-  California State University Monterey Bay Campus
-  New/Extended Roadway



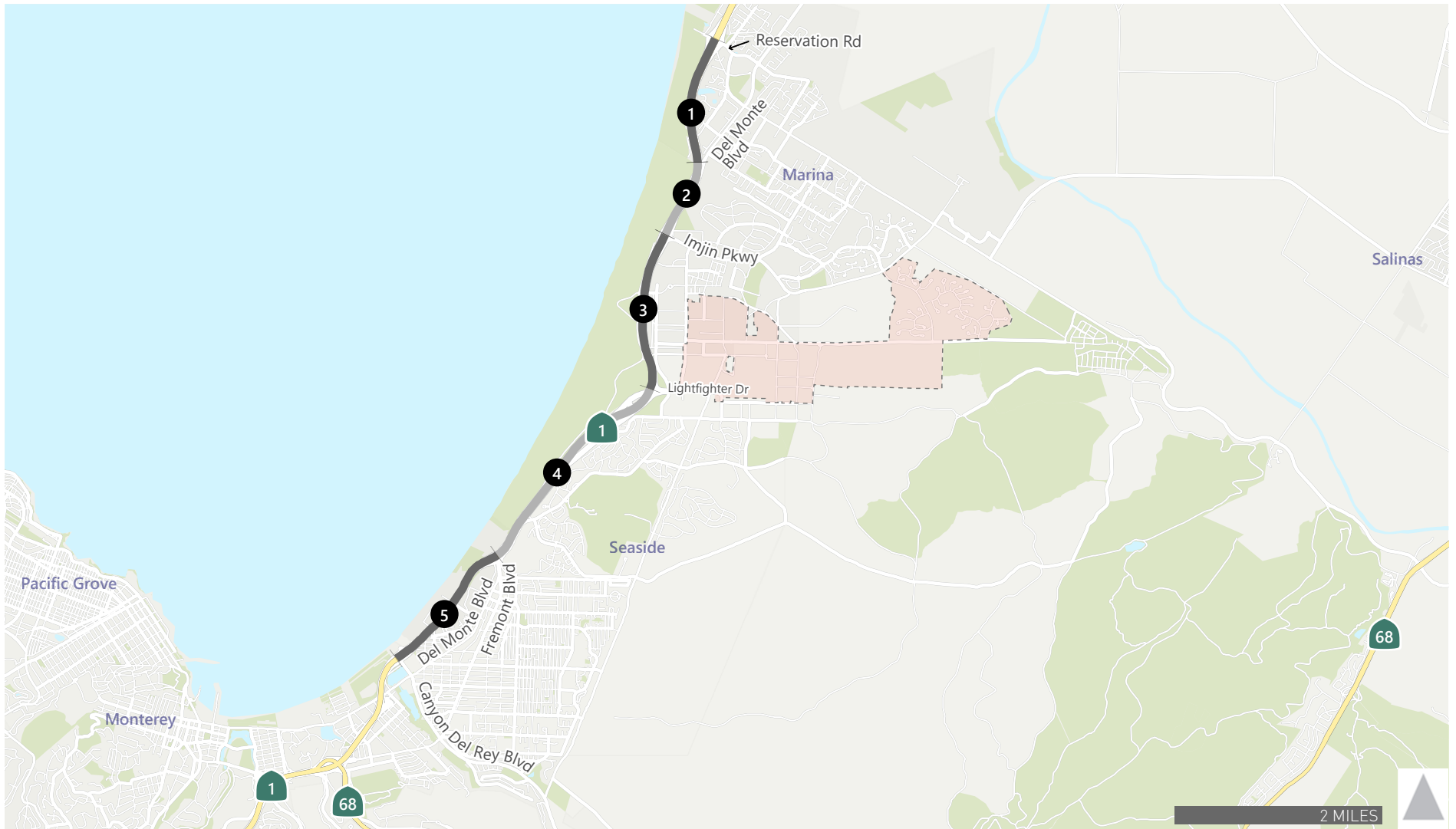
Figure 1
Project Location



- California State University Monterey Bay Campus
- # Study Intersection
- # Future Intersection
- New/Extended Roadway



Figure 2
Project Location and Study Intersections





-  Study Freeway Segments
-  California State University Monterey Bay Campus



Figure 3
 Project Location and Study Freeway Segments

PROJECT DESCRIPTION

The Project is the proposed CSUMB 2020 Master Plan, including Project Design Features (PDFs), as described in Project Description (Chapter 3), of the CSUMB Master Plan Draft Environmental Impact Report (Master Plan Draft EIR). Project elements that would affect the transportation system include the proposed increase in student enrollment and associated increase in faculty and staff; the added on-campus housing for students, faculty, and staff; and a Main Campus street and parking system that facilitates and prioritizes walking, bicycling, and transit use over vehicle travel. Each of these Project elements is described below.

CAMPUS POPULATION

Upon buildout, the Project would accommodate an increase in campus enrollment from the existing (based on academic year 2016-2017) 6,634 full-time equivalent (FTE) students⁷ and 1,024 FTE faculty/staff,⁸ to 12,700 FTE students and 1,776 FTE faculty/staff. Achieving this growth would result in an increase of approximately 6,066 FTE students and 752 FTE faculty/staff over existing levels.

LAND USE/CAMPUS HOUSING

Upon buildout, the Project is forecast to house at least 60 percent of enrolled students and 65 percent of faculty and staff on campus (refer to PDF-LU-5 and PDF-LU-6, as described in Chapter 3 of the proposed CSUMB Master Plan Draft EIR [Master Plan Draft EIR]). Based on current and projected future conditions, at Project buildout the percentage of students housed on-campus is expected to be similar to the existing percentage, although the absolute number of students housed on campus will increase with planned enrollment growth, while the percentage of faculty and staff housed on campus is expected to increase as the result of the Project. Refer to *California State University, Monterey Bay Proposed Master Plan Housing Memorandum* (**Attachment A** of the trip generation memorandum in **Appendix A** of this TA report).

Table 1 summarizes the number and percentage of students, faculty, and staff presently residing on- and off-campus (Existing Conditions), and the number forecasted to reside on- and off-campus under Project Conditions when FTE student enrollment and FTE faculty/staff employment reach a total of 14,476.

⁷ Full-time equivalent (FTE) is the unit of measurement used to convert class load to student enrollment. At CSUMB, one FTE is equal to 15 units. Thus, one FTE student is equal to one student enrolled in 15 units or three students each enrolled in 5 units. A related unit of measurement is "headcount." In the case of one student taking 15 units, the headcount is 1; in the case of three students collectively taking 15 units, the headcount is 3.

⁸ According to CSUMB Institutional Assessment and Research, 1 FTE faculty/staff = full-time faculty or staff headcount + part time faculty or staff headcount then divided by 3. The faculty and staff category also includes affiliates, which are companies that have been contracted by the University Corporation at Monterey Bay or "Corporation" to provide services that the auxiliary has been asked to provide by the university (e.g. dining, bookstore, etc.), and the affiliate's employees work full-time on campus in that capacity. They are also referred to as contractors. The auxiliary includes staff of the Corporation, Student Union, and Foundation.



TABLE 1: CSUMB POPULATION TYPE BY HOUSING LOCATION

Housing Location	Existing Conditions (FTE Students or Faculty/Staff) ¹	Project Conditions (FTE Students or Faculty Staff) ¹	Change (Project – Existing) ²
Student Population			
Main Campus	2,600 (39.2%)	7,620 ³ (60.0%)	+5,020
East Campus ⁴	1,380 (20.8%)	0 (0%)	-1,380
Off-Campus	2,654 (40.0%)	5,080 (40.0%)	+2,426
<i>Subtotal [A]</i>	<i>6,634</i> <i>(100%)</i>	<i>12,700</i> <i>(100%)</i>	<i>+6,066</i>
Faculty/Staff Population			
East Campus ⁴	463 (45.2%)	1,154 ³ (65.0%)	+691
Off-Campus	561 (54.8%)	622 (35.0%)	+61
<i>Subtotal [B]</i>	<i>1,024</i> <i>(100%)</i>	<i>1,776</i> <i>(100%)</i>	<i>+752</i>
Student, Faculty, and Staff Population (Campus Population)			
Main Campus and East Campus (Students, Faculty and Staff)	4,443 (58.0%)	8,774 (60.6%)	+4,331
Off-Campus (Students, Faculty and Staff)	3,215 (42.0%)	5,702 (39.4%)	+2,487
Total [A + B = C]	7,658 (100%)	14,476 (100%)	+6,818
Campus Population with Community Housing Partners			
East Campus (Community Housing Partners) [D]	280	66	-214
Total [C+D = E]	7,938	14,542	+6,604

Notes:

1. FTE = Full-time equivalent students, faculty/staff or community housing partners.
2. Change (Project – Existing) = Project Conditions column – Existing Conditions column.
3. The transportation trip generation analysis uses a campus population that, meets but does not exceed the 60 percent student housing goal and the 65 faculty and staff housing goal under Project Conditions.
4. Under Existing Conditions 1,380 students, 463 faculty/staff, and 280 community housing partners live in the East Campus housing. Under Project Conditions 1,154 faculty/staff and 66 community housing partners live in the East Campus housing unless housing is needed by for campus employees.

Source: Fehr & Peers, 2019.



As shown in **Table 1**, the total population housed on-campus (i.e., the number of students, faculty, and staff residing in either Main Campus or East Campus housing) is forecasted to increase from the existing 58 percent (4,443 of 7,658) to 61 percent (8,774 of 14,476).⁹

CAMPUS TRANSPORTATION NETWORK

The Project includes physical modifications to existing campus parking and transportation facilities to create a more pedestrian and bicycle-oriented campus core. Specific elements (refer to **Figure 6**) of the key PDFs in Chapter 3 of the Master Plan Draft EIR that influence existing and future vehicle traffic in and near the CSUMB campus include the following:

- Parking will be consolidated and relocated to select areas on the periphery of the campus core (PDF-MO-1[c]).
- Vehicle access will be limited to CSUMB students, faculty, and staff vehicles on General Jim Moore Boulevard between Eighth Street and Fifth Street (PDF-MO-3).
- Vehicle travel through the campus core will be restricted to shuttles, transit vehicles, service vehicles, and emergency vehicles at the following locations (PDF-MO-3):
 - Inter-Garrison Road between General Jim Moore Boulevard and Sixth Avenue
 - Divarty Street between General Jim Moore Boulevard and Seventh Avenue
 - Fourth Avenue between Divarty Street and Inter-Garrison Road
 - Fifth Avenue between Divarty Street and Inter-Garrison Road
 - A Street between Divarty Street and Seventh Avenue
 - Sixth Avenue between B Street and north of Divarty Street
 - Butler Street between Sixth Avenue and Seventh Avenue
- Seventh Avenue between Colonel Durham Street and Butler Street will be converted to one-way for vehicles traveling north from Colonel Durham Street to Inter-Garrison Road.

CSUMB proposed on campus bicycle and pedestrian networks are presented in **Figure 4** and **Figure 5**.









⁹ As space permits, Community Housing Partners will also reside in the East Campus housing; Community Housing Partners are made up of affiliates (a subcategory of CSUMB staff), educational partners and military partners. While Community Housing Partners live on-campus, they are not associated with on-campus housing for students, faculty, and staff, and therefore are not included in the student, faculty, and staff population total but are included in the entire campus population total in **Table 1**.

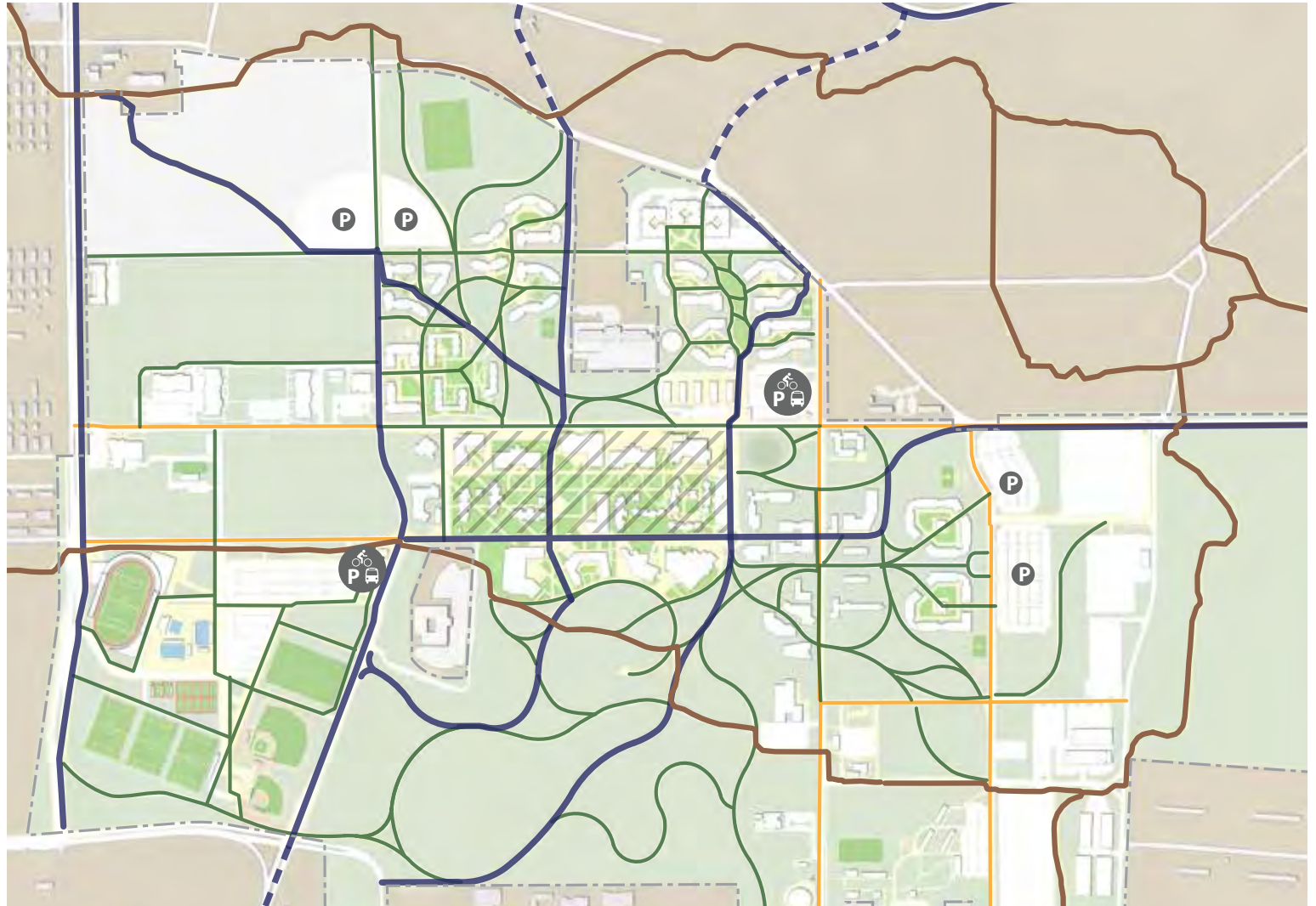


TRANSPORTATION DEMAND MANAGEMENT AND PARKING MANAGEMENT

In addition to consolidating and relocating existing campus parking lots, parking management (PDF-MO-1[c]) would be aligned with the expansion of the existing transportation demand management (TDM) strategies (PDF-MO-1), as indicated in Chapter 3 of the Master Plan Draft EIR, to make parking more efficient and remove non-essential lots from the campus core. Parking for academic or residential lots would be consolidated as new development occurs. Continued use of a limited number of special-use parking stalls would be provided throughout campus to accommodate service vehicles, deliveries, loading and unloading activities, and trash pick-up. Appropriate numbers of accessible stalls would be allocated campus wide as required by state code. The TDM plan would address parking management and complement other multimodal infrastructure investments (PDF-MO-2), vehicle restrictions (PDF-MO-3), transit mobility (PDF-MO7 to 11), and active mode (bicycle and pedestrian) mobility (PDF-MO-12 and 13). The list of existing Parking Management and TDM strategies are listed in the Existing Conditions chapter (**Chapter 2**).





-  Proposed Campus Regional Bicycle/Pedestrian Path
-  Proposed Campus Bicycle/Pedestrian Path
-  Proposed Regional Routes
-  Proposed FORTAG Trail
-  Existing Shared Roadway/Bicycle Boulevard
-  Dismount Zone
-  Multimodal Hub
-  Parking Area

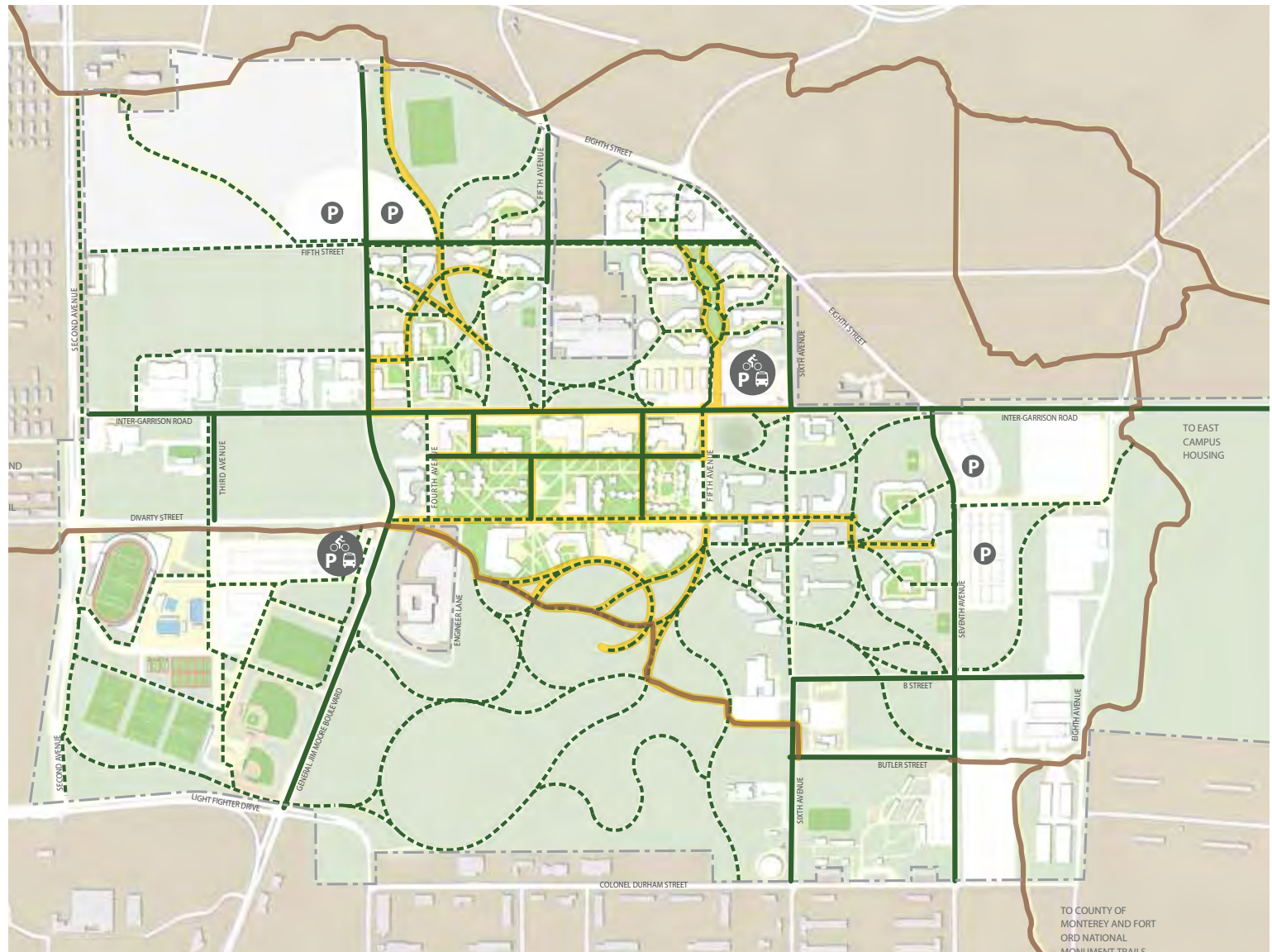


Source: Page / BMS Design Group (2017)



Figure 4
CSUMB Proposed Bicycle Network

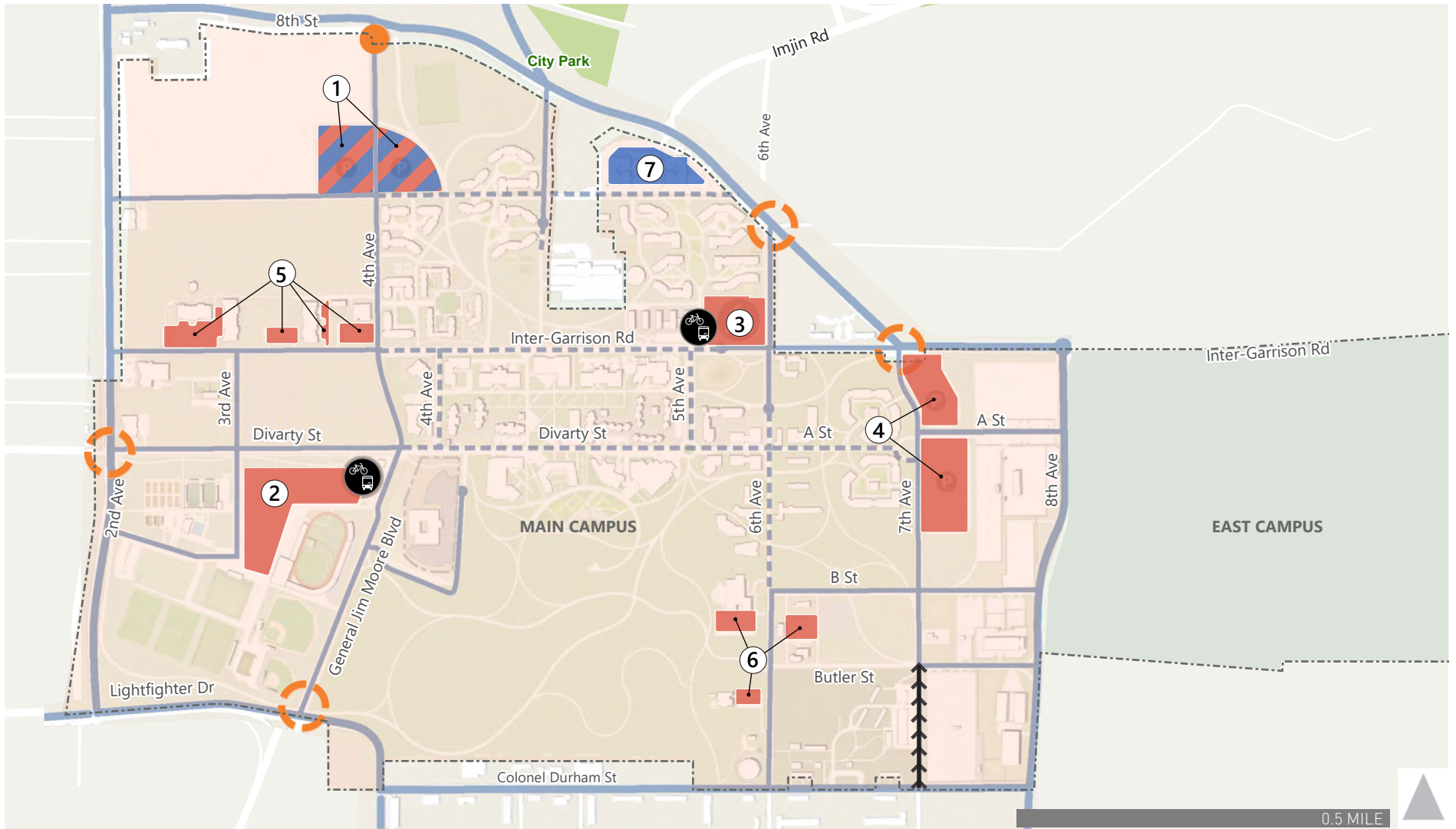
- Proposed FORTAG Trail
- - - Bicycle/Pedestrian Path
- Sidewalk or Walkway
- Grades < 5%
-  Multimodal Hub
-  Parking Area



Source: Page / BMS Design Group (2017)



Figure 5
 CSUMB Proposed Pedestrian Network



California State University Monterey Bay Main Campus
 California State University Monterey Bay East Campus

Peripheral Circulation Street
 Campus Vehicular Street
 Campus Restricted Access Street
 (Shuttle, Transit, Service and Emergency)
 Oneway Street
 Campus Entry
 Gated Entry
 (Restricted to CSUMB students, faculty and staff)

Academic Parking Area
 Residential Parking Area
 Academic and Residential Parking Area
 Multimodal Hub



Figure 6
 CSUMB Campus Streets and Parking Lots

RECENT CHANGES TO CEQA TRANSPORTATION ANALYSIS

Senate Bill (SB) 743, signed by Governor Jerry Brown in 2013, changed the way transportation impacts are identified under CEQA. Specifically, the legislation directed the State of California's Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts and make corresponding revisions to the CEQA Guidelines. Following several years of draft proposals and related public comments, OPR settled upon VMT¹⁰ as the preferred metric for assessing passenger vehicle-related impacts, and issued revised CEQA Guidelines in December 2018, along with a *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) to assist practitioners in implementing the CEQA Guidelines revisions to use VMT as the new metric.

Under the revised Guidelines, vehicle level of service (LOS) is no longer used as a determinant of significant environmental impacts, and an analysis of a project's impacts relative to VMT is the new metric against which significant impacts are to be assessed. In response to this methodological change in required transportation analysis, the CSU Chancellors Office prepared the recently issued *2019 California State University Transportation Impact Study Manual (CSU TISM)*, which supersedes the *2012 CSU TISM*. The *2019 CSU TISM* provides guidance for the preparation of CEQA-compliant transportation impact analysis pursuant to SB 743 and is the operative TISM for the analysis presented here.

SB 743 VMT ASSESSMENT METHODS DECISIONS

As discussed below, the comprehensive VMT analysis (i.e., VMT including all vehicle trips, vehicle types, and trip purposes without separation by land use) presented in this report considers the Project's direct impacts, as well as a cumulative analysis that considers the Project's long-term effect on VMT.¹¹ The VMT analysis methods and thresholds used for this analysis go beyond the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) due to the unique characteristics of a university campus development project, which are not specifically addressed in the Technical Advisory. This is due to several reasons, including the Technical Advisory's focus on how to streamline or avoid VMT impact review for

¹⁰ VMT refers to "Vehicle Miles Traveled," a metric that accounts for the number of vehicle trips generated plus the length or travel distance of those trips. This report uses the total VMT and boundary VMT metrics for specific geographic areas. The VMT metrics are defined in **Chapter 4**. VMT is an accessibility performance metric that evaluates the changes in land use patterns, regional transportation systems, and other built environment characteristics. This is different from the previous performance metric, vehicle level of service, which measures vehicle mobility.

¹¹ This is in contrast with the OPR Technical Advisory recommendation to use Partial VMT for transportation impact analysis (Governor's Office of Planning and Research, *Technical Advisory: On Evaluating Transportation Impacts in CEQA*, pages 15 and 16). Using Partial VMT for Project generated VMT screening may not tell the full story of the project's benefits. For example, mixed-use projects help reduce VMT by shortening vehicle trip lengths or reducing vehicle trips because of the convenience of walking, bicycling, or using transit between project destinations. A comprehensive VMT analysis is a more complete evaluation.



projects the state considers to be desirable based on their type and location (i.e., infill projects near transit) and that include the most common land uses (i.e., office, industrial, residential, and retail).

Accordingly, after careful evaluation of the OPR Technical Advisory relative to a campus setting, the CSU Chancellor's Office prepared the *2019 CSU TISM* to provide guidance for CEQA compliant transportation impact analysis pursuant to SB 743 for all CSU campuses. The *2019 CSU TISM* was prepared by transportation engineers and support staff with a strong understanding of CEQA practice and focus on consistency and compliance with CEQA Guidelines.

The OPR Technical Advisory provides a blueprint for organizing key decisions regarding SB 743 methods: the decisions listed later in this section follow the basic structure of the *OPR Technical Advisory*. The *OPR Technical Advisory* recommends considering a project's short-term, long-term, and cumulative effects on VMT but provides limited recommendations on how to prepare a comprehensive VMT analysis for projects. The CSU Chancellor's Office and resulting *2019 CSU TISM* considers the substantial evidence presented in the OPR Technical Advisory to make key decisions about the VMT forecasting model, VMT accounting methods, calculation of the baseline and cumulative regional VMT estimates, and VMT thresholds required for a comprehensive analysis. Below are substantial evidence examples with specific citations of:

- using all Project generated VMT and Project's Effect on VMT (refer to the **Retail Projects** quote below),
- not truncating trip lengths based on model or political boundaries (refer to the **Consideration for All Projects** quote below), and
- accounting for the cumulative effects of a project (refer to **Cumulative Impacts** quote) used to create the *2019 CSU TISM*.

The quotes are listed below with highlights added to the most relevant portion of the quote.

Retail Projects. *Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT¹¹ because retail projects typically reroute travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.* (Quote from page 5 of the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018; footnote 11 in this quote is a reference to see Appendix 1 of the OPR Technical Advisory, which discusses evaluation of Total VMT).

Considerations for All Projects. *Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. CEQA requires environmental analyses to reflect a "good faith effort at full disclosure." (CEQA Guidelines, § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Where those VMT effects will grow over time,*



analyses should consider both a project's short-term and long-term effects on VMT. (Quote from page 6 of the *Technical Advisory: On Evaluating Transportation Impacts in CEQA*, December 2018).

Cumulative Impacts. *A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (Pub. Resources Code, § 21083, subd. (b)(2); see CEQA Guidelines, § 15064, subd. (h)(1).)* (Quote from page 6 of the *Technical Advisor: On Evaluating Transportation Impacts in CEQA*, December 2018).

The inclusion of Project's effect on VMT for retail projects in the OPR Technical Advisory is one of the reasons that the analysis presented here includes all trip purposes and vehicle types without separation of VMT by land use, and an evaluation of Project's Effects on VMT (i.e., Project generated VMT per service population and boundary VMT).

The expectations of a CEQA impact analysis to provide a complete picture of the VMT effects on the environment are highlighted within the CEQA Guidelines in the following sections.

- **CEQA Guidelines – Expectations for Environmental Impact Analysis**
 - § 15003 (F) = fullest possible protection of the environment...
 - § 15003 (I) = adequacy, completeness, and good-faith effort at full disclosure...
 - § 15125 (C) = EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated...
 - § 15144 = an agency must use its best efforts to find out and disclose...
 - § 15151 = sufficient analysis to allow a decision which intelligently takes account of environmental consequences...

All of these suggest completeness (and accuracy) is important and have largely been recognized by the courts as the context for judging an adequate analysis. Furthermore, to understand the effects of a project, VMT inputs for air quality, greenhouse gas (GHG) emissions, and energy consumption already require a comprehensive analysis of 'project generated' and 'project's effect on VMT' using local or regional travel forecasting models:

- Project generated VMT per service population (Direct Impacts): The sum of the "VMT from" and "VMT to" and within a local jurisdiction under baseline conditions divided by the sum of the number of residents, employees, and students in the local jurisdiction.
- Project's effect on VMT per service population (Cumulative Impacts): An evaluation of the change in travel between without and with project conditions on all roadways within the local jurisdiction under Cumulative Conditions divided by the sum of the number of residents, employees, and students in the local jurisdiction.



Both 'project generated VMT' and the 'project's effect on VMT' are recommended in the 2019 CSU TISM to fully account for VMT effects that may include changes to VMT generation from neighboring land uses. The importance of a comprehensive analysis using all VMT per service population and that considers the project's effect on VMT is that land use projects can influence the routing of existing trips and the VMT generation of surrounding land uses. Combined with the expectations established in the CEQA Guidelines and CEQA case law discussed below, ignoring the project's effect on VMT may result in an inadequate analysis.

With this in mind, implementation of an SB 743 VMT assessment requires that certain methodology decisions must be made prior to the assessment. The necessary decisions and selected tools used in this assessment are as follows (consistent with the 2019 CSU TISM):

- Select a VMT calculation tool
 - Use the Association of Monterey Bay Area Governments (AMBAG) regional travel forecasting model.
- Select the VMT accounting method(s)
 - Total (Project generated)¹² VMT per service population (for Direct Impacts): The sum of the "VMT from" and "VMT to" and within a specific geographic area divided by the service population, which is the sum of the number of residents, employees, and students in the county.
 - Project's effect on VMT per service population (for Cumulative Impacts): An evaluation of the change in travel between without and with Project Conditions on all roadways within Monterey County under Cumulative Conditions divided by the sum of the number of residents, employees, and students in the county.
- Calculate the baseline and cumulative regional VMT estimates
 - The analysis presented here uses VMT from all trip purposes and vehicle types without separation of VMT by land use for Monterey County with a baseline set as Existing Conditions VMT generated by Monterey County and cumulative set as VMT on all roadways in Monterey County under Cumulative without Project Conditions. (Refer to the descriptions of Project generated VMT (Project Analysis) and Project's effect on VMT (Cumulative Analysis) presented in **Chapters 4** and **5** for more details.)
- Set VMT threshold(s)

¹² For projects requiring a full VMT assessment, the 2019 California State University Transportation Impact Study Manual describes the need to evaluate the project-generated VMT per service population. This analysis uses the total VMT metric. The Project's VMT is the difference between the CSUMB campus total VMT under Existing with Project Conditions and Existing Conditions. This approach of identifying the Project's total VMT is to capture the effects of increasing on-campus housing and shifting of student housing from East Campus Housing to Main Campus.



- The threshold to be applied in assessing Project-specific impacts is 15 percent below the existing total VMT per service population rate for Monterey County.¹³ (Refer to **Table 10** for additional details about this threshold)
- The threshold to be applied in assessing cumulative impacts (Project's effect on VMT) is no change in the cumulative conditions (future) boundary VMT per service population (without and with Eastside Parkway) for Monterey County. (Refer to **Table 10** for additional details about this threshold)

As to direct impacts, total VMT per service population is the metric used to evaluate how the CSUMB campus VMT rate changes (increases or decreases) between the "without Project" and "with Project" scenarios, considering both VMT increases due to growth and VMT reductions due to changes in travel behavior.¹⁴ The "with Project" scenario results are divided by the number of full-time equivalent (FTE) students, FTE faculty, and staff (the change in service population due to the Project) to normalize the results; that is, to account for the differences in travel behavior among the different campus population types.¹⁵ Total VMT per service population is used to evaluate changes in the VMT rate due to the Project (i.e., the direct impacts); however, it does not evaluate a Project's effect on VMT on the entire roadway system,¹⁶ which is evaluated as part of the cumulative analysis.

Regarding the cumulative analysis, the CSUMB campus land use changes are relatively small in the context of Monterey County's residential population and employment; therefore, it is likely that the Project's effect on VMT (cumulative impact) would be localized, such as shifting some existing trips to/from other neighborhoods close to the CSUMB campus. Furthermore, the Project is likely to cause existing pass-through traffic to shift to alternate routes as more CSUMB campus-generated traffic occurs on the local streets within and near the CSUMB campus. Therefore, the Project's effect on VMT, as evaluated by the cumulative effects of the Project's land use and transportation changes, compares the changes in boundary

¹³ The CSU has selected the 15 percent reduction relative to Monterey County based on the OPR *Technical Advisory*, which states "... OPR recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold." (Quote from page 10 of the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018).

¹⁴ The trip generation approach and technical methods are unique because of the size of the CSUMB campus, the unique travel behavior of each portion of the CSUMB population, and varied housing locations of the CSUMB population. Rather than calculating the net increase in project VMT due to the net increase in land use intensity like most projects, the total VMT is prepared for the entire campus under Existing Conditions and Existing with Project Conditions to capture the effects of adding student on-campus housing to the Main Campus and shifting of student housing from East Campus to Main Campus, and increasing the portion of faculty and staff living in the East Campus.

¹⁵ For this analysis, service population is defined as the sum of all employees, residents, and students (Kindergarten through University).

¹⁶ An often-cited example of how a project can affect VMT is the addition of a grocery store in a food desert. Residents of a neighborhood without a grocery store have to travel a great distance to an existing grocery store. Adding a grocery store to that neighborhood will shorten many of the grocery shopping trips and reduce the VMT to/from the neighborhood. This concept is likely to occur with the addition of campus housing.



VMT per service population¹⁷ between the Cumulative and Cumulative with Project conditions, including with and without Eastside Parkway Conditions. Each scenario is described in detail later in this chapter.

For the reasons listed above, the analysis presented in this report focuses on the VMT for all trip purposes and vehicle types without separation of VMT by land use. For the project analysis, the Project generated VMT threshold was developed using the Existing Conditions total VMT for Monterey County because a substantial majority of the campus population (nearly 90 percent of students, faculty, and staff) lives within Monterey County. As a result, most of the CSUMB campus total VMT would be within Monterey County and, therefore, impacts assessed against the Monterey County baseline is the most appropriate assessment of a project's direct impact. Like the Project-generated VMT baseline rate, the boundary VMT baseline uses the Monterey County boundary VMT to evaluate the Project's effects on VMT because the Project effects are likely to be localized near the CSUMB campus and within Monterey County.

OPERATIONS ANALYSIS STUDY AREA AND SCENARIOS (FOR INFORMATION PURPOSES ONLY)

PROJECT STUDY AREA

The study area for the transportation operations analysis presented in this report was determined by using Project traffic volume estimates to identify intersections and freeway segments where the Project may contribute to deficient operations. The outer edges of the study area were defined first, followed by major intersections along local access routes to the campus that could potentially experience deficient operations with the addition of Project traffic and redistribution of traffic. Please refer to the memorandum *California State University, Monterey Bay (CSUMB) Master Plan EIR – Transportation Study Area Locations* in **Appendix A** of this report for additional details regarding the process used to determine the study area. The intersections and freeway segments within the study area are described below.

Study Intersections

A total of 51 intersections, as shown on **Figure 2** and listed here, were selected as study locations in consultation with CSUMB staff and reviewing agencies; the corresponding jurisdiction is noted in parentheses.

1. Del Monte Boulevard and Reindollar Avenue (City of Marina [M])
2. Second Avenue Extension and Patton Parkway (Future Intersection) (M)
3. State Route (SR) 1 Southbound Ramps and Imjin Parkway (Caltrans [Cal])

¹⁷ Boundary VMT captures all VMT on a roadway network within a specified geographic area, including local trips plus interregional travel, that does not have an origin or destination within the area.



4. SR 1 Northbound Ramps and Imjin Parkway (Cal)
5. Second Avenue and Imjin Parkway (M)
6. Third Avenue and Imjin Parkway (M)
7. Fourth Avenue and Imjin Parkway (M)
8. California Avenue and Imjin Parkway (M)
9. California Avenue and Patton Parkway (M)
10. Imjin Road and Imjin Parkway (M)
11. Abrams Drive and Imjin Parkway (M)
12. Reservation Road and Imjin Parkway (M)
13. Blanco Road and Reservation Road (Monterey County [MC])
14. Inter-Garrison Road Connection and Reservation Road (MC)
15. Second Avenue and Ninth Street (M)
16. Second Avenue and Eighth Street (M)
17. Fourth Avenue and Eighth Street (Future Intersection) (M / CSUMB)
18. Imjin Road and Eighth Street (M)
19. Second Avenue and Inter-Garrison Road (M)
20. General Jim Moore Boulevard and Inter-Garrison Road (M/CSUMB)
21. Eighth Street/Seventh Avenue and Inter-Garrison Road (MC / M / CSUMB)
22. Eighth Avenue and Inter-Garrison Road (CSUMB)
23. Abrams Drive and Inter-Garrison Road (MC / CSUMB)
24. Schoonover Road and Inter-Garrison Road (MC)
25. Inter-Garrison Road Connection and Inter-Garrison Road (MC)
26. East Garrison Road and Reservation Road (MC)
27. Reservation Road and Watkins Gate Road (MC)
28. Davis Road and Reservation Road (MC)
29. Second Avenue and Divarty Street (M / CSUMB)
30. General Jim Moore Boulevard and Divarty Street (M / CSUMB)
31. First Avenue and Lightfighter Drive (City of Seaside [S])
32. Second Avenue and Lightfighter Drive (S)
33. General Jim Moore Boulevard and Lightfighter Drive (S)
34. Malmedy Road and Colonel Durham Street (S)
35. Parker Flatts Cut Off Road and Colonel Durham Street (S)
36. Sixth Avenue and Colonel Durham Street (S)



37. Seventh Avenue and Colonel Durham Street (S)
38. Eighth Avenue and Colonel Durham Street (MC)
39. General Jim Moore Boulevard and Gigling Road (S)
40. Malmedy Road and Gigling Road (S)
41. Parker Flatts Cut Off Road and Gigling Road (S)
42. Sixth Avenue and Gigling Road (S)
43. Seventh Avenue and Gigling Road (S)
44. Eighth Avenue and Gigling Road (MC)
45. Eastside Parkway and Gigling Road (MC)
46. General Jim Moore Boulevard and Normandy Road (S)
47. General Jim Moore Boulevard and Coe Avenue (S)
48. Fremont Boulevard-Southbound SR 1 Off-Ramp and Monterey Road (Cal / Sand City)
49. California Avenue and Monterey Road-Northbound SR 1 Off-Ramp (Cal / S)
50. Reservation Road and State Route 68 Westbound Ramps (Cal / MC)
51. Reservation Road and State Route 68 Eastbound Ramps (Cal / MC)

Freeway Segments and Ramps

The freeway segments identified for analysis are those at which the Project is expected to add traffic equal to or greater than two percent of the freeway segment's capacity. Based on this criterion, the following ten freeway segments were selected:

1. State Route 1 between Reservation Road and Del Monte Boulevard (2 segments)
2. State Route 1 between Del Monte Boulevard and Imjin Parkway (2 segments)
3. State Route 1 between Imjin Parkway and Lightfighter Drive (2 segments)
4. State Route 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard (2 segments)
5. State Route 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard (2 segments)

In addition to the above segments, the study area includes the following eight freeway on- and off-ramps:

1. State Route 1 and Imjin Parkway Interchange Ramps (4 ramps)
2. State Route 1 and Lightfighter Drive Interchange Ramps (4 ramps)



ANALYSIS SCENARIOS

The operations of the study intersections, freeway segments, and freeway ramps are evaluated during the weekday morning (AM) and weekday evening (PM) peak hours for the scenarios listed below. These scenarios include a description of the study area conditions at the time the Draft EIR Notice of Preparation was issued (Existing Conditions); Project changes to the existing transportation conditions for all travel modes in the study area (Existing with Project Conditions); and a description of the long-term cumulative setting, approximately 20 years in the future (Cumulative without Project and without Eastside Parkway Conditions and Cumulative with Project and without Eastside Parkway Conditions). Given the uncertainty of the Eastside Parkway project, two cumulative scenarios relating to Eastside Parkway are provided (Cumulative without and with Project and without Eastside Parkway Conditions, and Cumulative without and with Project and with Eastside Parkway Conditions).

- Scenario 1:** *Existing Conditions* – Existing traffic conditions based on existing volumes.
- Scenario 2:** *Existing with Project Conditions* – Scenario 1 volumes plus the combined effects of the CSUMB Master Plan including increased campus population and modifications to existing campus parking and transportation facilities.
- Scenario 3:** *Cumulative without Project and without Eastside Parkway Conditions* – Year 2035 cumulative traffic volumes based on forecasts from the AMBAG regional travel model without Eastside Parkway.¹⁸
- Scenario 4:** *Cumulative with Project and without Eastside Parkway Conditions* – Scenario 3 volumes plus effects of the CSUMB Master Plan including increased campus population and modifications to existing campus parking and transportation facilities.
- Scenario 5:** *Cumulative without Project and with Eastside Parkway Conditions* – Year 2035 cumulative traffic volumes based on forecasts from the AMBAG regional travel model with Eastside Parkway.
- Scenario 6:** *Cumulative with Project and with Eastside Parkway Conditions* – Scenario 5 volumes plus the combined effects of the CSUMB Master Plan including increased campus population and modifications to existing campus parking and transportation facilities.

¹⁸ As of this writing, the Eastside Parkway project does not have an identified funding source, nor has a final alignment been determined. Refer to **Figure 2** for alignment studied.



REPORT ORGANIZATION

This report is divided into five sections and 11 chapters:

- **Existing Conditions and Relevant Plans**
 - **Chapter 2 – Existing Conditions** describes the existing campus parking and transportation demand management and the transportation system near the Project site, including the surrounding roadway network, AM and PM peak hour driveway and intersection turning movement volumes, existing bicycle, pedestrian, and transit facilities, intersection levels of service, freeway segment levels of service, and ramp operations.
 - **Chapter 3 – Summary of Relevant Circulation and Transportation Plans** provides background information to be used for the plan consistency evaluation.
- **CEQA Significance Criteria, VMT Analysis Methods, Impacts and Mitigation**
 - **Chapter 4 – Significance Criteria and Analysis Methods** lists the significance criteria used for the environmental impact analysis. This chapter also discusses the traffic forecasting methods used to estimate total VMT per service population rate and the Project's effect on VMT using boundary VMT per service population.
 - **Chapter 5 – CEQA Impacts and Mitigation** evaluates the Project's impacts on the overall transportation system via the VMT analyses and to transit, bicycle, and pedestrian systems, and identifies mitigation measures, if warranted, to address significant impacts of the Project.
- **Parking Management and TDM**
 - **Chapter 6 – Parking Management and TDM** describes the parking supply and mode share assumptions used in the transportation analysis, which establishes the business as usual condition for the future Parking Management and TDM Plan. To assist with refining the proposed PDFs and implementation of the Master Plan, the Main Campus Parking Evaluation and Main Campus Inbound AM peak Hour Mode Share Evaluation was conducted using the parking demand and mode share data collected for this report.
- **Operations Analysis (For Information Purposes Only)**
 - *Chapter 7 – Operations Analysis and Project Traffic Forecasting Methods (For Information Purposes Only)* describes the traffic analysis methods and traffic volumes used for the operations analysis chapters.
 - *Chapter 8 – Existing with Project Conditions (For Information Purposes Only)* addresses intersection and freeway operations for Existing with Project Conditions. The relevant Project information and Project trip generation, distribution, and assignment is also discussed in this chapter.



- *Chapter 9 – Cumulative without Eastside Parkway Conditions (For Information Purposes Only)* addresses the cumulative intersection and freeway operations for conditions without and with the Project and without the Eastside Parkway.
- *Chapter 10 – Cumulative with Eastside Parkway Conditions (For Information Purposes Only)* addresses the cumulative intersection and freeway operations for conditions without and with the Project and with the Eastside Parkway.
- *Chapter 11 – Transportation Deficiencies and Improvements (For Information Purposes Only)* describes the Project's effects on intersection and freeway operations, and identifies improvements to address deficiencies caused by the Project. This chapter also includes an evaluation of potential secondary effects to bicycle and pedestrian facilities associated with the roadway system improvements.



2. EXISTING CONDITIONS

This chapter describes the Existing Conditions associated with roadways, truck routes, pedestrian facilities, bicycle facilities, and transit service near the Project site. It also presents existing vehicle volumes, and operations for the study intersections and freeway segments.

EXISTING CAMPUS PARKING AND TRANSPORTATION DEMAND MANAGEMENT

This section describes the existing parking conditions and transportation demand management (TDM) program currently in effect on the campus. The parking uses are described as academic parking and residential parking:

- Academic parking serves students (residing on- and off-campus), staff, employees, and visitors, and is not restricted to on-campus residents as is residential parking, described below. Academic parking also includes handicapped, electric vehicle, and motorcycle parking that serves all populations.
- Residential parking is parking reserved for on-campus residents only. Residential parking includes handicapped, electric vehicle, and motorcycle parking reserved for on-campus residents.

EXISTING PARKING INVENTORY AND DEMAND SURVEY

To assess the existing level of parking demand on-campus and the related available inventory, a parking occupancy survey was conducted over a three-day period for the academic and residential parking areas located within the Main Campus on typical non-holiday days (Tuesday, November 28, 2017; Wednesday, November 29, 2017; and Thursday, November 30, 2017). This parking occupancy survey also provided a parking inventory of the existing parking lots on the campus. The details of the survey results are provided in **Appendix C**.

Under Existing Conditions, the campus has 40 parking lots with a total of 4,721 academic and residential spaces. **Table 2** presents a summary of the number of existing parking spaces on the CSUMB Main Campus.



TABLE 2: EXISTING PARKING SPACES

Parking Type	Spaces ¹
Academic	3,730
Residential	991
Total	4,721

Notes:

1. Residential lots include both North Quad and Promontory Housing lots. Students who live in the Main Quad park in Academic lots.

Source: CSUMB data received May 2018. Fehr & Peers, 2019.

Table 3 presents the core campus peak parking demand rates, which are estimated as the total parking utilized on the campus divided by the existing campus population, for the academic and residential parking lots based on the survey results. For the academic parking lots, the peak parking occupancy period occurred at 11:00 AM at a demand rate of 0.31 parking spaces per FTE; for the residential parking lots the peak parking occupancy period occurred at 7:00 AM at a demand rate of 0.20 parking spaces per student. Academic and residential parking occupancy percentages depict the amount of existing parking utilized compared to the amount of existing parking available on the campus, and are shown for every half-hour from 7:00 AM to 7:00 PM in **Figure 7** and **Figure 8**.

TABLE 3: EXISTING PARKING DEMAND RATES

Item	Academic	Residential
Existing Peak Parking Demand	2,396 spaces	525 spaces
Existing Population	7,658 FTE	2,600 residents
Existing Parking Demand Rate	0.31 spaces/FTE	0.20 spaces per resident

Notes:

1. FTE = Full-time equivalent students, faculty, and staff

Source: CSUMB data received May 2018. Fehr & Peers, 2019.



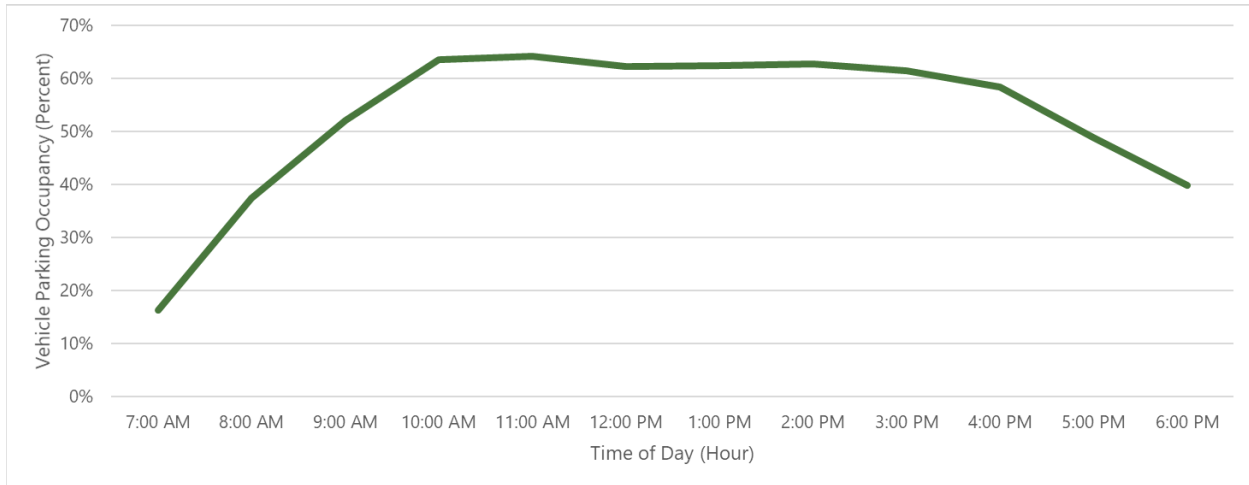


Figure 7 Academic Parking Occupancy from 7:00 AM to 7:00 PM

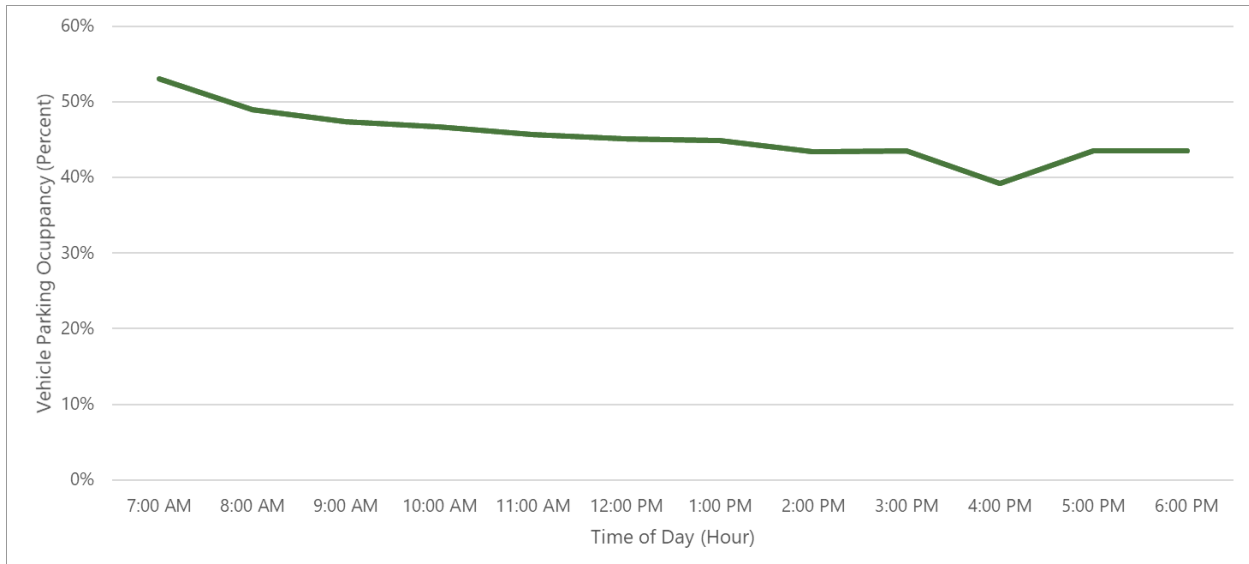


Figure 8 Residential Parking Occupancy from 7:00 AM to 7:00 PM

In terms of the direct observations, the peak observed academic parking demand for the entire campus was 2,396 vehicles, or 64 percent occupied, at 11:00 AM. The peak observed residential parking demand for the entire campus was 525 vehicles, or 53 percent occupied, at 7:00 AM. The overall academic and residential demand of 2,921 vehicles is lower than existing parking supply of 4,721 parking spaces and represents an overall occupancy rate of approximately 62 percent. Assuming a circulation factor of five percent, the estimated existing parking supply based on the existing demand would be 3,068 parking spaces, which is 1,653 spaces fewer than the actual existing parking supply.



EXISTING TRANSPORTATION DEMAND MANAGEMENT PROGRAM

The existing CSUMB TDM program complements the on-campus housing of students, faculty, and staff and enhances the quality of pedestrian, bicycle, and transit facilities on campus. Housing and high-quality transportation infrastructure helps to promote walking, bicycling, and transit use, which reduces vehicle trips to/from the campus. CSUMB's Master Plan Guidelines include the following existing TDM strategies intended to provide residents and off-campus students, faculty, and staff with transportation options that can reduce vehicle trip generation:

- Otter Cycle Center – on-campus bicycle repair shop that also offers bicycle rentals and other services to facilitate bicycle ridership.
- Bicycle Storage and Amenities – several hundred bicycle racks have been installed on campus outside of residence halls and popular academic, recreation and administrative buildings. Additionally, a secure bicycle bunker storage room has been installed, as well as two 'fix-it' stations that provide 24/7 access to bicycle repair tools and air pumps. Bicycle registration is also available through the University Police Department to simplify that process. Three skateboard storage racks also have been installed in the popular destinations on campus.
- Paid Parking – to discourage non-CSUMB related vehicle trips the campus manages parking on campus via a parking permit fee structure presently based upon campus, community, or vehicle type and parking timeframes. The fees have increased several times over the last two decades to more accurately match the true cost of providing managed parking.
- Monterey-Salinas Transit (MST) – the campus has entered into an agreement with MST that is annually renewed and provides universal access on the MST bus network for all active CSUMB ID card holders, three supplemental campus-serving and subsidized bus routes, and funding for a shared transit marketing student intern.
- Emergency Ride Home Program – campus community members can sign up for a program run by Transportation Agency for Monterey County (TAMC) that reimburses taxi or ridesharing trips home in emergency situations for commuters who use alternative means of transportation.
- Carsharing and Ridesharing – CSUMB hosts four cars for carsharing. These are cars stationed on the campus available for use by carshare members on the campus. Additionally, CSUMB students, faculty and staff can use Go831, a regional ride share program.
- Transportation Services Website – Information for most of the available TDM strategies is included on a campus website to facilitate information dissemination.
- Delivery Vehicle Limitations – to discourage delivery vehicle trips, drivers providing frequent delivery services to campus, such as office supply deliveries, have been instructed to limit their deliveries to campus to no more than three days per week.



- Bicyclist/Pedestrian Malls – to encourage pedestrian and bicycle use, a section of Divarty Street and a section of Sixth Avenue are closed to regular vehicular traffic to accommodate pedestrians and bicyclists.
- Traffic Calming – to discourage automobile use and provide increased safety, speed humps and flashing beacon crosswalk devices have been installed on several campus roadways to reduce vehicle speeds, particularly near high traffic pedestrian crosswalks.

EXISTING STREET SYSTEM

Regional access to the CSUMB Main Campus is provided by State Route (SR) 1. Primary local access to the CSUMB campus is provided by Imjin Road from the north, Inter-Garrison Road from the west and east, and General Jim Moore Boulevard from the south. The Main Campus entrance at Lightfighter Drive and General Jim Moore Boulevard is marked by a gateway entrance sign. Traffic from Seaside or the Monterey Peninsula access the campus from the General Jim Moore Boulevard entrance; traffic from Salinas or Marina accesses the campus via either the Second Avenue, Imjin Road, or Inter-Garrison Road entrances; and traffic from Santa Cruz County access the campus entrances at either Inter-Garrison and Second Avenue or Imjin Road. These roadways are described below and illustrated in **Figure 1**.

State Route 1 (SR 1) is a state highway within Monterey County, providing access to Watsonville and Santa Cruz to the north via Seaside, Marina, and Castroville, and to San Luis Obispo to the south via Monterey and Carmel. Through its connection to SR 156 in Castroville, SR 1 also provides access to US 101 and the greater San Francisco Bay Area. Through Marina and Seaside, SR 1 has a posted speed limit of 65 miles per hour (mph), and provides four lanes north of the Del Monte Boulevard interchange, six lanes south of Del Monte Boulevard interchange to the Fremont Boulevard/Del Monte Boulevard interchange, and returns to four lanes south of the Fremont Boulevard/Del Monte Boulevard interchange. SR 1 average daily traffic (ADT) counts range between 51,560 to 96,960 for the segments between Del Monte Boulevard and Canyon Del Rey Boulevard, with the highest ADT between Imjin Parkway and Del Monte Boulevard.

Reservation Road is a major arterial extending from the Pacific Ocean at Marina State Park west of Dunes Drive, through the City of Marina. East of Del Monte Boulevard, Reservation Road is a four-lane divided street. At East Garrison Road, east of Imjin Parkway, it narrows to a two-lane rural highway. Reservation Road is under the jurisdiction of the City of Marina west of Blanco Road and the County of Monterey east of Blanco Road. The ADT on Reservation Road ranges between 6,220 to 26,570 vehicles with the lowest ADT south of Blanco Road, and the highest ADT between Imjin Road and Blanco Road.

Imjin Parkway is an arterial street within the City of Marina limits. Imjin Parkway is a two-lane road at its interchange with SR 1 and a four-lane divided street with left-turn channelization east of the northbound SR 1 ramps and two lanes east of Imjin Road. Imjin Parkway has bike lanes on each side of the street starting east of Second Avenue with the eastbound bike lane ending at Reservation Road. The speed limit on Imjin Parkway is



45 mph. Imjin Parkway has an ADT of 22,500 east of Second Avenue and an ADT of 28,220 west of Second Avenue toward SR 1.

California Avenue/Fifth Avenue is a two-lane arterial from central Marina to Imjin Parkway, and a local street south of Imjin Parkway ending at Inter-Garrison Road. California Avenue connects Reservation Road with Imjin Parkway and CSUMB. Bicycle lanes are provided along California Avenue/Fifth Avenue between Imjin Parkway and Reservation Road. The speed limit on California Avenue is 25 mph. The ADT on California Avenue north of Imjin Parkway is 5,900.

Eighth Street is a two-lane arterial from First Avenue to Inter-Garrison Road that is currently closed (future extension is planned) between Third Avenue and Fifth Avenue. The speed limit along Eighth Street is 35 mph.

Inter-Garrison Road extends from Second Avenue to Reservation Road as a two-lane arterial. The extension of Inter-Garrison Road (referred to as the Inter-Garrison Road Connection in this analysis) to Reservation Road, completed in 2013, provides a regional connection from the Marina-Salinas area to SR 1. The speed limit on Inter-Garrison Road is 35 mph between Eighth Avenue and Schoonover Road and 25 mph between Second Avenue and Eighth Avenue. Inter-Garrison Road has an ADT of 8,450 between Eighth Avenue and Abrams Drive, and an ADT of 2,630 between Second Avenue and Third Avenue.

Lightfighter Drive starts from the SR 1 ramps as an east-west street that continues as the north-south street Malmedy Road at the intersection of Colonel Durham Street. From the SR 1 interchange to General Jim Moore Boulevard, the street is a four-lane divided major arterial with a speed limit of 40 mph. East of General Jim Moore Boulevard, Lightfighter Drive is a two-lane minor arterial with a speed limit of 25 mph. West of General Jim Moore Boulevard, the ADT on Lightfighter range between 13,250 and 15,000 vehicles.

Divarty Street is a two-lane local street from First Avenue to Fifth Avenue providing access to the core of the CSUMB campus. The speed limit along Divarty Street is 25 mph.

Colonel Durham Street is a two-lane local street that extends between Lightfighter Drive/Malmedy Road to the west and Eighth Avenue to the east. The street has pedestrian facilities along one or both sides west of Sixth Avenue, and although it is a local street, the speed limit is 35 mph along its entirety.

Gigling Road is a two-lane arterial that starts just east of SR 1 at Noumea Road and extends to Eighth Avenue. Gigling Road has a speed limit of 30 mph and an ADT of 6,300 vehicles.

Second Avenue connects Lightfighter Drive in Seaside with Imjin Parkway in Marina, along the western edge of CSUMB. Second Avenue is a north-south arterial street in Marina and Seaside with four lanes from Imjin Parkway to Tenth Street, two lanes from Tenth Street to Divarty Street, and returns to four lanes south of Divarty Street. Second Avenue has right-turn and left-turn channelization on the entire stretch of the street, and bike lanes north of Divarty Street to Imjin Parkway. The speed limit on Second Avenue is 35 mph. The lowest ADT on



Second Avenue is 2,500 vehicles south of Divarty Street. Second Avenue's ADT is highest north of Fifth Street, with ADT of 6,330 vehicles.

General Jim Moore Boulevard is a four-lane arterial that extends from Canyon del Rey Boulevard to Lightfighter Drive in Seaside. Once it enters the campus at Lightfighter Drive, the street becomes a two-lane arterial to Fifth Street with a posted speed limit of 25 mph on campus. The ADT on General Jim Moore Boulevard ranges between 5,230 to 9,600 vehicles, with the lowest ADT north of Lightfighter Drive (on campus) and highest ADT between Lightfighter Drive and Gigling Road (south of campus).

Sixth Avenue is a north-south local street that extends from Gigling Road to Eighth Street. The two-lane connector has restricted access from CSUMB's Student Services building, 250 feet south of A Street to B Street.

Seventh Avenue is a north-south two-lane local street that extends from Gigling Road to the south to Eighth Street/Inter-Garrison Road to the north.

Eighth Avenue is a north-south two-lane local street that extends from Gigling Road on the south to Inter-Garrison Road at in the north.

Abrams Drive is a two-lane connector between Imjin Parkway and Inter-Garrison Road, with a posted speed limit of 30 mph and ADT of 5,050. Abrams Drive is the main street through East Campus Housing and connects to Bunker Hill Drive, Manassas Drive, and Schoonover Road.

Schoonover Road is a two-lane connector between Abrams Drive and Inter-Garrison Road with a posted speed limit of 25 mph. The street travels through the eastern side of the East Campus Housing.

EXISTING TRUCK ROUTES

SR 1 is identified as part of the regional truck network. The freeway is intended to move goods efficiently within the cities of Marina and Seaside, between outlying agricultural uses, and packing/distribution centers. Additionally, the freeway serves to separate truck traffic from local streets where the larger vehicles may conflict with other uses.

Both the City of Marina and City of Seaside designate and describe streets that permit commercial vehicles exceeding three tons as truck routes with appropriate signage. Neither city has an existing truck route network, but in the Circulation Element of the Seaside General Plan, the City identified establishing a truck route network as an ongoing goal to reduce impacts on residential neighborhoods. In the City of Marina, commercial trucks are prohibited from entering local residential streets and collectors except for the purpose of local deliveries.



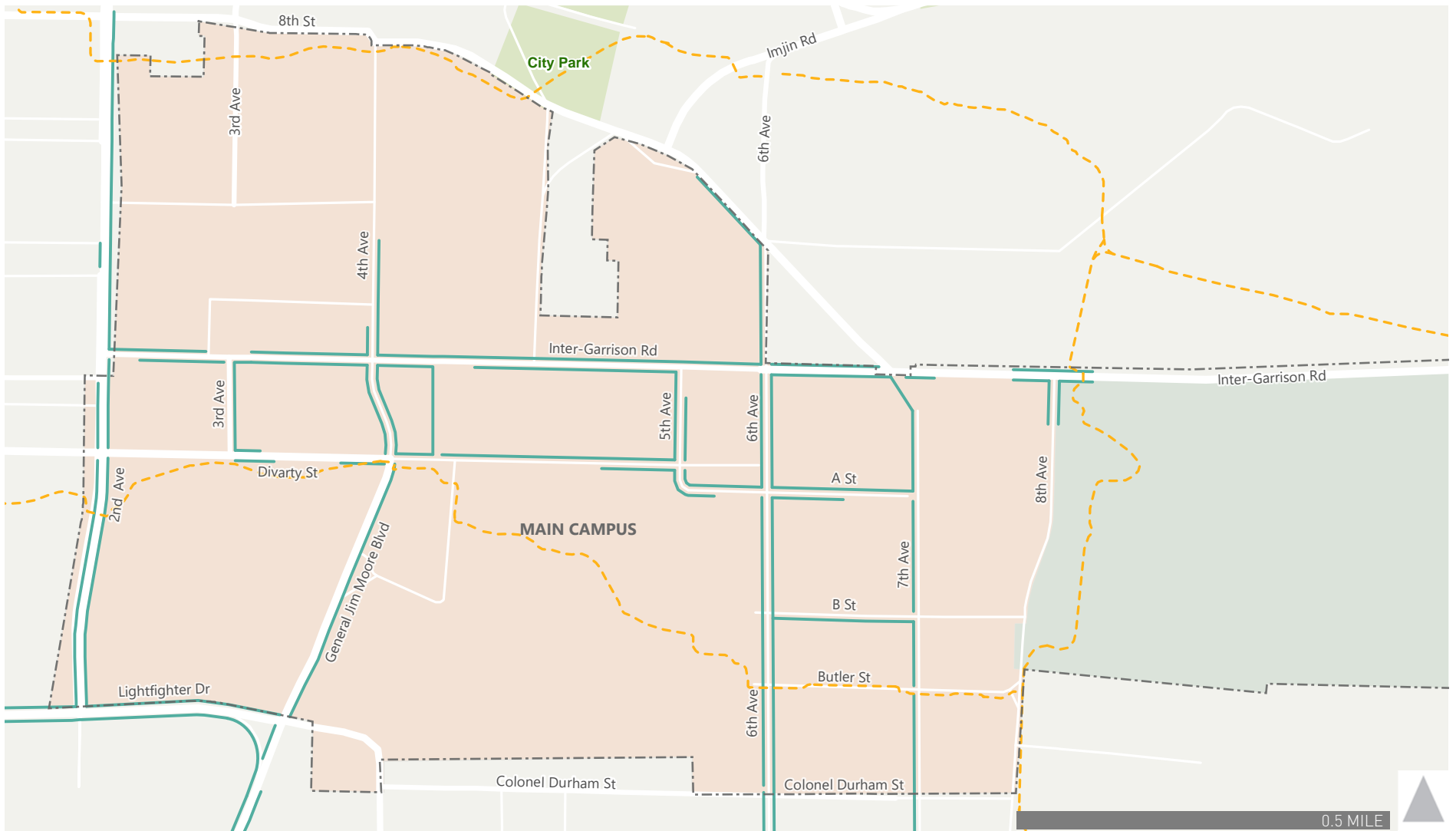
EXISTING PEDESTRIAN FACILITIES

The CSUMB campus has a variety of pedestrian accommodations, such as sidewalks, pedestrian malls, and trails. Some portions of the campus, such as existing pedestrian malls on Divarty Street and Sixth Avenue which are street segments reserved for primarily pedestrian use with limited transit and service vehicle usage, have a high-quality walking environment with many destinations within a close walking distance, while other areas of campus lack sidewalks. **Figure 9** shows the locations of existing sidewalks and sidewalk gaps on and near the CSUMB campus.

Arterial roads such as Lightfighter Drive, Second Avenue and Gigling Road have sidewalks on one or both sides of the street. Several local streets within and near the campus do not have sidewalks, creating gaps in the pedestrian network.

While CSUMB has made improvements to the on-campus pedestrian network, a limited number of direct, accessible, and protected pedestrian connections are in place through parking lots and to the existing sidewalk network. Additionally, there are no existing sidewalks along Inter-Garrison Road connecting the Main Campus to the East Campus Housing area east of Eighth Avenue. In many areas, the natural topography exceeds a five percent grade, making the construction of Americans with Disabilities Act (ADA)-accessible pathways difficult along some streets such as Fifth Avenue, Sixth Avenue, and portions of Inter-Garrison Road. Distances between major destinations that are more than a 10-minute walk, coupled with a mild yet windy and foggy coastal climate, can deter pedestrian movement.





- California State University Monterey Bay Main Campus
- California State University Monterey Bay East Campus

- Existing Pedestrian Network**
- Existing Sidewalk

- Planned Pedestrian Network**
- Fort Ord Regional Trail & Greenway (FORTAG) Preferred Alignment



Figure 9
Existing CSUMB and Regionally Planned Pedestrian Facilities

EXISTING BICYCLE FACILITIES

There are several existing bicycle facilities on the CSUMB campus and in surrounding areas, comprised of bike routes or boulevards, bike lanes, and separated bike paths or trails. On campus and surrounding the campus, there are 3.8 miles of bike boulevards, which are low-speed and low-volume streets designated with pavement markings for shared bicycle use with motor vehicles, and other bike facilities along roadways. The campus has parking for 580 bicycles, which includes 36 secure indoor spots within the Bike Bunker parking facility, which are typically well-utilized during the academic year.

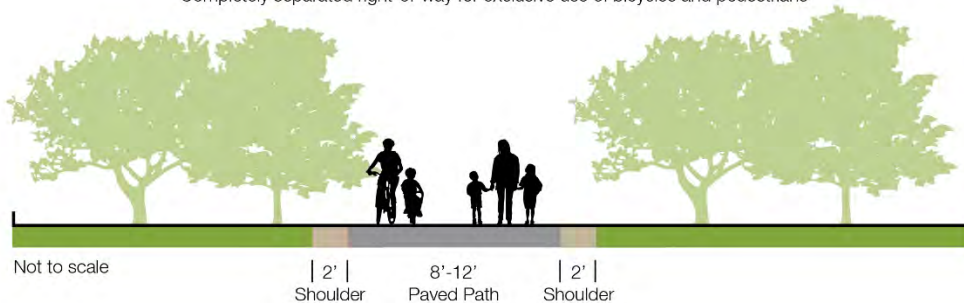
Figure 10 shows the existing and regionally planned bicycle facilities as described in the *2011 Transportation Agency for Monterey County (TAMC) Bicycle and Pedestrian Master Plan, 2016 for a Regional Urban Design Guidelines* and *2018 Monterey County Active Transportation Plan*.

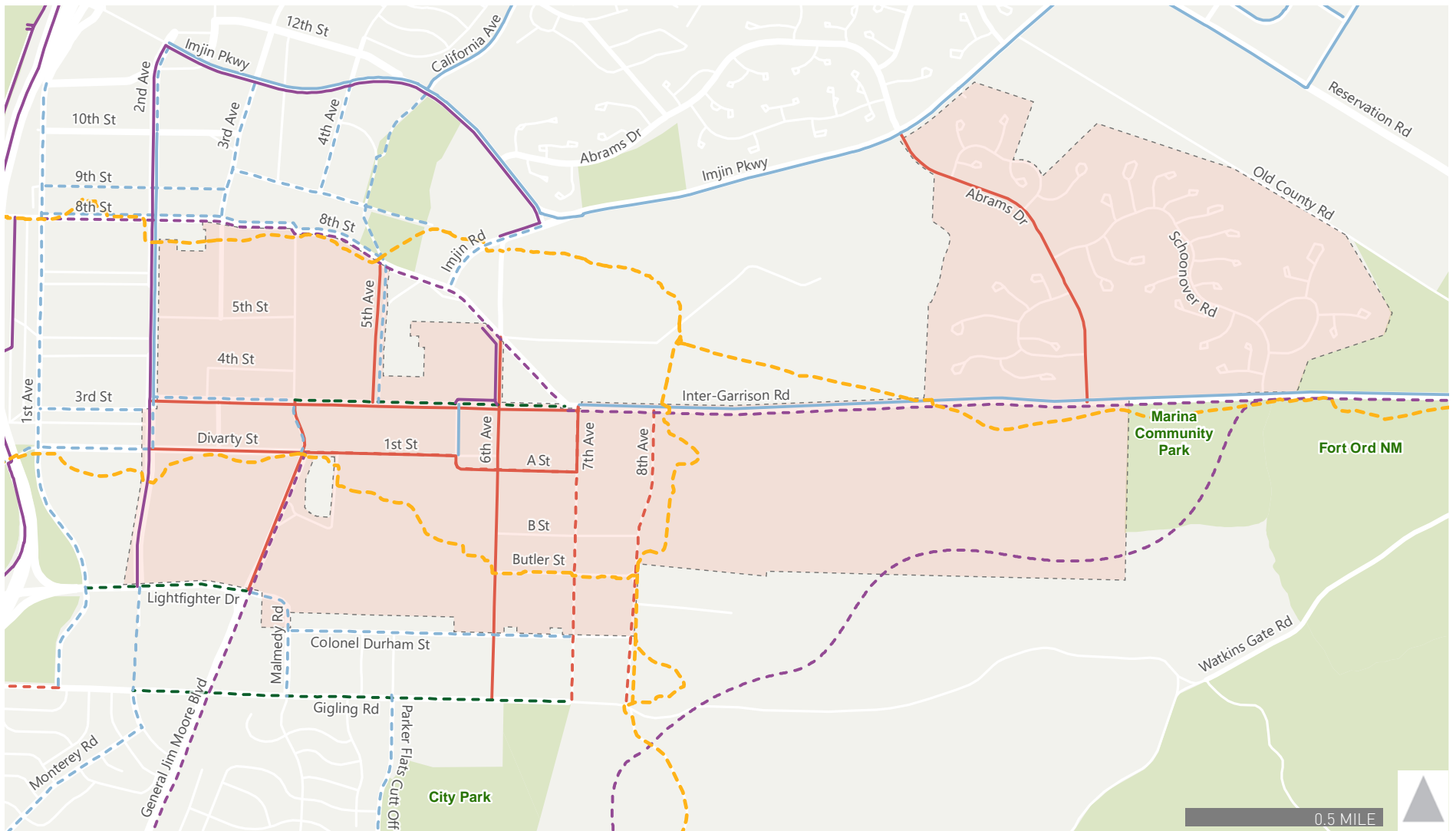
Bikeway planning and design in California typically relies on guidelines and design standards established by the California Department of Transportation (Caltrans) in the *Highway Design Manual* (Caltrans 2020). The *Highway Design Manual* provides for three distinct types of bikeway facilities that are applicable to the campus, as described below and shown in the accompanying figures.


- Class I Bikeways (Shared-Use Paths) provide a completely separate right-of-way and are designated for the exclusive use of bicycles and pedestrians, with vehicle and pedestrian crossflow minimized. The campus recently constructed its first separated bike path, or a Class I facility, between the Promontory housing and Inter-Garrison Road. On the campus periphery, separated bicycle paths exist on the east side of Second Avenue between Lightfighter Drive and Imjin Parkway and off campus, along Imjin Parkway between Second Avenue and Imjin Road, at which point it transitions to an in-road shared bicycle route.

SHARED-USE PATH (CLASS I)




Completely separated right-of-way for exclusive use of bicycles and pedestrians





 California State University Monterey Bay Campus

Existing Bicycle Facilities

-  Class I - Shared Use Path
-  Class II - Bicycle Lane
-  Class III - Bicycle Route

Planned Bicycle Facilities

-  Fort Ord Regional Trail & Greenway (FORTAG) Preferred Alignment
-  Class I - Shared Use Path
-  Class II - Bicycle Lane
-  Class III - Bicycle Route
-  Class IV - Cycle Track/Separated Bikeway

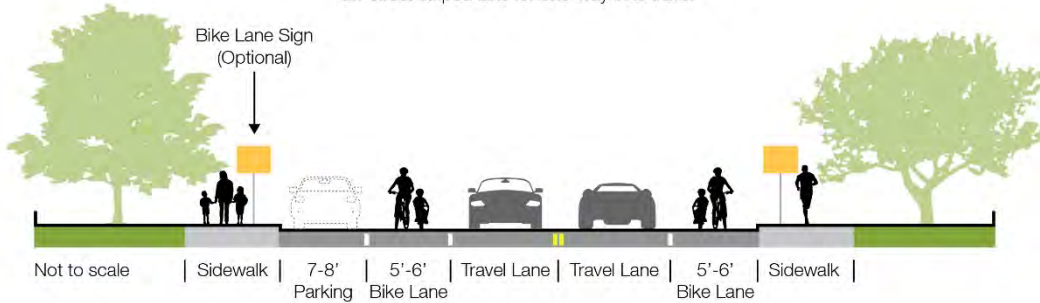


Figure 10
Existing CSUMB and Regionally Planned Bicycle Facilities

- Class II Bikeways (Bicycle Lanes) are dedicated lanes for bicyclists generally adjacent to the outer vehicle travel lanes, that have special lane markings, pavement legends, and signage. Bicycle lanes are at least five (5) feet wide. Bicycle lanes, also known as Class II facilities, are provided on Second Avenue, General Jim Moore Boulevard from Lightfighter Drive to Inter-Garrison Road, Fifth Avenue from Divarty Street to Inter-Garrison Road and Inter-Garrison Road from Seventh Avenue to Schoonover Drive.

BICYCLE LANE (CLASS II)

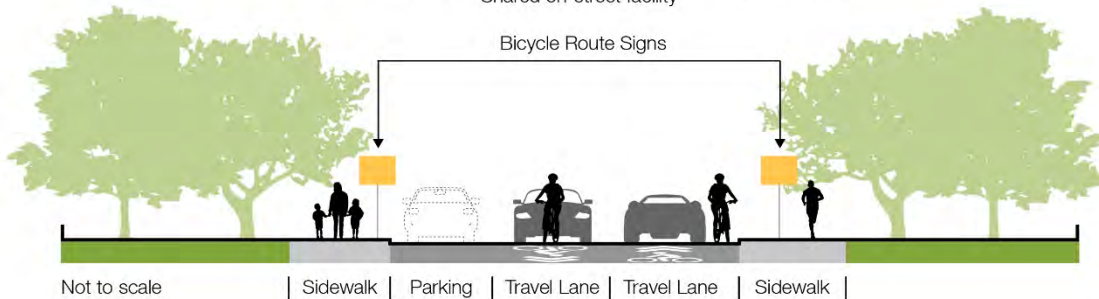
On-street striped lane for one-way bike travel



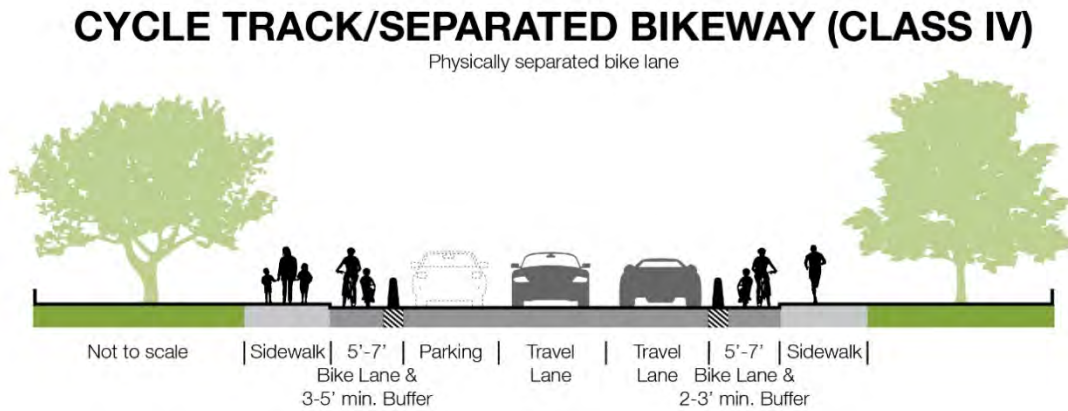
- Class III Bikeways (Bike Boulevards/Bicycle Routes) are designated by signs or pavement markings for shared use with motor vehicles but have no separated bike right-of-way or lane striping. On-campus bike routes, known as Class III facilities, include approximately 3.8 miles of bicycle boulevards on the following road segments: Divarty Street from Second Avenue to A Street, A Street from Divarty to Seventh Avenue, Seventh Avenue from Inter-Garrison Road Colonel Durham Street, and Inter-Garrison Road from Seventh Avenue to Second Avenue.

BICYCLE ROUTE (CLASS III)

Shared on-street facility



- Class IV Bikeways (Cycle Tracks or “Separated” Bikeways) provide a right-of-way designated exclusively for bicycle travel within a roadway and are protected from other vehicle traffic by physical barriers, including, but not limited to, grade separations, flexible posts, inflexible vertical barriers such as raised curbs or parked cars. None of the existing facilities in the study area classify as Class IV bikeways.



EXISTING TRANSIT SERVICE

The public transit system that connects the CSUMB campus to the greater Monterey and Salinas area is operated by the Monterey-Salinas Transit District (MST). Students, staff, and faculty receive free boarding and unlimited access on all MST regular bus routes with their CSUMB Otter ID card. Eight bus routes serve stops in or along the boundary of the CSUMB campus throughout the academic year: Routes 12, 16, 18, 19, 25, 26, 67, and 74. **Figure 11** shows the map of the transit services that run through the academic year, and **Table 4** describes weekday bus route information and route access from CSUMB to major points of interest throughout the region.

Seven bus routes travel along Fourth Avenue and connect with a main stop that is centrally located adjacent to CSUMB’s Alumni and Visitor Center and west of the Main Campus. Routes serve a total of 21 on-campus bus stops – 11 stops in the Main Campus and 10 stops in the East Campus. A majority of the stops are located along Inter-Garrison Road, Second Avenue, and Sixth Avenue. Routes 16, 19, 25, 26, and 74 travel through the campus and provide service to the stops located at the East Campus Housing.

Students, faculty, and staff with physical disabilities have access to the MST para-transit program, RIDES. This service operates on a point-to-point basis with no restrictions on purpose of the trip and appointments are required to guarantee service. The para-transit service accommodates travel to and from locations that are up to three-quarters of a mile from any of MST’s regular bus routes and the service is available during the hours of operation of MST’s regular fixed-route bus service. CSUMB also offers a wheelchair accessible cart that is



available for University Departments/Group tours, campus-wide orientations, and major events such as Commencement.

BUS ROUTE BOARDINGS

The boarding factors for all bus routes described in **Table 4**, including the number of buses, the capacity of each bus, and the number of passenger boardings (general and CSUMB) per bus, are provided for the AM and PM peak hours in **Table 5** (except Route 19 with a daily factor). Boarding factor is defined as the average number of passenger boardings relative to average bus capacity.

As shown on the table, Routes 12, 16, 18, and 74 run vehicles with a capacity between 46 to 59 passengers, and Routes 19, 25, and 26 run vehicles with a capacity of 21 passengers. Students make up more than 50 percent of the ridership on an average day for Routes 16, 19, 25, and 26. Route 16, which runs from The Dunes development at Second Avenue through the Main Campus and East Campus to the Marina Transit Exchange, has an estimated average boarding factor of 0.20 in the AM peak hour and 0.24 in the PM peak hour, with students making up 0.10 and 0.14 of those boarding factors, respectively. Route 19, which runs on Fridays and weekends, has a daily boarding factor of 0.29, with students making up most of that boarding factor (0.23). Routes 25 and 26, which primarily serve the campus, have estimated average weekday boarding factors greater than 0.20, with students making up most or all of the boardings. Route 74 has the highest boarding factor of 0.59 in the AM peak hour. Students make up a small percentage of the passengers of Route 74.



TABLE 4: EXISTING WEEKDAY MST TRANSIT SERVICE SUMMARY

Route	Description	From	To	Hours of Operation	Average Weekday Headway	Average Weekday Boardings ¹	CSUMB Weekday Boardings ¹
12	The Dunes - NPS	CSUMB Alumni & Visitor Center	Naval Postgraduate School	6:45 AM to 5:40 PM	Limited ²	37	10%
16	Marina – The Dunes	CSUMB Alumni & Visitor Center	Marina Transit Exchange	5:35 AM to 10:30 PM	Every 60 Minutes	376	60%
18	Monterey – The Dunes	CSUMB Alumni & Visitor Center	Monterey Transit Plaza	6:00 AM to 10:40 PM	Every 60 Minutes	383	43%
19	Del Monte Center – CSUMB East Campus	CSUMB Alumni & Visitor Center	Del Monte Center	Fridays & Saturdays: 1:00 PM to 2:55 AM Sundays: 6:00 PM to 11:50 PM	Every 60 Minutes before 7:00 PM Every 120 minutes after 7:00 PM ³	66	80%
25	CSUMB – Salinas	CSUMB Alumni & Visitor Center	Salinas Transit Center	6:20 AM to 10:35 PM	Every 60 Minutes	120	80%
26	CSUMB – East Campus Express	CSUMB Alumni & Visitor Center	East Campus	6:30 AM to 12:25 AM	Every 20 minutes	390	98%
67 ⁴	Presidio – Marina	Otter Sports Center	Reservation & Beach	Fridays: 2:15 PM to 10:10 PM Weekends: 10:15 AM to 10:10 PM	Every 120 minutes ⁵	-	-
74 ⁶	Presidio – Toro Park	CSUMB Alumni & Visitor Center	Portola and Anza	6:30 AM to 6:00 PM	Limited ²	89	3%

Notes:

1. Boardings collected for the CSUMB Spring 2017 Semester, from January 23, 2017 to May 12, 2017. Boardings based on average Tuesday to Thursday boardings for all routes except Route 19. Average boardings for Route 19 based on Friday and Saturday data.
 2. Headways for Route 12 range between 60 to 120 minutes. Route 74 runs one route in each direction in the morning and one evening route towards Toro Park.
 3. Route 19 only operates on Fridays and weekends, and headways are shown for Fridays and Saturdays, since the hours of operation are limited for Sunday.
 4. Route 67 service started operating in September 2017.
 5. Route 67 runs every 60 minutes on weekends.
 6. Regular service does not make a scheduled stop at CSUMB Alumni and Visitor Center. Express Service in the evening does not make a stop at CSUMB Alumni and Visitor Center.
- Source: Calculations based on boarding data provided by MST in August 2017. Route descriptions and hours of operation are based on printable map and schedules downloaded from MST.org in December 2017.



TABLE 5: AVERAGE WEEKDAY MST BOARDING FACTORS

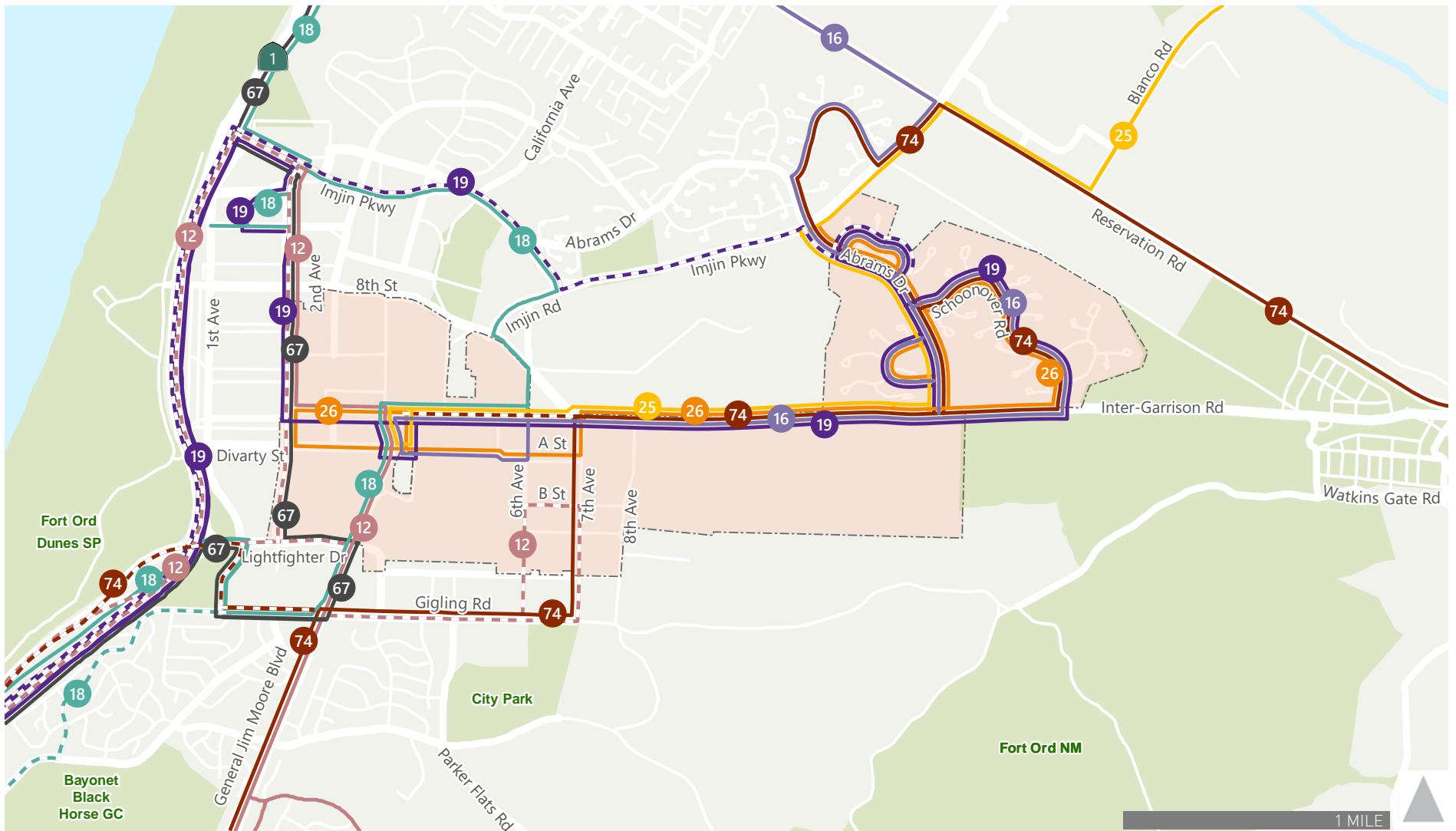
Route ¹	Peak Hour ²	Average Number of Peak Period Buses [A]	Bus Capacity [B] ¹	Total Peak Hour Capacity [(A * B) / 2 = C]	Average Peak Hour Boardings [D] ²	Average Peak Hour CSUMB Boardings [E] ²	Boarding Factor [D/C = F]	CSUMB Boarding Factor [E/C = G]
12	AM	5	49	123	8	1	0.07	0.01
	PM	3	49	74	6	1	0.08	0.02
16	AM	5	47	118	23	12	0.20	0.10
	PM	5	47	118	28	16	0.24	0.14
18	AM	5	47	118	22	7	0.19	0.06
	PM	5	47	118	33	17	0.28	0.14
19	Daily ³	11	21	231	66	53	0.29	0.23
25	AM	3	21	32	8	6	0.25	0.19
	PM	3	21	32	7	6	0.22	0.19
26	AM	10	21	105	22	22	0.21	0.21
	PM	10	21	105	29	29	0.28	0.28
74	AM	2	56	56	33	1	0.59	0.02
	PM	1	56	56	7	1	0.13	0.02

Notes:

1. Bus capacity includes sitting and standing capacity.
2. Calculations based on Spring 2017 Tuesday through Thursday peak period ridership data provided by MST. Peak hour boardings were calculated by dividing the peak period capacity by two.
3. Route 19 only operates on Fridays and weekends. Boarding factor for Route 19 is based on average ridership on Friday and Saturday, since hours of operation are limited on Sundays.

Source: Calculations based on Spring 2017 Tuesday through Thursday peak period and daily ridership data provided by MST in August 2017.





Note: Transit Routes shown for Academic Year, 2017

 California State University Monterey Bay Campus

Monterey-Salinas Transit (MST)

 Regular Service Routes

 Express/Select Trips

Headways

20 minutes: 26

60 minutes: 16, 18, 19, 25

120 minutes: 67

Limited: 12, 74



Figure 11
Existing Transit Service to CSUMB

EXISTING INTERSECTION OPERATIONS

Intersection traffic operations were evaluated during a typical mid-week day during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods at the 51 study intersections. For the study intersections, the single hour with the highest traffic volumes during each count period was identified. In addition, counts of pedestrian and bicycle volumes were collected during the morning (AM) and evening (PM) peak periods at the study intersections. All counts were collected in May 2017 and April 2018 while CSU and local schools were in session; the data is shown in **Appendix D**.

Table 6 shows the existing level of service at each study intersection. (refer to **Chapter 7** for a description of the level of service (LOS) analysis method and relevant LOS standards for each jurisdiction.) **Appendix E** contains the analysis sheets documenting the intersection level of service calculations. The intersection volumes are shown in **Figure 12**.

The following intersections, with applicable peak hour noted, exceed their applicable level of service standard of the local jurisdiction under Existing Conditions (i.e., without Project, Conditions):

- Int 3. SR 1 Southbound Ramps and Imjin Parkway (AM peak hour)
- Int 4. SR 1 Northbound Ramps and Imjin Parkway (PM peak hour)
- Int 6. Third Avenue and Imjin Parkway (AM and PM peak hour)
- Int 7. Fourth Avenue and Imjin Parkway (AM and PM peak hour)
- Int 16. Second Avenue and Eighth Street (AM peak hour)
- Int 23. Abrams Drive and Inter-Garrison Road (AM peak hour)
- Int 47. General Jim Moore Boulevard and Coe Avenue (AM peak hour)
- Int 48. Fremont Boulevard/Southbound SR 1 Off-Ramp and Monterey Road (AM and PM peak hour)



TABLE 6: EXISTING INTERSECTION LEVELS OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
1	Del Monte Boulevard and Reindollar Avenue	4/25/2018	Signalized	M (D)	AM PM	11.6 8.9	B A
2	Second Avenue Extension and Patton Parkway	Future	Signalized	M (D)	AM PM	Future Intersection	
3	SR 1 Southbound Ramps and Imjin Parkway	5/3/2017	Signalized	for a (C)	AM PM	36.6 17.2	D B
4	SR 1 Northbound Ramps and Imjin Parkway	5/3/2017	Signalized		AM PM	0.0 (0.1) 0.2 (26.7)	A (A) A (D)
5	Second Avenue and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	12.5 16.3	B B
6	Third Avenue and Imjin Parkway	4/27/2017	SSS	M (D)	AM PM	3.7 (103.6) 1.3 (43.2)	A (F) A (E)
7	Fourth Avenue and Imjin Parkway	5/3/2017	SSS	M (D)	AM PM	0.4 (88.9) 1.4 (> 120)	A (F) A (F)
8	California Avenue and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	20.2 10.0	C A
9	California Avenue and Patton Parkway	4/25/2018	SSS	M (D)	AM PM	1.4 (17.4) 0.4 (10.4)	A (C) A (B)
10	Imjin Road and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	7.4 7.6	A A
11	Abrams Drive and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	14.5 17.4	B B
12	Reservation Road and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	22.5 32.9	C C
13	Blanco Road and Reservation Road	4/25/2018	Signalized	MC (D)	AM PM	13.1 11.0	B B
14	Inter-Garrison Road Connection and Reservation Road	4/27/2017	Signalized	MC (D)	AM PM ⁷	10.4 10.2	B B
15	Second Avenue and Ninth Street	4/27/2017	AWSC	M (D)	AM PM	21.9 11.4	C B
16	Second Avenue and Eighth Street	4/27/2017	AWSC	M (D)	AM PM	56.3 12.8	F B
17	Fourth Avenue and Eighth Street	Future	AWSC	M / CSUMB (D)	AM PM	Project Intersection ⁶	
18	Imjin Road and Eighth Street	4/27/2017	AWSC	M (D)	AM ⁷ PM	17.9 9.3	C A
19	Second Avenue and Inter-Garrison Road	4/27/2017	AWSC	M (D)	AM PM	26.5 9.8	D A



TABLE 6: EXISTING INTERSECTION LEVELS OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
20	General Jim Moore Boulevard and Inter-Garrison Road	4/25/2018	AWSC	M/ CSUMB (D)	AM ⁷ PM ⁷	8.5 9.9	A A
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	4/25/2018	AWSC	MC / M / CSUMB (D)	AM ⁷ PM	12.9 8.9	B A
22	Eighth Avenue and Inter-Garrison Road	4/25/2018	Roundabout	CSUMB (D)	AM ⁷ PM	32.1 8.6	D A
23	Abrams Drive and Inter-Garrison Road	4/27/2017	AWSC	MC / CSUMB (D)	AM ⁷ PM	60.3 12.8	F B
24	Schoonover Road and Inter-Garrison Road	4/27/2017	AWSC	MC (D)	AM ⁷ PM	20.8 11.1	C B
25	Inter-Garrison Road Connection and Inter-Garrison Road	4/27/2017	AWSC	MC (D)	AM ⁷ PM	11.8 11.1	B B
26	East Garrison Road and Reservation Road	4/25/2018	Signalized	MC (D)	AM PM	5.0 5.6	A A
27	Reservation Road and Watkins Gate Road	Future	Signalized	MC (D)	AM PM	Future Intersection	
28	Davis Road and Reservation Road	4/25/2018	Signalized	MC (D)	AM PM	18.2 15.9	B B
29	Second Avenue and Divarty Street	4/27/2017	AWSC	M / CSUMB (D)	AM PM	31.1 9.4	D A
30	General Jim Moore Boulevard and Divarty Street	4/27/2017	AWSC	M / CSUMB (D)	AM PM ⁷	9.1 10.2	A B
31	First Avenue and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM ⁷ PM	4.0 3.4	A A
32	Second Avenue and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM PM	18.3 14.2	B B
33	General Jim Moore Boulevard and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM PM	20.0 22.6	B C
34	Malmedy Road and Colonel Durham Street	4/25/2018	AWSC	S (C)	AM ⁷ PM	9.9 8.3	A A
35	Parker Flatts Cut Off Road and Colonel Durham Street	4/25/2018	SSS	S (C)	AM ⁷ PM ⁷	0.4 (10.9) 1.1 (10.1)	A (B) A (B)
36	Sixth Avenue and Colonel Durham Street	4/25/2018	AWSC	S (C)	AM ⁷ PM ⁷	8.9 7.8	A A
37	Seventh Avenue and Colonel Durham Street	4/25/2018	SSS	S (C)	AM ⁷ PM ⁷	6.6 (12.3) 7 (10.5)	A (B) A (B)
38	Eighth Avenue and Colonel Durham Street	4/25/2018	SSS	MC (D)	AM PM	0.6 (14.5) 2 (13.9)	A (B) A (B)



TABLE 6: EXISTING INTERSECTION LEVELS OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
39	General Jim Moore Boulevard and Gigling Road	4/27/2017	Signalized	S (C)	AM PM	25.9 14.8	C B
40	Malmedy Road and Gigling Road	4/25/2018	SSS	S (C)	AM PM	3.7 (24.9) 2.0 (18.0)	A (C) A (C)
41	Parker Flatts Cut Off Road and Gigling Road	4/25/2018	SSS	S (C)	AM ⁷ PM	2.0 (23.6) 2.8 (17.6)	A (C) A (C)
42	Sixth Avenue and Gigling Road	4/25/2018	AWSC	S (C)	AM PM	13.3 10.2	B B
43	Seventh Avenue and Gigling Road	4/25/2018	SSS	S (C)	AM PM	2.1 (12.7) 0.9 (9.0)	A (B) A (A)
44	Eighth Avenue and Gigling Road	4/25/2018	AWSC	MC (D)	AM ⁷ PM	9.9 10.3	A B
45	Eastside Parkway and Gigling Road	Future	AWSC	MC (D)	AM PM	Future Intersection	
46	General Jim Moore Boulevard and Normandy Road	4/25/2018	Signalized	S (C)	AM PM	22.0 9.9	C A
47	General Jim Moore Boulevard and Coe Avenue	4/25/2018	AWSC	S (C)	AM PM	92.2 18.4	F C
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	4/25/2018	Signalized	for a / Sand City (C)	AM PM	65.8 50.5	E D
49	California Avenue—and Monterey Road - Northbound SR 1 Off-Ramp	4/25/2018	Signalized	Cal / S (C)	AM PM	12.1 24.5	B C
50	Reservation Road and State Route 68 Westbound Ramps	4/25/2018	Signalized	Cal / MC (C)	AM PM	13.6 33.0	B C
51	Reservation Road and State Route 68 Eastbound Ramps	4/25/2018	Signalized	Cal / MC (C)	AM PM	11.4 12.2	B B

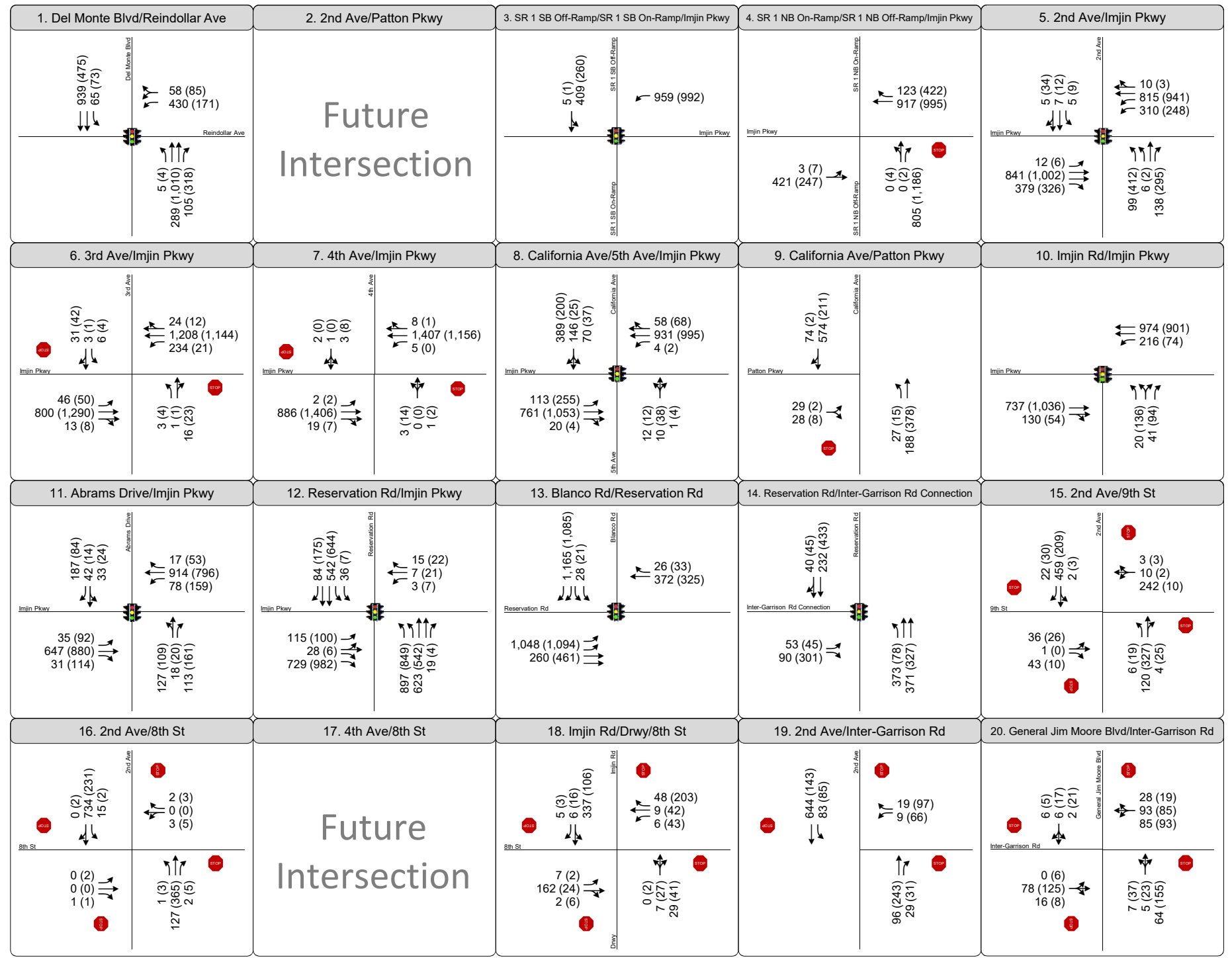
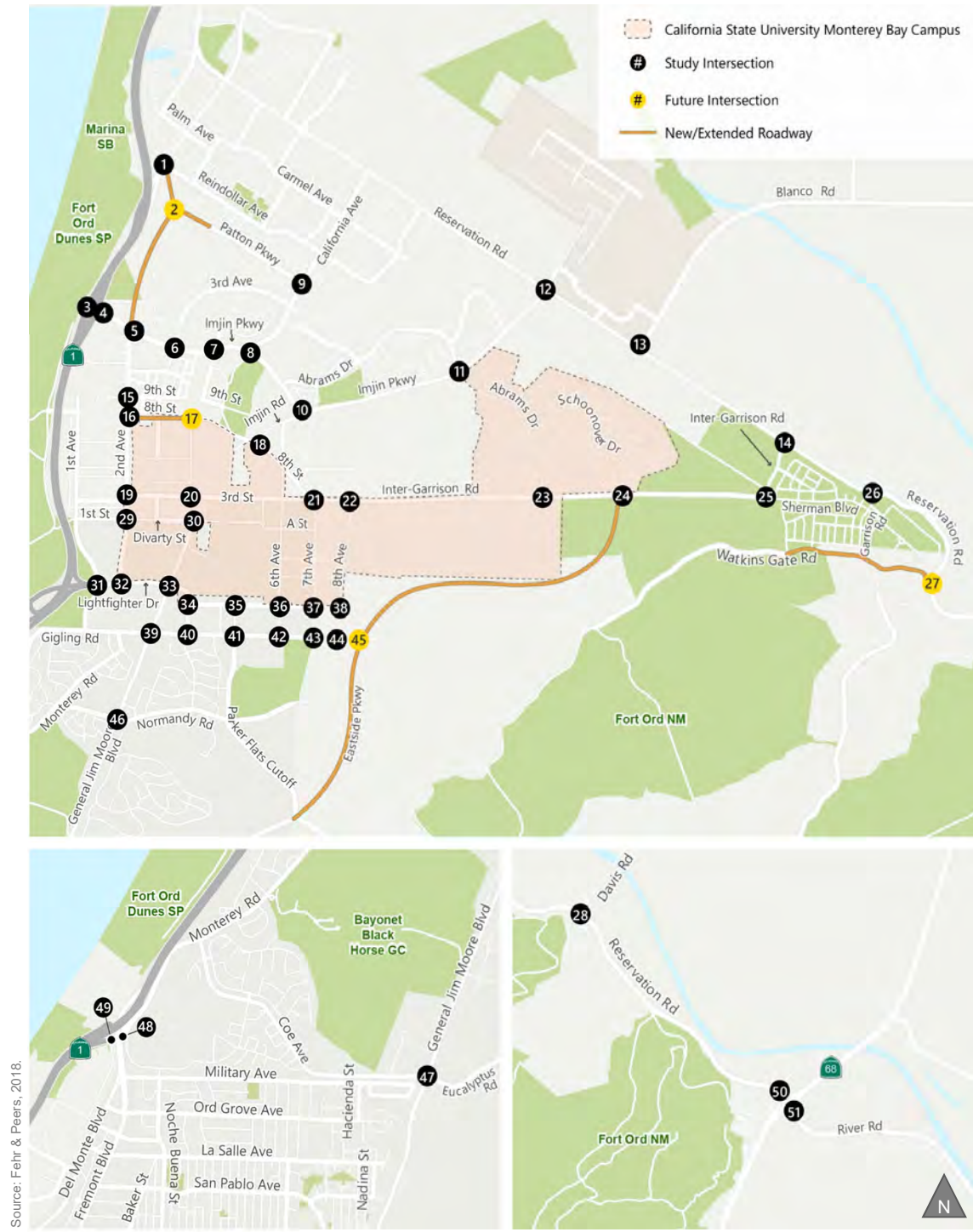
Notes: **Bold text** indicates intersection operates at unacceptable level of service.

- SSS = Side Street Stop Controlled, AWSC = All Way Stop Controlled, Signalized = Signalized intersection
- Intersection jurisdiction and associated LOS threshold applied.
 - City of Marina = M
 - City of Seaside = S
 - California State University, Monterey Bay = CSUMB
 - Monterey County = MC
 - Caltrans = Cal
- AM = AM peak hour, PM = PM peak hour.
- Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."



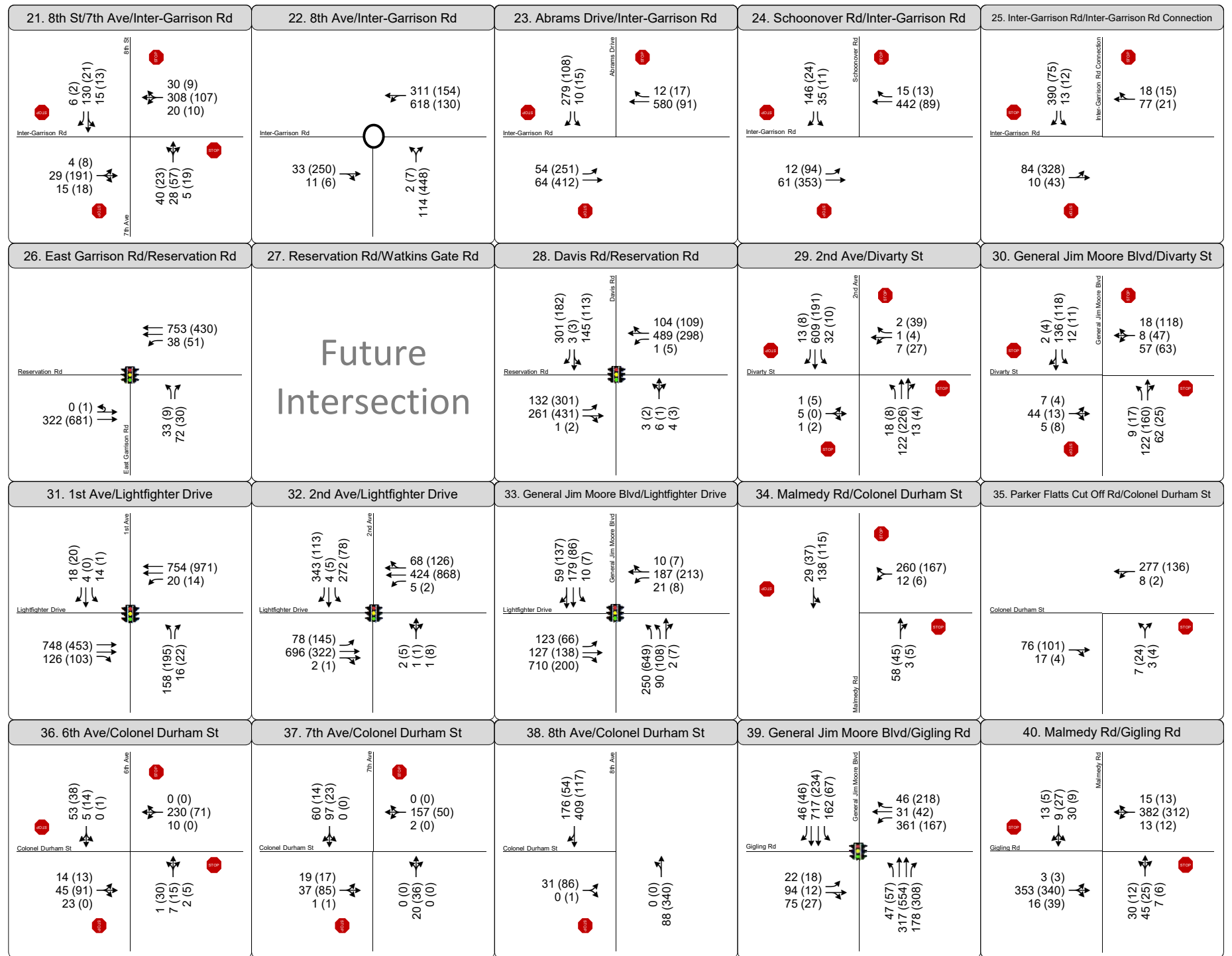
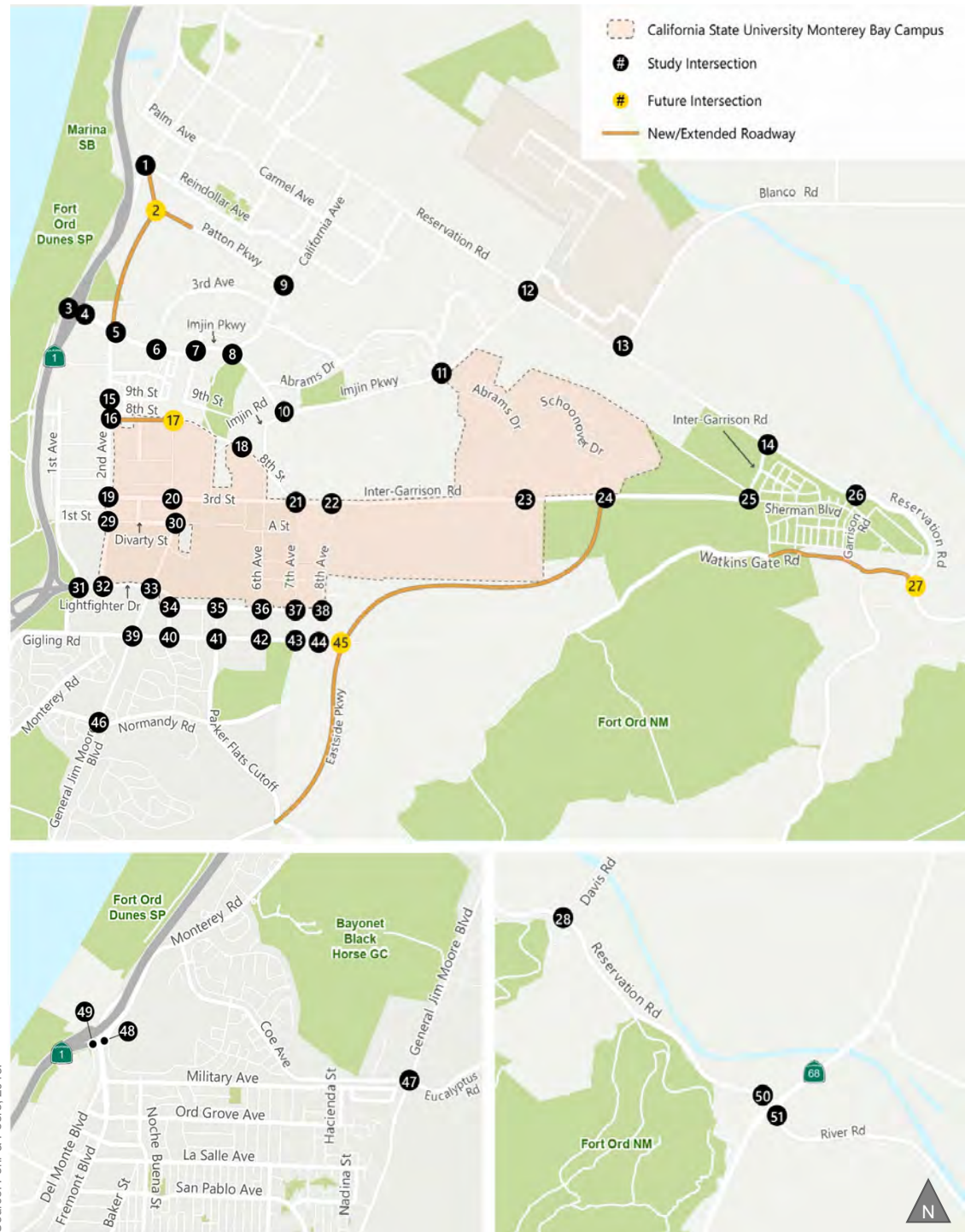
5. LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."
 6. Fourth Avenue and Eighth Street is currently closed by both the City of Marina and CSUMB. The Project proposes to make this a limited access gated entry, restricted to through traffic; therefore, the intersection is considered open in the with Project scenarios. The intersection is also proposed to be open in the future; therefore, open in the Cumulative without Project scenarios.
 7. For these intersections, the peak hour factor is below 0.85; therefore, the delay is calculated based on the peak of the peak 15 minutes, which results in delay calculations that vary from general peak hour observations.
- Source: Fehr & Peers, 2019.





- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure 12a
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

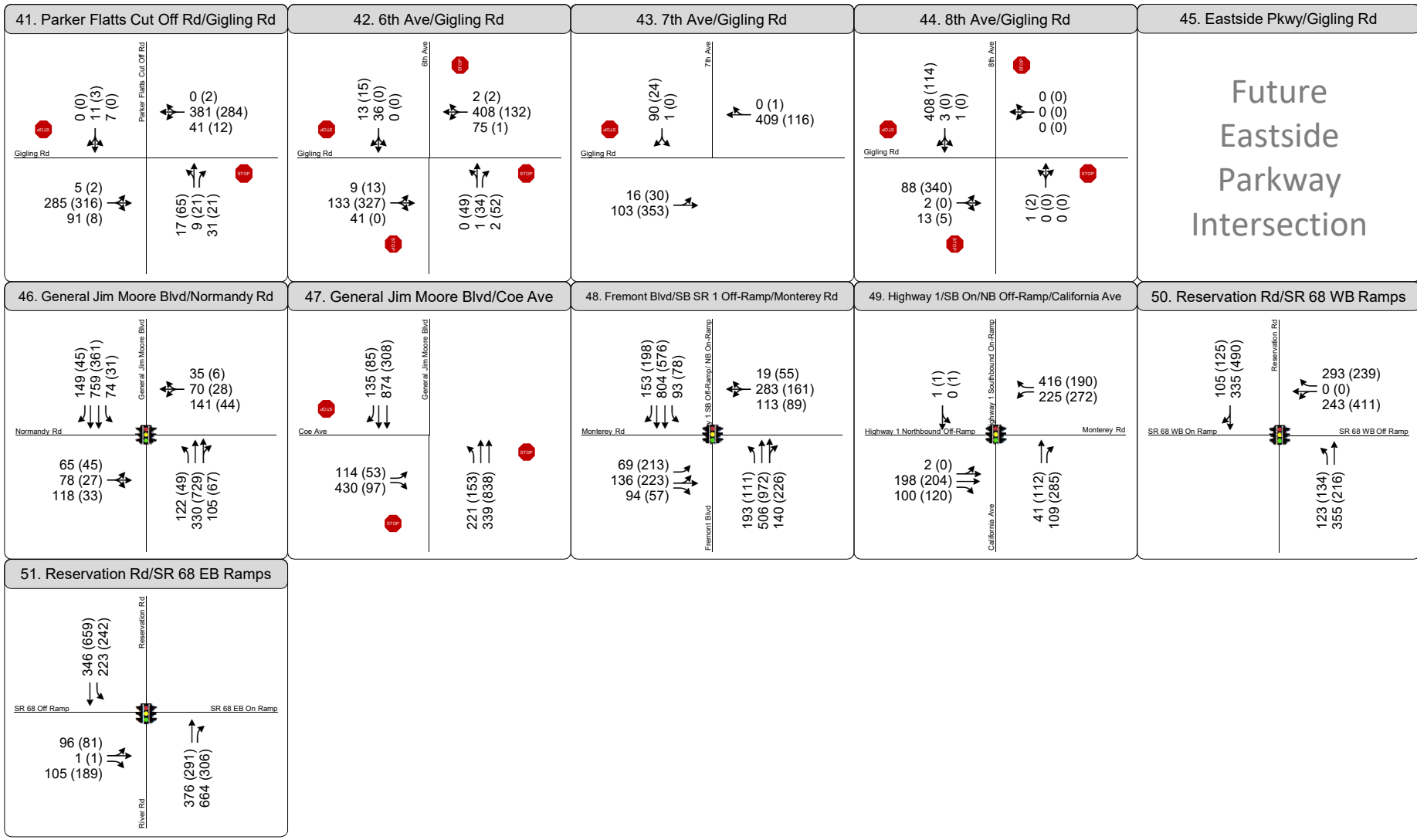
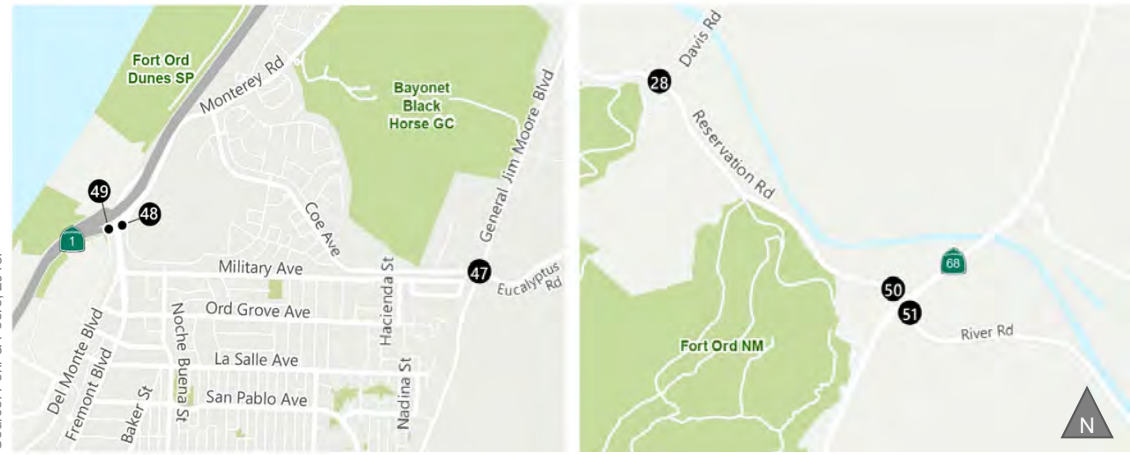
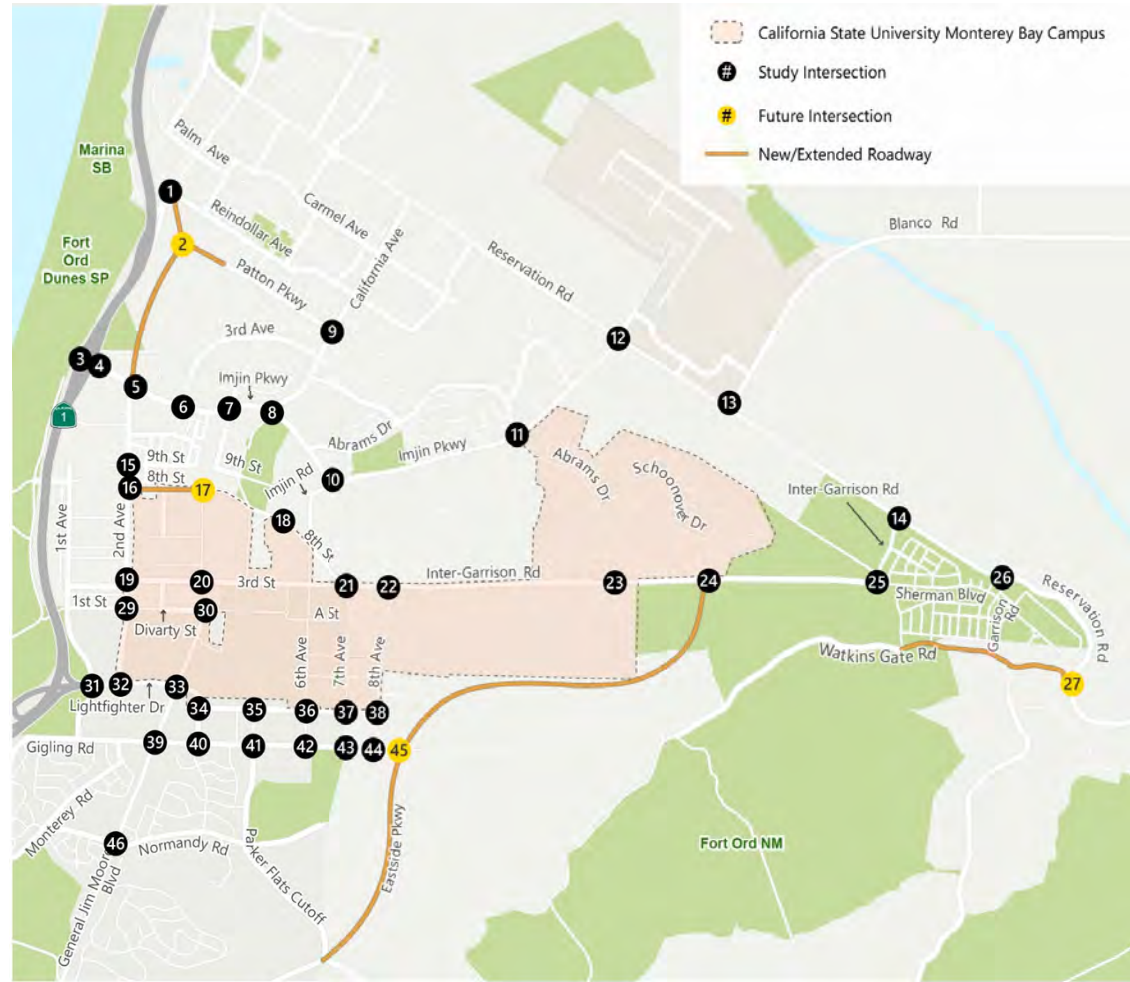


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure 12b
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions





LEGEND

AM (PM) Peak Hour Traffic Volume



Stop Sign Controlled



Roundabout



Figure 12c
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing Conditions

EXISTING FREEWAY SEGMENT OPERATIONS

The existing morning (AM) and evening (PM) peak hour freeway segment levels of service were evaluated using the method described in **Chapter 7**. Traffic volume observations were recorded at five locations along SR 1. **Table 7** shows the existing freeway segment levels of service. The following freeway segments exceed the Caltrans level of service standard (that is, they operate at LOS D or worse under Existing Conditions):

- Southbound SR 1 between Reservation Road and Canyon Del Rey Boulevard during the AM peak hour (all 5 southbound SR 1 segments)
- Northbound SR 1 between Imjin Parkway and Lightfighter Drive during the PM peak hour
- Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard the PM peak hour

TABLE 7: EXISTING FREEWAY SEGMENT LEVELS OF SERVICE

Freeway Segment	Peak Hour ¹	Mixed Lanes	Volume	Density ^{2,3}	Level of Service ⁴
State Route 1 – Southbound					
Reservation Road and Del Monte Boulevard	AM	2	2,705	29.1	D
	PM		1,418	11.3	B
Del Monte Boulevard and Imjin Parkway	AM	3	4,055	26.7	D
	PM		2,088	11.3	B
Imjin Parkway and Lightfighter Drive	AM	3	4,560	30.1	D
	PM		2,859	15.5	B
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	3	4,778	30.5	D
	PM		3,177	16.9	B
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	AM	2	3,843	34.7	D
	PM		2,629	21.2	C
State Route 1 – Northbound					
Reservation Road and Del Monte Boulevard	AM	2	1,172	9.6	A
	PM		2,671	21.2	C
Del Monte Boulevard and Imjin Parkway	AM	3	1,725	9.9	A
	PM		4,231	22.8	C
Imjin Parkway and Lightfighter Drive	AM	3	2,397	13.6	B
	PM		4,906	26.7	D
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	3	2,708	15.2	B
	PM		4,728	25.2	C
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard	AM	2	2,355	20.1	C
	PM		3,745	32.1	D

Notes:

1. AM = AM peak hour, PM = PM peak hour.
2. Measured in passenger cars per mile per lane. Mixed = Mixed-Flow Lanes.
3. If volume/capacity ratio is greater than 1 density is not applicable.
4. Level of service based on density.

Bold text indicates below the applicable level of service standard (LOS D for Caltrans designated facilities).

Source: Fehr & Peers, 2019.



EXISTING FREEWAY RAMP OPERATIONS

The ramp operations were evaluated by comparing the AM and PM peak hour volumes to the ramp capacities. The existing AM and PM peak hour ramp volumes at the SR 1 interchanges at the Imjin Parkway and Lightfighter Drive interchanges are shown and compared in **Table 8** and **Table 9**, respectively. As shown in the tables, all the study ramps operate below capacity during the AM and PM peak periods under Existing Conditions.

TABLE 8: EXISTING RAMP AM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type ¹	Lanes	Capacity ¹	Existing Volume (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	126
	SB	Diagonal On-Ramp	1	1,500	964
	NB	Diagonal Off-Ramp	2	3,000	805
	SB	Diagonal Off-Ramp	1	1,500	414
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	197
	SB	Diagonal On-Ramp	2	3,000	739
	NB	Diagonal Off-Ramp	2	3,000	460
	SB	Loop Off-Ramp	1	1,200	431

Notes:

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Bold text indicates volumes above capacity.

Source: Fehr & Peers, 2019.



TABLE 9: EXISTING RAMP PM PEAK-HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type ¹	Lanes	Capacity ¹	Existing Volume (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	431
	SB	Diagonal On-Ramp	1	1,500	993
	NB	Diagonal Off-Ramp	2	3,000	1,192
	SB	Diagonal Off-Ramp	1	1,500	261
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	661
	SB	Diagonal On-Ramp	2	3,000	538
	NB	Diagonal Off-Ramp	2	3,000	384
	SB	Loop Off-Ramp	1	1,200	167

Notes:

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Bold text indicates volumes above capacity.

Source: Fehr & Peers, 2019.

FIELD OBSERVATIONS

Field observations were conducted in May 2017 and May 2018 to observe vehicle operations on the local street and freeway systems, and overall circulation of pedestrians and bicycles around the study intersections. Observations were conducted at each study intersection to confirm lane geometries and operational characteristics, including cycle lengths where possible. Field observations are described for the following key access corridors: Imjin Parkway, Inter-Garrison Road, Lightfighter Drive, and Second Avenue.

Imjin Parkway:

- At SR 1 Interchange: During the AM and PM peak periods, the queue of westbound left-turning vehicles at the SR 1 southbound on-ramp extended to the upstream signalized intersections of SR 1 Northbound Ramps / Imjin Parkway and Second Avenue / Imjin Parkway.
- At Second Avenue: During the AM peak period, queuing on the westbound through approach extended approximately 500 feet upstream from the intersection.
- At Abrams Drive: During the PM peak period, congestion was observed to be heavier in the eastbound direction of Imjin Parkway. Queuing at the Abrams Drive intersection extended west past Third Avenue.
- At Reservation Road: During both peak periods, queues of northbound left-turning vehicles extended past the storage length of the left-turn lanes, approximately 400 feet from the



intersection. Queuing for these left-turn lanes extended farther in the AM period and did not clear after one cycle.

- Along Imjin Parkway: During the AM and PM peak periods, a few people were observed bicycling and walking along Imjin Parkway, and were mostly observed crossing the Second Avenue intersection and Abrams Drive Intersection. Along Imjin Parkway, cyclists were observed using the shared-use path.

Inter-Garrison Road:

- At stop-controlled intersections during both peak periods, little queuing was observed at intersections with no congestion.
- At Eighth Avenue: Two cyclists were observed traveling on the roadway through the roundabout in lieu of using the shared-use path around the intersection. During the AM peak hour, high westbound left-turn volumes resulted in delays to the westbound approach and the overall intersection delay and LOS as shown in **Table 6**. Little to no queuing was observed during off-peak periods as left turn volumes were lower than during the peak period as shown in counts in **Appendix D**.
- Along Inter-Garrison Road: Most pedestrians were observed closer to campus east of Eighth Avenue. During the PM peak period around class dismissal times, westbound traffic experienced longer queues, specifically around intersections at the Main Campus entrance/exit.

Lightfighter Drive:

- At First Avenue: During both AM and PM peak periods, the westbound through vehicles experienced the greatest queuing with queues extending to approximately 150 feet. All queues cleared after one traffic signal cycle.
- At General Jim Moore Boulevard: During the AM and PM peak periods, queues of eastbound through vehicles extended approximately 100 feet and would clear after one cycle. During the PM peak period, northbound left-turning vehicles mainly utilized the outside left-turn lane.

Reservation Road:

- At Blanco Road: During the AM and PM peak periods, observed queues were longest along the westbound left-turn lanes with a maximum of 8 vehicles in each lane in the AM peak period and 18 vehicles in each lane in the PM peak period. The majority of the traffic signal cycle length is utilized by the westbound left and through movement, which allows the westbound left-turn lanes to clear in one cycle. During both peak periods, southbound queuing was limited to a few vehicles, with maximum queue lengths of 75 feet for the left-turn lane. Vehicle queuing for the eastbound approach was substantial in the PM peak hour with a maximum queue of 12 vehicles, translating to nearly a 450-foot queue length.



- At Inter-Garrison Road: Minimal vehicle queuing, approximately 50 feet in length, was observed along Inter-Garrison Road.
- At East Garrison Road: Minimal vehicle queuing, approximately 50 feet in length, was observed along East Garrison Road.
- At Davis Road: Minimal vehicle queuing was observed in the AM and PM peak periods. The longest queues, approximately 125 feet of queued vehicles, were mainly observed along Davis Road on the southbound approach.
- At SR 68 Ramps: A majority of the queuing was observed southbound on Reservation Road at the SR 68 westbound ramps. The queuing in the AM peak period caused a few vehicles to extend past the Portola Drive intersection north of the SR 68 ramps, with a length of approximately 250 feet. During the PM peak period, queues were observed to extend farther back to approximately 375 feet, which blocked the entrance into Portola Drive.
- Along Reservation Road: Minimal to no pedestrian and bicycle activity was observed along Reservation Road.

Second Avenue:

- Most pedestrians were observed crossing and using the shared-use path along Second Avenue. During the PM peak period, pedestrians were mainly observed traveling north on Second Avenue from the campus.

Colonel Durham Street:

- No vehicle queuing or frequent pedestrian activity was observed.

Gigling Road:

- At Parker Flats Cut-Off Road: During the PM peak period, the northbound left-turn vehicles experienced queuing and the length was about 50 feet.
- At Sixth Avenue: During the AM peak period, the westbound through vehicles experienced the most queuing with queues extending over 300 feet from the stop sign. During the PM peak period, queuing occurred in both the eastbound and westbound through directions with queue lengths of about 50 feet.
- At Eighth Avenue: During both the AM and PM peak periods, most pedestrians and cyclists were observed traveling southbound to the trail entrance.
- At General Jim Moore Boulevard: During the AM and PM peak periods, limited queuing was observed at the intersection.
- Along Gigling Road: Minimal pedestrian and bicycle activity was observed along Gigling Road.



SR 1 ramps at Monterey Road/ Fremont Boulevard and Monterey Road/ California Avenue:

- At Fremont Boulevard/ Monterey Road: During the AM and PM peak periods, queues greater than 10 vehicles (250 feet) were mostly observed along the southbound SR 1 off-ramp and northbound Fremont Boulevard on-ramp. Some queues along Monterey Road, both eastbound and westbound, extended between 5 and 10 vehicles (125 feet to 250 feet) and would not clear in one cycle. During the PM peak period, queues from the Monterey Road eastbound approach would queue back to the California Road intersection.
- At California Avenue/ Monterey Road: Queues along Monterey Road were observed to queue back into the northbound right-turn lane along California Avenue for approximately 250 feet. These queues were not served in one cycle.
- At Fremont Boulevard/ Monterey Road and California Avenue/ Monterey Road: More pedestrians were observed along the northbound approach crosswalk, mostly students from the nearby high school traveling between the shopping center and the high school.
- At California Avenue/ Monterey Road: A few pedestrians were observed crossing Monterey Road at the westbound approach, which does not have a crosswalk, to reach the Monterey Peninsula Recreation Trail entrance on the northern end of the intersection. Bicyclists were observed traveling to and from the trail, using either the travel way or crosswalks.

Along the other roadways, light to moderate congestion was observed along the major approaches, and few vehicles were observed using the local streets. Northbound and southbound traffic south of the campus flowed with minimal delay and queuing. During the peak periods, queuing and delay were observed primarily on Imjin Parkway and at intersections closer to State Route 1. At intersections with geometries similar to Eighth Street and Fifth Avenue, vehicles were observed using the intersections as typical stop-controlled T-intersections. In general, the observations indicated that all study intersections, except as noted above, are operating at or near the calculated level of service.



3. SUMMARY OF RELEVANT REGIONAL CIRCULATION AND TRANSPORTATION PLANS

This chapter provides background information regarding circulation and transportation plans employed in the plan consistency evaluation later in this report. While CSUMB is not subject to local and regional plans because CSU is a state agency, this chapter summarizes the key transportation plans, goals, and policies and related plan transportation networks, to support the evaluation of Project conflicts with such plans and policies in **Chapter 5** of this report.

AMBAG REGIONAL TRANSPORTATION PLAN

The Association of Monterey Bay Area Governments (AMBAG) is the Metropolitan Planning Organization (MPO) for the three county region (Monterey County, San Benito County, and Santa Cruz County). As the MPO, AMBAG is responsible for preparing the regional transportation plan and sustainable community strategy plan titled Monterey Bay 2040 Moving Forward/2040 Metropolitan Transportation Plan and Sustainable Communities Strategy (2040 MTP/SCS), both published in June 2018. The 2040 MTP/SCS is a 20-year planning document, updated every three years with the following goals and policy objectives:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region’s standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

Based on these goals and policies, a financially constrained transportation network (i.e., one recognizing current financial limitations) was prepared by AMBAG to establish the planned improvements that best meet the goals and policy objectives and available funding projections.



SEASIDE GENERAL PLAN

SEASIDE GENERAL PLAN (2004)

The 2004 Seaside General Plan includes goals to provide and maintain the City of Seaside's transportation network and ensure that its transportation network is integrated with the regional transportation system (City of Seaside 2004). The general plan also includes multimodal goals to promote additional transit usage and adequate parking. Key transportation goals and policies from the 2004 Seaside General Plan relevant to the analysis presented here include:

Key Goals:

- *Goal C-1:* Provide and maintain a City circulation system that promotes safety and satisfies the demand created by new development and redevelopment in Seaside.
- *Goal C-2:* Provide a local circulation system that is integrated with the larger regional transportation system to ensure the economic well-being of the community.
- *Goal C-3:* Promote the increased use of multimodal transportation.
- *Goal C-4:* Ensure adequate parking is provided throughout Seaside.

Key Policies:

- *Policy C-1.1:* Design roadway capacities and ensure transportation facilities that adequately serve planned land uses.
- *Policy C-1.2:* Improve the Seaside circulation system in concert with public and private land development and redevelopment projects to maintain the City standard of Level of Service "C".
- *Policy C-1.3:* Coordinate improvements to and maintenance of the City circulation system with other major transportation and infrastructure improvement programs.
- *Policy C-1.4:* Provide adequate access to the University, golf courses, and other uses in North Seaside.
- *Policy C-1.5:* Use traffic calming methods within residential and mixed use areas where necessary to create a pedestrian-friendly circulation system.
- *Policy C-1.6:* Apply creative approaches to increase safety and reduce congestion in areas with unique problems, such as: neighborhoods with narrow, one-way streets; areas around schools; neighborhoods with non-essential alleys, businesses with drive-through access; and other special situations.
- *Policy C-1.7:* Reduce impacts on residential neighborhoods from truck traffic and related noise.
- *Policy C-2.1:* Coordinate planning, construction and maintenance of development projects and circulation improvements with adjacent jurisdictions and transportation agencies.
- *Policy C-2.2:* Support programs that help reduce congestion and encourage alternative modes of transportation.



- *Policy C-2.3:* Support development that is compatible with increased operations at the Monterey Peninsula Airport.
- *Policy C-3.1:* Support the provision and expansion of regional transit services and support facilities to serve the City.
- *Policy 3.2:* Work with MST to provide special transit services to meet community needs.
- *Policy C-3.3:* Promote mixed use, higher density residential, and employment-generating development in areas where public transit is convenient and desirable.
- *Policy C-3.4:* Support alternative modes of transportation that encourage physical activity, such as biking and walking.
- *Policy C-4.1:* Require off-street parking in new development and redevelopment projects.
- *Policy C-4.2:* Support the development of well-designed and aesthetically pleasing parking facilities in areas where current parking deficiencies exist or where substantial traffic generating uses are planned.
- *Policy C-4.3:* Ensure well-landscaped parking lots that facilitate pedestrian movement and screen unattractive structures.

SEASIDE DRAFT GENERAL PLAN UPDATE

In addition to the existing general plan approved in 2005, the City of Seaside is currently preparing its next general plan, the 2040 General Plan, *Seaside 2040*, which includes a vision for a multimodal network of complete streets (City of Seaside 2017). The 2040 General Plan is in draft form and has not yet been adopted by the City Council; therefore, the information contained in the draft plan is advisory only. Goal LUD-23 in the *Seaside 2040* Land Use & Community Design section highlights the desire to transform the City's northern area into a "mixed-use, economically-vibrant Campus Town that serves the student population and leverages its geographic adjacency to CSUMB." The area is intended to be high-density with a multimodal focus to improve access and connections for all modes to CSUMB.

Additionally, the 2040 General Plan presents different modal priorities than the currently adopted 2005 General Plan. The 2005 General Plan includes a level of service (LOS) policy that requires the City of Seaside to maintain a LOS C standard during peak hours. Using this LOS C standard requires the construction of larger intersections, which can have a negative effect on pedestrian and bicycle access and comfort. Thus, the draft 2040 General Plan (November 2017) goals include policies that focus on creating accessible, complete streets for all users of the street system and paths. Key transportation goals and policies relevant to the analysis presented here from the 2040 General Plan include:



Key Goals:

- *Goal M-1:* A citywide network of “complete streets” that meets the needs of all users, including bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors.
- *Goal M-2:* Mobility options that serve the multi-modal access and travel needs generated by new development in a manner suitable to the local context.
- *Goal M-5:* A citywide bicycle network that connects residential, commercial, educational, and recreational uses, and earns Seaside the reputation of a bicycle-friendly city.
- *Goal M-6:* Transit service that is frequent and convenient, and maximizes ridership potential for residents, employees, and visitors.
- *Goal M-7:* A safe transportation system that eliminates traffic-related fatalities and reduces non-fatal injury collisions.
- *Goal M-9:* Minimize the impact of motor vehicle parking on residential neighborhoods.
- *Goal M-10:* Environmentally sustainable transportation.
- *Goal M-11:* Integrate Seaside’s circulation system with the larger regional transportation system to ensure the economic well-being of the community.

Key Policies:

- *Planning for all modes and transportation/ land use integration.* Design streets holistically, using a complete streets approach, which considers pedestrians, bicyclists, motorists, transit users, and other modes together to adequately serve future land uses.
- *Coordination with new development.* Improve the Seaside circulation system in concert with public and private land development and redevelopment projects.
- *Traffic calming.* Consider the implementation of traffic calming measures to reduce speeding and make streets user-friendly for all modes of transportation, including pedestrians and bicyclists.
- *Multi-modal connectivity.* Promote pedestrian and bicycle improvements that improve connectivity between existing and new development.
- *Pedestrian amenities.* Require new development and redevelopment to increase connectivity through direct and safe pedestrian connections to public amenities, neighborhoods, shopping, and employment destinations throughout the City.
- *Bikeway network completion.* Strive to complete the citywide bicycle network to create a full network of bicycle facilities throughout Seaside.
- *Transit Priority Corridors.* Provide measures to reduce delay to transit vehicles on priority transit corridors, such as queue-jump lanes and/or bus signal prioritization, where feasible, on transit priority street segments.



- *Transit amenities.* Support right-of-way design and amenities consistent with local transit goals to make it easier to get to transit services and improve transit as a viable alternative to driving.
- *Transit stop maintenance is provided.* Work with local and regional transit agencies to ensure that transit stops are maintained in a safe, clean, and attractive condition to encourage transit ridership.
- *Safety Improvements.* Provide safety improvements, and prioritize pedestrian circulation over other travel modes, along high-injury and high-fatality streets and intersections.
- *Safety and traffic calming.* Use traffic calming methods within residential and mixed-use areas, where necessary, to create a pedestrian-friendly circulation system.
- *Safety for all modes.* Ensure that planned non-transportation capital improvement projects, on or near a roadway, consider safety for all modes of travel during construction and upon completion.
- *Transportation demand management (TDM).* Promote TDM measures for new development. Measures may include subsidized transit passes, car share spaces, unbundled parking, and secured bicycle parking. Allow the City to provide incentives to new projects that provide TDM measures.
- *TAMC and countywide planning efforts.* Continue to support the overall vision, goals, objectives, and policies as a partner in TAMC. The City recognizes the regional significance of connecting bicycle and pedestrian facilities, sharing consistent guidelines, needs, and preferences within the City and the greater Monterey County.
- *Regional transit.* Continue to support and encourage development of TAMC's planned regional transit projects and coordinate service and facilities for new development and redeveloped parts of the City.

MARINA GENERAL PLAN

The Marina General Plan was adopted on October 31, 2000 and updated with amendments through August 4, 2010 (City of Marina 2010). The Marina General Plan lays out broad goals and specific policies on land use, community design, circulation, housing, public facilities, open space, recreation, conservation, noise, seismic and safety considerations, and historic preservation. The following are the primary policies of the Marina General Plan from the Transportation Element that are relevant to the analysis presented here:

- *Policy 3.3.2:* Reduce the length and travel time of work trips generated by local residents by maximizing opportunities for residents to work within the community.
- *Policy 3.3.4:* Reduce the number and length of vehicular trips and limit overall traffic congestion by promoting land use patterns which allow for multipurpose trips and trip deferral during peak travel times.



- *Policy 3.3.5:* The City of Marina shall ensure that walking and bicycling routes are integral parts of street design and form a safe and preferred transportation network. Protect existing and future residential areas from through-traffic that creates safety, noise, and pollution problems.
- *Policy 3.3.7:* The City of Marina shall coordinate with surrounding jurisdictions and agencies, such as TAMC, Caltrans, California Department of Parks and Recreation, Monterey Peninsula Regional Park District, CSUMB, AMBAG, FORA, BLM, City of Seaside, and Monterey County to pursue projects that develop new pedestrian and bicycle routes and that improve and maintain existing pedestrian and bicycle routes. New routes shall be linked to existing routes wherever possible.
- *Policy 3.3.8:* Link existing and future areas of the City with an integrated system of roads, transit, footpaths, and bikeways that connect neighborhoods, commercial areas, schools, parks, and other major community-serving destinations.
- *Policy 3.3.9:* Where necessary and feasible, accept some traffic congestion to achieve other community goals, such as encouraging the integrity of neighborhoods and the use of alternative means of travel.
- *Policy 3.3.10:* Make all transportation decisions within a broad policy context that considers visual, environmental, economic, and social objectives rather than being solely responsive to existing or projected traffic problems.

MONTEREY COUNTY GENERAL PLAN

The Monterey County General Plan released on October 26, 2010, presents a long-range vision for the County, looking forward 25 years into the future (County of Monterey, 2010). The transportation goals and polices in the Circulation Element relevant to the analysis presented here are listed below:

- Goal C-1 – Achieve an acceptable level of service by 2030.
 - Policy C-1.1 – The acceptable level of service of County roads and intersection shall be Level of Service D, except as follows:
 - Acceptable level of service for County roads in Community areas may be reduced below LOS D through the Community Plan process.
 - County roads operating at LOS D or below at the time of adopting this General Plan shall not be allowed to be degraded further except in Community areas where the Lower LOS may be approved through the Community Plan process.
 - Area Plans prepared for County Planning Areas may establish an acceptable level of service for County roads other than LOS D. The benefits which justify less than LOS D shall be identified in the Area Plan. Where an Area Plan does not establish a separate LOS, the standard LOS D shall apply.
- Goal C-2 – Optimize the use of the County's transportation facilities.



- Policy C-2.4 – A reduction of the number of vehicle miles traveled per person shall be encouraged.
- Policy C-2.6 – Bicycle and automobile storage facilities shall be encouraged in conjunction with public transportation facilities.
- Goal C-3 – Minimize the negative impacts of transportation in the County.
 - Policy C-3.1 – Transportation modes shall be planned, and strategies developed to protect air quality; reduce noise; reduce the consumption of fossil fuels; and minimize the acquisition of land for roadway construction.
- Goal C-4 – Provide a public road and highway network for the efficient and safe movements of people and commodities.
 - Policy C-4.2 – All new roads and interior circulation systems shall be designed, developed, and maintained according to adopted County standards or allowed through specific agreements and plans.
 - Policy C-4.5 – New public local and collector roads shall be located and designed to minimize disruption of existing development, discourage through auto traffic, and provide for bicycle and pedestrian traffic within the right-of-way.
 - Policy C-4.7 – Where appropriate and sufficient public right-of-way is available, bicycle paths shall be separated from major roads and highways and be provided between adjacent communities.
- Goal C-5 – Maintain and enhance a system of scenic roads and highways through areas of scenic beauty without imposing undue restrictions on private property or constricting the normal flow of traffic.
 - Policy C-5.5 – Agencies involved in officially designating State Scenic Highways and/or County Scenic Roads shall coordinate their efforts for the integrated design and implementation of such designations.
- Goal C-6 – Promote viable transportation options.
 - Policy C-6.3 – The County shall encourage new development to concentrate along major transportation corridors and near cities to make transit services to these areas more feasible.
 - Policy C-6.8 – The County shall encourage coordination between all social service transportation providers.
- Goal C-8 – Encourage a rail system that offers efficient and economical transport of people and commodities.
- Goal C-9 – Promote a safe, convenient bicycle transportation system integrated as part of the public roadway system.
 - Policy C-9.2 – Construction or expansion of roadways within major transportation corridors shall consider improved bike routes.



- Policy C-9.5 – Visitor-serving facilities shall provide adequate bicycle access and secure bicycle parking facilities.

TAMC CONGESTION MANGEMENT PROGRAM

Transportation Agency for Monterey County (TAMC) is the designated Congestion Management Agency for Monterey County. In 1990, the state passed legislation requiring CMAs like TAMC to implement a Congestion Management Program (CMP). The CMP provides level of service and performance standards, trip reduction techniques, development of deficiency programs, transportation system management, and capital improvement programming for the purpose of minimizing regional traffic impacts of development. As a designated CMA, TAMC reviews land use development proposals in order to ensure that traffic impacts of land use development are mitigated. TAMC also undertakes traffic counting regionally, and projects traffic impacts on regional roadways based on adopted general plans and other land use planning documents.

2018 MONTEREY COUNTY ACTIVE TRANSPORTATION PLAN

The 2018 Transportation Agency for Monterey County Active Transportation Plan is an update of the 2011 Bicycle and Pedestrian Master Plan, which identified all existing and planned bicycle and pedestrian facilities in Monterey County. The Plan identifies remaining gaps in the bicycle and pedestrian network and opportunity areas for innovative bicycle facility design, such as a planned separated bikeway (Class IV) improvement along Inter-Garrison Road. These pedestrian and bicycle planned improvements, including the planned Inter-Garrison Road improvement, are shown on **Figure 9** and **Figure 10**. The ATP has added more emphasis on “low-stress networks” that serve people of all ages and abilities, such as separate bike paths, protected bike lanes, bicycle boulevards, and bike protection at intersections. Goals set out in the Plan relevant to the analysis presented here include:

- Increasing the proportion of active transportation trips throughout Monterey County.
- Improve bicycle and pedestrian safety.
- Remove gaps and enhance bicycle and pedestrian network connectivity.
- Provide improved bicycle and pedestrian access to diverse areas and populations in Monterey County.
- Increase awareness of the environmental and public health benefits of bicycling and walking for transportation and recreation.
- Improve the quality of the bike and pedestrian network through innovative design and maintenance of existing facilities.



FORT ORD REUSE AUTHORITY ACT

The Fort Ord Reuse Authority Act was implemented to facilitate the transfer and reuse of the Fort Ord military base, and established Fort Ord Reuse Authority (FORA) as the entity responsible for planning, financing, and carrying out the transfer and reuse of the base in a cooperative, coordinated, balanced, and decisive manner (Cal. Gov. Code § 6765 for a seq.). Founded in 1994, FORA was responsible for oversight of the Monterey Bay area economic recovery following the closure and reuse planning of the former Fort Ord military base. Pursuant to the Act, FORA's legislatively defined mission was complete as of June 30, 2020 and FORA has been dissolved per the FORA resolution No. 18-11.

The FORA Resolution No. 18-11 approved a Transition Plan that was submitted to the Monterey County Local Agency Formation Commission and that assigns assets and liabilities, designates responsible successor agencies, and provides a schedule for the remaining obligations (FORA 2018). The Transition Plan calls for the cities of Marina, Seaside, Monterey and Del Rey Oaks, and the County of Monterey to follow the Reuse Plan policies and programs and states that "...the implementation of the on-site Fort Ord transportation network and transit policies and programs are essential to the long-term success of the economic recovery of the reuse." The Resolution further states that after FORA's ultimate dissolution, any changes to the policies and programs of the Reuse Plan or any part thereof will be made by the respective land use jurisdictions only after full compliance with all applicable laws, including but not limited to CEQA.

After the official closure of Fort Ord in 1994, FORA adopted the Fort Ord Reuse Plan (Reuse Plan) in 1997 (FORA 1997). The Reuse Plan provided a framework for the reuse of more than 45 square miles of the former Fort Ord army base. The Reuse Plan identified transportation improvements to create a balanced transportation system, including pedestrian ways, bikeways, transit, and streets to provide for the safe and efficient movement of people. Responsibility for the remaining capital improvements in the Reuse Plan has been transitioned to the local agencies for implementation. The remaining capital improvements enhance regional access alternatives, provide additional local access routes, and enhance the internal circulation system to reduce through trips on facilities in the higher density or other sensitive areas.

The FORA Regional Urban Design Guidelines (RUDG), adopted on June 10, 2016, established standards for road design, setbacks, building height, landscaping, signage, and other matters of visual importance (FORA 2016). RUDG emphasizes the application and importance of the complete streets and connected street network, as well as providing well-designed transit facilities that improve the rider experience and economic vitality. To realize and support the complete streets concept, the following objectives are identified within the guidelines:

- Encouraging appropriate development scale and pattern to a village environment
- Minimizing street scale to facilitate pedestrian movement while providing adequate circulation and parking opportunities
- Minimizing street width to provide comfortable pedestrian environment



MONTEREY-SALINAS TRANSIT DESIGNING FOR TRANSIT

MST developed the Designing for Transit manual in November 2006 to provide guidance to decision-makers, developers, and community members on planning for safe and efficient transit (MST 2020). This includes guidance on considerations and statements other agencies should consider in their general plans and planning. MST advises these policy statements should be considered in General Plans to achieve a multimodal transportation network:

- Integrate land use and circulation plans to create an urban environment that supports a multimodal transportation system;
- Prioritize future development and redevelopment projects that are accessible using the existing multimodal transportation network;
- Direct development to areas with a confluence of transportation facilities (sidewalks, bike paths, park & rides, and transit centers); and
- Limit development in areas accessible by only a single transportation mode.



4. SIGNIFICANCE CRITERIA AND VMT ANALYSIS METHODS

As previously noted, recent legislation in California, Senate Bill 743, changed the metric by which transportation-related significant impacts are to be assessed from LOS to VMT under CEQA. While lead agencies have until July 2020 to implement this change, they are free to do so prior to that date, as has been the case with multiple jurisdictions throughout the state.

In response to this recent legislation, the CSU Chancellor’s Office recently issued the *2019 California State University Transportation Impact Study Manual (2019 CSU TISM)*. The *2019 CSU TISM* provides guidance for the preparation of CEQA compliant transportation impact analysis pursuant to SB 743 and is the operative TISM for the analysis presented here. The detailed impact criteria for VMT and other transportation-related items are described below followed by the VMT forecasting methods.

An analysis of the Project’s potential impacts is presented in **Chapter 5**.

SIGNIFICANCE CRITERIA

Consistent with the revised CEQA Guidelines, the *2019 CSU TISM* establishes updated significance criteria to be used for environmental impact analysis. The project would result in a significant impact if it meets any of the significance criteria below:

- Plan Conflict: The Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- VMT Impacts: The Project would result in a VMT-related impact as described below in **Table 10**.
- Hazard Impact: The Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Emergency Access Impact: The Project would result in inadequate emergency vehicle access.

TABLE 10: EXISTING CSU TISM VMT SIGNIFICANCE THRESHOLDS

Impact Categories	CSU Significance Thresholds	Calculated Numeric Thresholds for Project
Project Impacts	The threshold to be applied in assessing Project-specific impacts is 15% below the existing total VMT per service population rate of Monterey County.	The Project would result in a significant project-specific impact if the CSUMB campus total VMT per service population under Existing with Project Conditions is greater than 23.91.
Cumulative Impacts	The threshold to be applied in assessing cumulative impacts is no change in the cumulative conditions (future) boundary VMT per service population for Monterey County.	The Project would result in a significant cumulative impact if it causes the cumulative countywide daily boundary VMT per service population to be greater than 14.07.

Source: CSU 2019.



Each of these impact criteria is discussed further below.

PLAN CONFLICTS

As described in the *2019 CSU TISM*, a Project may cause a significant impact if:

- The Project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

To determine the Project's consistency with relevant transportation programs, plans, ordinances or policies, the following significance thresholds were applied to each respective mode of travel – transit, roadways, bicycle facilities and pedestrians as listed below.

Transit

Analysis of transit-related impacts encompasses two components: (1) transit capacity, and (2) the Project's consistency with local transit plans. For transit capacity, a significant impact would occur if the Project creates demand for public transit above the capacity which is provided or planned.

To determine the Project's consistency with local transit plans, significant impacts would occur if the Project or any part of the Project:

- Disrupts existing transit services or facilities;¹⁹ or
- Conflicts with an existing or planned transit facility; or
- Conflicts with transit policies adopted by the City of Seaside, Monterey County, Fort Ord Reuse Authority, Transportation Agency for Monterey County, or Monterey-Salinas Transit for their respective facilities in the study area.

Roadways

To determine the Project's consistency with local roadway plans, significant impacts would occur if the Project or any part of the Project:

- Disrupts existing or planned roadway facilities or conflicts with applicable program, plan, ordinance, or policy.

¹⁹ This includes disruptions caused by the Project relative to transit street operations and transit stops/shelters; or impacts to transit operations from traffic improvements proposed or resulting from the Project.



Bicycle Facilities

To determine the Project's consistency with local bicycle plans, significant impacts would occur if the Project or any part of the Project:

- Disrupts existing or planned bicycle facilities or conflicts with applicable bicycle plans, guidelines, policies, or standards.

Pedestrian Facilities

Analysis of pedestrian impacts encompasses two components: (1) on-campus pedestrian connections, and (2) the Project's consistency with applicable programs, plans, ordinances, or policies. Significant pedestrian impacts would occur if the Project or any part of the Project

- Fails to provide safe pedestrian connections between campus buildings and adjacent streets and transit facilities; or
- Disrupts existing or planned pedestrian facilities or conflicts with applicable programs, plans, ordinances, or policies.

VMT THRESHOLDS AND IMPACT CRITERIA

As discussed in **Chapter 1**, the VMT impact analysis presented in this report considers the Project's direct impacts relative to Project generated VMT using the total VMT per service population metric, as well as a cumulative analysis, which considers the Project's long-term effect on VMT using boundary VMT per service population. Each analysis is addressed separately below.

Project Generated VMT (Project Analysis)

The significance threshold for determining the project's direct impact is a Total VMT per service population rate that is 15 percent below the Existing Conditions total VMT per service population for Monterey County. The OPR *Technical Advisory* suggests a similar threshold for residential and office land uses (i.e., 15 percent below VMT in a geographic area). Per the *2019 CSU TISM*, the CSU has selected the 15 percent reduction relative to Monterey County based on the OPR *Technical Advisory* and the fact that most of the students, faculty, and staff live within Monterey County. As a result, most of the CSUMB campus total VMT would be within Monterey County and, therefore, impacts assessed against the Monterey County baseline is the most appropriate measure of the Project's direct impact. Thus, the threshold applied in this analysis is 15% below the existing VMT of 28.12, which as shown in **Table 10**, is the existing total VMT per service population of Monterey County, or 23.91 (Monterey County total VMT per Service Population of 28.12 x 85% = 23.91).



TABLE 11: PROJECT GENERATED VMT THRESHOLD BASED ON EXISTING CONDITIONS FOR MONTEREY COUNTY

Item	Amount
Monterey County Total Vehicle Miles Traveled (A) ¹	19,158,300
Monterey County Service Population (B) ^{1,2}	681,200
Monterey County Total VMT per Service Population (A/B = C)	28.12
Monterey County Total VMT per Service Population Threshold (C*85% = D)	23.91

Notes:

1. Rounded service population and VMT to nearest 100.
 2. Service population is defined as the sum of all employees, residents, and students (Kindergarten through University).
- Source: Fehr & Peers, 2019.

Therefore, the Project would cause a significant Project generated VMT impact if

- The Project would result in a significant project-specific impact if the CSUMB campus total VMT per service population under Existing with Project Conditions is greater than 23.91.

Project's Effect on VMT (Cumulative Analysis)

The impact threshold for the Project's effect on VMT, or the Project's cumulative impact, is the Monterey County Boundary VMT per Service Population, or 14.07 (refer to **Table 12** for illustration of how the 14.07 is calculated). Like the Project generated VMT baseline using the total VMT per service population rate of Monterey County, the boundary VMT baseline uses the Monterey County boundary VMT to evaluate the Project's effects on VMT because the Project effects are likely to be localized near the CSUMB campus and within Monterey County.

TABLE 12: PROJECT'S EFFECT ON VMT (BOUNDARY VMT) THRESHOLD BASED ON CUMULATIVE CONDITIONS FOR MONTEREY COUNTY

Item	Amount
Monterey County Boundary Vehicle Miles Traveled (A) ¹	11,268,400
Monterey County Service Population (B) ^{1,2}	800,900
Monterey County Boundary VMT per Service Population (A/B = EC)	14.07
Monterey County Boundary VMT per Service Population Threshold (C)	14.07

Notes:

1. Rounded service population and VMT to nearest 100.
 2. Service population is defined as the sum of all employees, residents, and students (Kindergarten to University)
- Source: Fehr & Peers, 2019.



Therefore, the Project's effect on VMT would be significant if

- The Project would result in a significant cumulative impact if it causes the cumulative countywide daily boundary VMT per service population to be greater than 14.07.

HAZARD IMPACT

The Project would have a significant impact regarding hazards if

- The Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

EMERGENCY ACCESS IMPACT

Ease of access and travel time are critical for first responders when traveling in emergency vehicles. Obstructions in the roadway, detours, and excessive delays due to congestion are among the factors that can affect emergency response time. A significant impact would occur if

- The Project would result in inadequate emergency access.

TRAFFIC FORECASTING METHODS

The AMBAG regional travel forecasting model was used to develop daily VMT and traffic forecasts for the CSUMB campus and the Project study area. VMT forecasts were prepared for the SB 743 VMT assessment, as well as for use as inputs for the greenhouse gas (GHG) analysis.

AMBAG MODEL DOCUMENTATION

A description of the base year model validation and future year travel model assumptions is included in **Appendix B**. The future year travel model is used to develop forecasts for Cumulative Conditions and includes traffic from projects presently under construction, approved (but not yet constructed and/or occupied) developments, pending developments, and projected growth to Year 2035. Planned and funded roadway and intersection improvements associated with the approved projects and the Fort Ord Reuse Authority (FORA) Capital Improvement Program, City of Marina, and the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)* are included. Refer to **Table 13** for the jurisdictional source and descriptions of roadway improvements within the study area.



Intersection and freeway forecasts were developed using guidelines published in National Cooperative Highway Research Program (NCHRP) Report 765²⁰ for converting raw model results into forecasted volumes. This method, known as the difference forecast method, is based on existing counts and the difference between the model's baseline and future volumes. This method normalizes the model projections based on the accuracy of the model validation and the existing roadway volumes.

²⁰ National Cooperative Highway Research Program (NCHRP). *Report 765: Analytical Travel Forecasting Approaches for Project-Level Planning and Design*, Washington, D.C.: National Academy Press, 2014.



TABLE 13: ROADWAY IMPROVEMENTS FOR CUMULATIVE CONDITIONS

Project Number ¹	Name	Description	Sources ²			Notes
			City ³	FORA ⁴	RTP ⁵	
City of Marina Capital Improvement Program						
R 05	Second Avenue Extension	Extend Second Avenue as a 2-lane arterial between Imjin Parkway and Reindollar Avenue	X	X		
R 34	Eighth Street	Upgrade/construct Eighth Street as a 2-lane arterial from Second Avenue to Inter-Garrison Road	X	X		
R 37	Patton Parkway Extension	Extension of Patton Parkway from Del Monte Boulevard to Crescent Street	X	X		
R 61	Second Avenue Widening	Widen Second Avenue from Tenth street to Inter-Garrison Road. Remove Class II bike lanes and restripe for two lanes each direction	X			Project is planned, funding projected between 2020 and 2035.
Fort Ord Reuse Authority (FORA)						
FO 6	Inter-Garrison Road Widening	Widen Inter-Garrison Road to a 4-lane arterial from Eastside Parkway to Reservation Road		X		Partially completed between Sherman Blvd to Reservation Road
FO 7	Gigling Road	Widen Gigling Road to a 4-lane arterial from General Jim Moore Boulevard to Future Eastside Parkway near Eighth Avenue		X		
AMBAG Regional Transportation Plan (RTP)						
MON-MAR001-MA	Reservation Road Widening	Widen Reservation Road to 4 lanes between East Garrison Gate and Davis Road		X	X	
MON-MAR001-MA	Imjin Parkway Widening	Widen Imjin Parkway to four lanes from Imjin Road to Reservation Road	X		X	

Notes:

1. Project ID Number based on leading agency from source document.
2. Projects appearing in multiple source lists are described and denoted by source.
3. Listed in City of Marina's 5 Year Capital Improvement Project List, Revised March 2016.
4. Listed in Fort Ord Reuse Authority's Capital Improvement Program Fiscal Year 2017/18 through 2027/28, and Fort Ord Reuse Authority Fee Reallocation Study: Deficiency Analysis and Fee Reallocation (2017).
5. Listed in the 2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018).

Source: Fehr & Peers, 2019.



VMT ESTIMATION PROCESS FOR THE SB 743 ASSESSMENT

Total VMT per Service Population Estimation Method

The total VMT is the VMT from all vehicle trips for all trip purposes and types caused by the residential population, employment population, and student population in a specific area. It is calculated by summing the "VMT within," "VMT from," and "VMT to" a specified area, as follows:

$$\text{Total VMT} = (II + IX) + (II + XI) = 2 * II + IX + XI$$

- Internal-internal (*II*): The full length of all trips made entirely within the specified geographic area limits.
- Internal-external (*IX*): The full length of all trips with an origin within the specified geographic area and destination outside of the area.
- External-internal (*XI*): The full length of all trips with an origin outside of the specified geographic area and destination within the area.

The intra-zonal VMT and VMT between traffic analysis zones, or TAZs, that are in the specified geographic study area causes some double counting, which is an expected result when summing the trip end based VMT. To ensure a VMT rate is expressed properly (i.e., that the numerator and denominator include the generators of both trip ends of the VMT), the total VMT is divided by the service population (residential population, employment population, plus student population), the generators of both trip ends of the VMT. The VMT estimates are also presented on a per service population basis to account for both the effects of population and/or employment growth and the effects of changes in personal travel behavior. For example, population growth may cause an increase in VMT, while travelers changing their behavior by using different travel modes or decreasing their vehicle trip lengths (such as a higher percentage of students living campus) would cause decreases in VMT.

Project's Effect on VMT Estimation Method (Using Boundary VMT)

As noted earlier, the Project's effect on VMT, or cumulative impact, is evaluated using the boundary VMT, which captures all VMT on the roadway network within a specified geographic area, including local trips plus interregional travel that does not have an origin or destination within the area. The geographical boundary method only considers traffic within the physical limits of the selected study area and does not include the impact of vehicles once they travel outside the area limits. The use of boundary VMT provides a complete evaluation of the potential effects of the Project because it captures the combined effect of new VMT, shifting existing VMT to/from other neighborhoods, and/or shifts in existing traffic to alternate travel routes or modes. The boundary VMT is also divided by the service population (sum of residents, employees, and students) to account for the effects of population and/or employment growth and the effects of changes in personal travel behavior within the specified geographic area.



SERVICE POPULATIONS

Service population is the sum of the number of employees, residents, and students within the designated geographic area. **Table 14** shows the service populations for the CSUMB campus and Monterey County for the analysis scenarios:

- Existing Conditions – Baseline total VMT per service population and boundary VMT per service population based on existing land use and transportation network.
- Existing with Project Conditions – Existing Conditions with the combined effects of the CSUMB Master Plan including increased campus population and modifications to existing campus parking and transportation facilities on total VMT per service population.
- Cumulative Conditions – Year 2035 boundary VMT per service population based on forecasts from the AMBAG regional travel model without Eastside Parkway.
- Cumulative with Project and without Eastside Parkway Conditions– Cumulative Conditions boundary VMT per service population with the combined effects of the CSUMB Master Plan including increased campus population and modifications to existing campus parking and transportation facilities.



TABLE 14: SERVICE POPULATIONS

	Existing Conditions	Existing with Project Conditions	Cumulative Conditions	Cumulative with Project and without Eastside Parkway Conditions
CSUMB Campus				
Employees (A) ^{1,2}	1,030	1,780	1,030	1,780
Residents (B) ^{1,3}	280	70	280	70
Students (C) ^{1,4}	6,640	12,700	6,640	12,700
Service Population (A + B + C = D) ^{1,5}	7,950	14,550	7,950	14,550
Monterey County				
Employees (E) ^{1,2}	183,660	184,410	228,780	229,530
Residents (F) ^{1,3}	384,830	384,620	444,350	444,140
Students (G) ^{1,4}	112,690	124,820	127,680	139,810
Service Population (E + F + G = H) ^{1,5}	681,180	693,850	800,810	813,480

Notes:

1. Rounded service population to nearest 10.
2. Employees are the sum of employees working at the CSUMB Campus or in Monterey County per the AMBAG travel demand model.
3. Residents (defined as the Community Housing Partners living on the East Campus) are the sum of residents living on the CSUMB Campus or in Monterey County per the AMBAG travel demand model. As shown in Table 1, the Community Housing Partner residential population is expected to decrease as CSUMB accommodates more faculty and staff in the East Campus housing.
4. Students are the sum of students (Kindergarten to University) on the CSUMB Campus or Monterey County per the AMBAG travel demand model. Students on the CSUMB Campus are defined as university students.
5. Service population is defined as the sum of all employees, residents, and students (Kindergarten to University).

Source: Fehr & Peers, 2019.



5. CEQA SIGNIFICANT IMPACTS AND MITIGATION

This chapter discusses potential Project impacts per the significance criteria described in **Chapter 4**. The determination of a significant impact related to the transportation network is based on the evaluation of key plans, policies, and goals described in **Chapter 3** of this report. Plan conflict impacts were evaluated by comparing the Project Conditions to applicable programs, plans, ordinances, or policies addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities. Both direct (Project generated) and cumulative (Project's effect) VMT impacts were evaluated. Direct VMT impacts were evaluated using total VMT per service population rate under Existing with Project Conditions. Cumulative VMT impacts were evaluated using boundary VMT under Cumulative with Project and without Eastside Parkway Conditions, and Cumulative with Project and with Eastside Parkway Conditions. Hazards due to design features and emergency access impacts were evaluated under Project Conditions.

PLAN CONFLICTS ANALYSIS

Conflicts with the relevant transportation plans, as described in **Chapter 3**, were addressed by travel mode as discussed below.

TRANSIT EVALUATION

Existing access for regional MST bus routes is provided primarily via Inter-Garrison Road, Imjin Road, and General Jim Moore Boulevard. Currently, regional routes mainly circulate through Inter-Garrison, Divarty Street, East Campus, and General Jim Moore Boulevard. It is reasonable to expect that as long as there is adequate demand, existing transit circulation would be maintained in the future, including through the future restricted access segments of Inter-Garrison Road and Divarty Street. Since these restricted access segments are primarily designed to preserve bicycle and pedestrian circulation near the core campus, regional transit travel would be limited as much as possible to core routes, and shuttles would primarily travel along the periphery of the Main Campus.

As part of the Project, additional shuttles are proposed to support the regional transit passing through the campus, as well as residents living in Main Campus and East Campus. Existing shuttles run as MST routes and primarily travel along Inter-Garrison Road, Divarty Street, and East Campus. In the future, these additional shuttles are proposed to circulate in a larger loop serving the East Campus, North Main Campus Housing, the multimodal hubs, and parking areas by traveling along the future Fifth Street, Sixth Street, Inter-Garrison Road, Divarty Street, and General Jim Moore.

The Project does not propose changes to the transit system that would impact the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)* goals of expanding the role transit plays in meeting the region's mobility needs such as investments in bus rapid transit, expansion of local services,



and planned rail projects. Internal circulation changes would support core regional transit travel within the Campus.

Project transit ridership is estimated using the existing mode splits for each population type by housing location. Assuming the public transit service levels and the destinations accessible by transit (e.g., portion of jobs and other land use destinations) remain similar between Existing Conditions and Existing with Project Conditions, and assuming no parking management strategies are implemented that would encourage transit ridership, for the reasons explained below, it is reasonable to expect that transit travel behavior (e.g., percent transit mode share for each population type and residential location) would generally remain the same as Existing Conditions. Therefore, the existing transit mode share by population type was used in calculating the Project transit ridership.

The reason for this determination is because switching from the disaggregated mode share splits for each population type and residential location to the CSUMB Main Campus transit mode share, the analysis shows there actually would be a decrease in the transit mode share over time as students are moved from East Campus to Main Campus and, therefore, would be less reliant on transit. Based on the CSUMB person trip survey, the transit mode share currently is less than 10 percent of the Campus population travel. As more housing is built on campus and students are moved from East Campus to Main Campus, the share of travel by walking and bicycling is expected to increase and the transit mode share is expected to drop to less than 5 percent (refer to mode share summary in **Chapter 6**).

However, while the transit mode share expressed as a percentage could decrease, the total number of transit riders is likely to increase as CSUMB increases its implementation of effective Parking Management and TDM strategies, which would result in an increase in the transit mode share under future conditions. Relatedly, because the provision of transit service is reactive to increased demand for transit ridership, transit service can be increased via increased bus frequency and additional routes, if justified.

As shown in **Table 15**, Main Campus transit ridership is expected to increase as the Project proposes to house more students on the Main Campus. The student population has higher existing transit ridership rates compared to faculty and staff. Since the same travel behaviors are assumed in the future, increasing the student population on the Main Campus would correspondingly increase Project ridership on the Main Campus.



TABLE 15: MAIN CAMPUS TRANSIT RIDERSHIP SUMMARY

Data Source	Existing Ridership		Project Ridership	
	AM	PM	AM	PM
Mode Share/Trip Gen Data ¹	31	23	67	49
MST Data ²	27	41	N/A	N/A

Notes:

1. Peak hour ridership calculated using mode share data from person trip surveys (inbound - AM, outbound - PM), and campus population type by housing location.
2. Peak hour ridership data from Spring 2017 MST data for all Routes excluding Route 26.

Source: Fehr & Peers, June 2019; MST, August 2017.

In comparison, as shown on **Table 16**, transit ridership would decrease in the East Campus. As summarized in **Appendix A**, the current East Campus faculty and staff transit mode share is 2.9 percent and the East Campus student transit mode share is 32.8 percent. Relocation of student residents to the Main Campus and increasing the number of faculty and staff residents on the East Campus would therefore lower East Campus Project transit ridership overall, because faculty and staff use transit less frequently than students. The transit ridership numbers shown in **Table 16** are based on a condition where there are no additional parking management strategies or limitations in place to discourage use of single occupant vehicles. As previously noted, future parking management strategies could cause transit ridership to increase, thereby potentially exceeding future projected ridership rates. Should this occur, it is expected that future transit service would be implemented to serve the future ridership demand.

TABLE 16: EAST CAMPUS TRANSIT RIDERSHIP SUMMARY

Data Source	Existing Ridership		Project Ridership ³	
	AM	PM	AM	PM
Mode Share/Trip Gen Data ¹	66	51	18	15
MST Data ²	22	29	N/A	N/A

Notes:

1. Peak hour ridership calculated using mode share data from person trip surveys (inbound - AM, outbound - PM), and campus population type by housing location.
2. Peak hour ridership data from Spring 2017 MST data for Route 26, which travels between East Campus and Main Campus.
3. Future ridership conservatively based on current conditions, assuming no increase in on-campus housing, parking policies or additional transit connectivity to encourage ridership.

Source: Fehr & Peers, June 2019; MST, August 2017.

A bus capacity analysis was conducted for the weekday AM and PM peak hours when the Project's estimated public transit ridership is the highest. This analysis assumes that public transit service levels and the destinations accessible by transit (e.g., portion of jobs and other land use destinations) are similar between Existing Conditions and Existing with Project Conditions. Therefore, Project transit riders are estimated to



use each route in similar proportions as Existing Conditions. The estimated Project peak hour boardings per route are presented in **Table 17**. The Existing plus Project peak hour boardings were then divided by the route’s vehicle capacity to determine if the Project would cause the ridership-to-capacity ratio to exceed 1.0 and therefore create demand for public transit above the capacity provided under Existing Conditions.

TABLE 17: WEEKDAY PEAK HOUR BUS ROUTE CAPACITY ANALYSIS

Route ¹	Peak Hour	Peak Hour Capacity [A] ¹	Average Existing Peak Hour Boarding ²	Project Peak Hour Boarding ³	Total Boarding [B]	Over Capacity? (B/A > 1?)
Main Campus						
12	AM	123	8	2	10	No
	PM	74	6	1	7	No
16	AM	118	23	30	53	No
	PM	118	28	19	47	No
18	AM	118	22	17	39	No
	PM	118	33	21	54	No
25	AM	32	8	15	23	No
	PM	32	7	7	14	No
74	AM	56	33	2	35	No
	PM	56	7	1	8	No
East Campus						
26	AM	105	22	18	40	No
	PM	105	29	15	44	No

Notes:

1. Bus capacity is a product of the average number of buses serving the route during the weekday AM and PM peak hours and sitting and standing capacity. Peak hour capacity was calculated by dividing the peak period capacity by two.
2. Calculations based on Spring 2017 Tuesday through Thursday peak period ridership data provided by MST. Peak hour boardings were calculated by dividing the peak period capacity by two.
3. Plan transit ridership per route estimated based on the proportion of ridership for the route.

Source: Fehr & Peers, 2019.

As shown in Table 17, the Project is not anticipated to create demand for public transit above the existing available capacity and, therefore, the impact of the Project on transit ridership and facilities would be less than significant, and no mitigation or additional improvements would be required.

Moreover, the additional shuttles proposed by the Project to circulate within the campus would not affect existing or planned transit facilities and would not reduce existing or planned capacity. These proposed



shuttles would add capacity that could serve estimated Project ridership from the Main Campus and East Campus described above.

Consistent with the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)*, the existing transit circulation would be maintained in the future, including through the future restricted access segments of Inter-Garrison Road and Divarty Road. The changes to the vehicle circulation system as part of the Project would not be expected to interfere with existing transit facilities nor conflict with planned transit facilities and services or conflict with adopted transit plans, guidelines, policies, or standards. Additionally, the Project is supportive of the transit use and goals summarized in **Chapter 3**. Therefore, the impact relative to disruption of existing or planned transit facilities or conflicts with transit program, plan, ordinance, or policy would be less than significant.

ROADWAY EVALUATION

The Project includes modifications to existing campus parking and street facilities to create a more pedestrian and bicycle-oriented campus core. These modifications will cause existing and future local and regional traffic to circulate differently on-campus and in some cases divert traffic to adjacent streets. The expected influence on existing and future traffic for each of the key PDFs is to be implemented as part of the Project, as described in the Project Description, Chapter 3 of the Master Plan Draft EIR, are listed below:

- Parking will be consolidated and relocated to select areas on the periphery of the campus core (PDF-MO-1[c]):
 - Traffic Volume Change: Less CSUMB vehicle traffic within the Main Campus core. Increased volumes of CSUMB vehicles along the outer streets of the Main Campus.
- Vehicle access will be limited to CSUMB students, faculty, and staff vehicles on General Jim Moore Boulevard between Eighth Street and Fifth Street (PDF-MO-3):
 - Traffic Volume Change: Shifting of non-CSUMB vehicles to parallel streets of Second Avenue and Eighth Street and direct access to new parking lots for CSUMB vehicles along General Jim Moore Boulevard.
- Vehicle travel through the campus core will be restricted to shuttles, transit vehicles, service vehicles, and emergency vehicles by limiting access at the following locations (PDF-MO-3):
 - Inter-Garrison Road between General Jim Moore Boulevard and Sixth Avenue
 - Divarty Street between General Jim Moore Boulevard and Seventh Avenue
 - Fourth Avenue between Divarty Street and Inter-Garrison Road
 - Fifth Avenue between Divarty Street and Inter-Garrison Road
 - A Street between Divarty Street and Seventh Avenue
 - Sixth Avenue between B Street and north of Divarty Street
 - Butler Street between Sixth Avenue and Seventh Avenue



- Traffic Volume Change: Shifting of existing and future vehicle traffic to nearby roadway facilities including Second Avenue, Eighth Street (future street extension between Third Avenue and Fifth Avenue), Imjin Parkway, Eighth Street, Colonel Durham Street, and Gigling Road.
- Seventh Avenue between Colonel Durham Street and Butler Street will be converted to one-way for vehicles traveling north from Colonel Durham Street to Inter-Garrison Road (PDF-MO-3).
 - Traffic Volume Change: Shifting of outbound traffic to Eighth Avenue. (A complement to limiting vehicle access within the Main Campus core.)

Overall, the Project would not conflict with existing or planned roadway facilities because the proposed roadway changes are limited to on-campus roads. Moreover, while the Project would result in a shift of vehicle traffic from the campus core to nearby roads, the Project also includes a “park once” policy that would limit vehicle circulation on local streets on or near the CSUMB campus. Parallel transportation improvements (such as the Eighth Street extension and Gigling Road to Inter-Garrison Road) would serve the shifts in local and regional traffic that otherwise would travel through the CSUMB campus. The street modifications also would support a more walkable, bikeable and transit oriented Main Campus core. The Project would not be expected to interfere with existing roadway facilities, conflict with planned roadway facilities, or conflict with adopted transportation plans, guidelines, policies, or standards. Therefore, the impact relative to disruption of existing or planned roadways or conflicts with program, plan, ordinance, or policy would be less than significant.

BICYCLE EVALUATION

The Project is expected to generate demand for bicycle lanes, bicycle routes, and off-street shared use paths between the Campus and adjacent land uses, and travel to/from areas within the entire Campus. The Project proposes to improve bicycle access along Inter-Garrison Road and Divarty Street by restricting vehicles along segments of these roadways next to the campus core. Inter-Garrison Road has bicycle lanes (Class II) from the East Campus to Main Campus. The Project proposes to improve bicycle travel throughout the Main Campus through the following steps:

- Replacing the existing Class II facilities (bike lanes) on Inter-Garrison Road between Fourth Avenue and Sixth Avenue with Class I facilities (bike paths).
- Installing a Class I bicycle path facility in place of the existing Class III bicycle route facility along the future restricted access segment of Divarty Street between General Jim Moore Boulevard to Seventh Avenue.
- Installing a Class I bicycle path along the segment of General Jim Moore Boulevard that transverses the Main Campus from Lightfighter Road to Divarty Street that would serve as a main bicycle north-south route.
- Providing a network of Class 1 trails linking the campus together.



The proposed campus bicycle and pedestrian networks are shown on **Figure 4** and **Figure 5**, respectively.

To further facilitate bicycle and pedestrian travel, smaller interior parking lots would be removed, which would allow for increased internal campus facilities, such as campus bicycle and pedestrian paths and trails to aid pedestrian and bicycle circulation. These internal bicycle and pedestrian paths are proposed near housing and other campus buildings that would connect to the proposed bicycle facilities on roadways described above, and existing and planned facilities and trails, including the planned Fort Ord Regional Trail and Greenway (FORTAG) shown on **Figure 10**.

The FORTAG is a planned 30-mile network of regional trails that will connect Seaside, Marina, and CSUMB, and will extend to the existing Monterey Bay Sanctuary Scenic Trail that is parallel to SR 1. The FORTAG trail is planned to go through the Main Campus and along Butler Street, Eighth Street, and Divarty Street within the Campus. The trail would also intersect with Inter-Garrison Road, General Jim Moore Boulevard, and Second Avenue within and around the Main Campus. The Project's consolidation of parking to satellite parking areas would not interfere with the FORTAG trail's alignment and would remove driveways of smaller existing parking lots near the Main Campus, reducing the number of conflict points for the trail. The Project would not interfere with the FORTAG trail's planned route, and proposes bicycle facilities that would provide connections to the trail.

Overall, the Project's bicycle enhancements on the Main Campus core align with the *Monterey County Active Transportation Plan (ATP) 2018*, except for the planned improvement along a portion of Inter-Garrison Road. Under existing conditions, Inter-Garrison Road is a bike route (Class III bikeway) from Second Avenue to Seventh Avenue and has bike lanes (Class II bikeway) from Seventh Avenue to Inter-Garrison Road Connection. Under the *ATP 2018*, Inter-Garrison Road is planned as a cycle track or separated bikeway (Class IV bikeway) from General Jim Moore Boulevard to Eighth Street/Seventh Avenue. As shown on **Figure 4** and **Figure 10**, the Project proposes to restrict vehicle travel and construct a shared-use path (Class I bikeway) along Inter-Garrison Road between General Jim Moore Boulevard and Sixth Avenue. The specifics of this Project improvement differ somewhat from what is proposed in the *ATP 2018*; although, the Project's improvement would provide a path for exclusive use of bicycle and pedestrians. Thus, the path provides bicyclists a similar exclusive travel facility as would a cycle track and, as a result achieves the same purpose and, therefore, is consistent with the *ATP 2018*.

The Project improvements of adding new internal bicycle paths and on-road bicycle facilities connecting to existing and planned bicycle facilities align with the overall goals and policies of the plans described in **Chapter 3**, such as the *Monterey County ATP 2018*, which aims to improve bicycle connectivity by eliminating gaps, improving the quality of the bicycle network, and supporting complete streets for all users, including bicyclists. The Project improvements would not disrupt or conflict with the intent of planned bicycle facilities consistent with relevant plan goals and policies, and would not conflict with applicable programs, plans, ordinances, or policies related to bicycle facilities. Therefore, the bicycle-related impact would be less than significant.



PEDESTRIAN EVALUATION

The Project proposes to increase housing within the Main Campus and relocate parking areas outside of the Main Campus core. These changes are expected to generate demand for sidewalks and off-street shared use paths. As can be presented on **Figure 9**, there are gaps in the existing sidewalks on and around the campus. As shown on **Figure 5**, the Project would expand the pedestrian network on the campus and to adjacent land uses by adding multi-use greenways, pedestrian pathways, and closing existing sidewalk gaps. The Project also proposes to establish additional pedestrian malls such as Divarty Street and Inter-Garrison Road as described in **Chapter 1**.

The Project site plan was evaluated for internal circulation between the residential housing, academic and recreational uses, and transit stops. As part of the Project, Divarty Street would be further developed as a pedestrian mall with restricted vehicle travel. Along with Divarty Street, Inter-Garrison Road would also be limited to only pedestrian, bicycle, and transit travel. These restricted access roadways will allow for improved pedestrian circulation within the central core of the Main Campus. Along with restricting vehicles from traveling along the core of the campus, smaller interior parking lots will be removed, and parking would be located mainly on the periphery of the campus to help minimize pedestrian and vehicle conflicts.

Bus stops are mainly concentrated around the core of the campus along Inter-Garrison Road, Divarty Street, and Sixth Avenue, which would be limited to only pedestrian, bicycle, and transit travel. Pedestrians will continue to have access to the campus core bus stops.

The Project includes expanding the pedestrian network by adding multi-use greenways and pedestrian pathways. These pathways would link the core campus to residential areas in the north end of the Main Campus and the athletics and recreation district in the southern end of the Main Campus.

The pedestrian goals and policies of the plans summarized in **Chapter 3** include increasing trail connections to parks and open space, supporting pedestrian movements, improving pedestrian safety, and removing gaps in the pedestrian network. The Project improvements, such as increased trail connections to existing and planned trails, expanding multi-use greenways and pathways, reducing vehicle circulation through the core of the campus, and closing gaps in the pedestrian network, align with these goals and policies. The Project would not interfere with existing or planned pedestrian facilities nor conflict with applicable non-vehicle transportation plans, guidelines, policies, or standards and, instead, would enhance pedestrian circulation within the Main Campus core and connections to adjacent land uses, which is a beneficial effect on the pedestrian circulation and access. Therefore, the Project would not conflict with pedestrian-related plans and any impact would be less than significant.



SB 743 VMT ANALYSIS

This section presents an analysis of the Project's impacts relative to VMT, including the daily VMT estimates for the SB 743 VMT assessment; data for the greenhouse gas (GHG) analysis can be found in **Appendix G**. **Appendix G** also includes a VMT forecasting outline using the AMBAG regional travel model.

The total VMT and boundary VMT were estimated using the AMBAG travel model. The total VMT per service population rate is used to evaluate the direct effects of the Project under Existing with Project Conditions, while the boundary VMT is used under Cumulative with Project Conditions to evaluate the Project's effect on VMT – an evaluation of cumulative impacts. The results of the Project generated VMT (using total VMT per service population rates) and Project's effect (using boundary VMT per service population ratios) on VMT impact analyses are presented in **Table 18** and **Table 19**, respectively. Each analysis is separately addressed below.

PROJECT GENERATED VMT

As shown in **Table 18**, the CSUMB campus total VMT would increase in absolute terms between Existing Conditions (178,500 total vehicle miles traveled) and Existing with Project Conditions (295,500 total vehicle miles traveled), which is expected due to the planned Campus population increase and the associated increase in related vehicle travel.

However, on a per service population basis, which is the metric relative to assessing impacts under CEQA, VMT would *decrease* by approximately 10 percent between Existing Conditions (22.31) and Existing with Project Conditions (20.24). This decrease would result due to the increase in on-campus housing and modifications to the Campus street system, both attributes of the Project. Other VMT reducing components of the Project include student life buildings, indoor recreation buildings and facilities, outdoor athletics, and recreation support buildings.

As to whether the CSUMB campus total VMT per service population rate under Existing with Project Conditions would result in a significant impact within the meaning of CEQA, **Table 18** presents the CSUMB campus total VMT per service population of 20.24. This is less than the applicable threshold of 23.91. Therefore, the CSUMB campus total VMT rate impact would be less than significant.

Please refer to the sections titled SB 743 VMT Assessment Method Decisions in **Chapter 1** and the Significance Criteria and VMT Analysis Methods in **Chapter 4**, for explanation of the methods utilized to calculate the total VMT and the total VMT per service population rate, and the basis upon which significant impacts are assessed under CEQA.



TABLE 18: PROJECT GENERATED VMT FOR SB 743 VMT ASSESSMENT

	Existing Conditions	Existing with Project Conditions
CSUMB Campus		
Total Vehicle Miles Traveled (A) ¹	178,500	295,500
Service Population (B) ^{1,2}	8,000	14,600
Total VMT per Service Population (A/B = C)	22.31	20.24
Impact Assessment		
	Total VMT per Service Population Threshold (Impact Conclusion)	23.91 (Less Than Significant)

Notes:

1. Rounded service population and VMT to nearest 100.
2. Service population is defined as the sum of all employees, residents, and students (Kindergarten to University).

Source: Fehr & Peers, 2019.

PROJECT'S EFFECT ON VMT

The results of the analysis addressing the Project's effect on VMT under Cumulative with Project and *without* Eastside Parkway Conditions are presented in **Table 19**. Under Cumulative with Project and without Eastside Parkway Conditions the Monterey County boundary VMT per service population²¹ of 13.98 is less than the applicable threshold of 14.07. Therefore, the impact of the Project's effect on VMT under Cumulative without Eastside Parkway Conditions would be less than significant.

The results of the analysis addressing the Project's effect on VMT under Cumulative with Project and *with* Eastside Parkway Conditions are also presented in **Table 19**. Under Cumulative with Project and with Eastside Parkway Conditions the Monterey County boundary VMT per service population of 13.96 is less than the applicable threshold of 14.07. Therefore, the impact of the Project's effect on VMT under Cumulative with Project and with Eastside Parkway Conditions would be less than significant.

Please refer to the sections titled SB 743 VMT Assessment Method Decisions in **Chapter 1** and the Significance Criteria and VMT Analysis Methods in **Chapter 4**, for explanation of the methods utilized to calculate the boundary VMT and the basis upon which significant impacts are assessed under CEQA.

²¹ Service population is defined as the sum of all employees, residents, and students (Kindergarten to University)



TABLE 19: PROJECT’S EFFECT ON VMT (BOUNDARY VMT) FOR SB 743 VMT ASSESSMENT

	Existing Conditions	Cumulative Conditions	Cumulative with Project and without Eastside Parkway Conditions	Cumulative with Project and with Eastside Parkway Conditions
Monterey County				
Vehicle Miles Traveled (D) ¹	9,011,700	11,268,400	11,372,800	11,353,400
Service Population (E) ^{1,2}	681,200	800,900	813,500	813,500
VMT per Service Population (D/E = F)	13.23	14.07	13.98	13.96
Impact Assessment				
		VMT per Service Population Threshold (14.07) (Impact Conclusion)	14.07 (Less Than Significant)	14.07 (Less Than Significant)

Notes:

1. Rounded service population and VMT to nearest 100.
2. Service population is defined as the sum of all employees, residents, and students (Kindergarten to University).

Source: Fehr & Peers, 2019.

HAZARDS EVALUATION ANALYSIS

The Project includes modifications to existing campus parking and transportation facilities to create a more pedestrian and bicycle-oriented campus core. These modifications would change the design of parking lots and local streets and intersections, but they would not create hazards such as sharp curves or include otherwise dangerous transportation-facility design features. Therefore, the Project impact related to hazards would be less than significant.

EMERGENCY ACCESS ANALYSIS

While most vehicle traffic under the Project will have limited access to the Main Campus core, emergency vehicles will have unlimited access to Campus streets restricted to pedestrians, bicyclists, transit vehicles and service vehicles. Additionally, future parking facilities and streets will be designed to accommodate emergency vehicles. As such, emergency and service vehicles will continue to have unlimited access to the campus that will be improved by the design of future parking facilities and streets. Therefore, the Project impact related to emergency access would be less than significant.

CONSTRUCTION IMPACT ANALYSIS

Construction activities include those associated with site preparation, and building and other infrastructure construction.



Site preparation includes all of the activities required to allow construction on the Project site. Major components of site preparation would involve removal of the existing parking lots, excavation and grading of the site, and construction of necessary infrastructure. A variety of equipment would be required for the site preparation stage including bulldozers, grading machines, cranes, and dump trucks, which would be responsible for the removal and deposition of cut and fill material on the site.

Building construction involves the assembly of the buildings. Major elements of building construction could include driving piles to support the building foundation, assembling the concrete reinforcing bars as the building frame, pouring concrete, and completing the building accessories such as elevators. Additional infrastructure construction includes streets and parking lots.

As discussed in **Chapter 7**, at buildout the Project would generate approximately 12,510 average daily trips (ADT), with approximately 1,000 of those trips coming in the morning and evening peak hours. Construction operations would generate substantially fewer trips on a daily basis (less than 1,300 ADT) and, thus, the volume of construction traffic would be less than Project traffic. To address construction traffic, PDF-MO-14 (cited below) requires that the Project contractors implement construction traffic control plans that comply with California Department of Transportation (Caltrans) Standard Specifications and include, among other components, appropriate traffic control devices, such as signage and temporary roadway closures, if necessary. With implementation of the plan, safe access to the pedestrian, bicycle, transit, and street facilities would be maintained while construction activities associated with Project proceed.

PDF-MO-14: Avoid Construction Conflicts – When construction projects require significant work within existing roadways CSUMB will require the design team and/or the project contractor and their qualified registered Civil Engineer to implement a construction traffic control plan. This requirement will be incorporated into construction bid packages. The plans will conform with the current version of the State of California Department of Transportation Standard Specifications, where applicable, and will be reviewed and approved by CSUMB prior to implementation. The traffic control plan will include any detour plans and/or temporary traffic control devices warranted, per the current version of the California Manual on Uniform Traffic Controls Devices to provide for public safety, maintenance of access, temporary roadway closures, if needed, and construction-area signage. CSUMB shall inform emergency services of any roadway or lane closures and alternative travel routes to ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures.

Therefore, traffic-related impacts associated with Project construction would be less than significant with implementation of PDF-MO-14.



6. PARKING MANAGEMENT AND TDM

This chapter defines the parking supply and mode share assumptions used in the transportation analysis based on observed data (refer to **Appendix A** to **Appendix C**). This chapter provides additional detail about the parking supply and mode share to show the range of parking supply scenarios and potential VMT reductions due to additional parking management and TDM strategies. This parking supply analysis is also used to inform the campus traffic assignment to the new campus parking lots shown in the Operations Analysis section of this report (refer to **Chapter 7** to **11**). Furthermore, this parking and TDM evaluation provides a clear baseline to compare the effectiveness of the Parking Management and TDM Plan strategies to be implemented in the future. This chapter concludes with suggested refinements to the PDFs that could reduce project trips and/or VMT.

MAIN CAMPUS PARKING EVALUATION

PDF-MO-1(c) would manage the parking supply, consolidate and relocate parking lots to the edge of the Main Campus, remove non-essential parking lots from the campus core, and facilitate a “park once” policy.

This parking evaluation builds upon the *CSUMB Draft Parking Supply Scenarios* (Fehr & Peers, August 2015) included in **Appendix H**, which presented three parking supply scenarios with various parking pricing and parking management strategies. The 2015 parking supply scenarios analysis was a high-level analysis focused on parking supply using descriptive parking data provided by campus staff; it did not include existing parking occupancy or peak parking demand data as this analysis does. This parking analysis uses existing parking data to estimate future parking supply and identify potential parking management strategies that could be incorporated into a Parking Management Plan. Three scenarios are discussed:

1. **Future Parking Supply Base Scenario** – This business-as-usual scenario would result in a parking supply of 6,374 parking spaces at the consolidated parking lots. This scenario assumes the future parking supply accommodates future population at the current parking demand rate and implements the existing level of parking policies and parking management program.
2. **Land Area Allocation Parking Supply Scenario** – This scenario is based on the Master Plan land use map (PDF-LU-1) allocation for parking and would result in a parking supply of 5,651 parking spaces at the consolidated parking lots.
3. **Master Plan Vision to Maintain Existing Parking Supply Scenario** – This scenario would maintain the parking supply of 4,721 parking spaces at the consolidated parking lots and would require parking management to reduce the parking demand by implementing parking strategies such as increased parking pricing and permit restrictions for freshmen and sophomores. This scenario was chosen by the campus as part of the public Master Planning process and could be achieved by implementation of a Parking Management Plan and TDM measures per PDF-MO-1. The existing parking supply is described in the CSUMB Master Plan Guidelines as having an over-



supply of parking for the existing campus enrollment. As the campus consolidates parking to satellite parking areas along the edge of the Main Campus, as shown in **Figure 6**, the parking supply is assumed to remain constant. By placing the parking areas along the edge of the Main Campus near the gated entry and campus entries, most vehicle traffic will circulate on Eighth Avenue, Eighth Street, Gigling Road, Second Avenue, and General Jim Moore Boulevard. Parking areas closer to the campus core will include “Multimodal Hubs.”

Below is a description of current academic parking, residential parking, and multimodal hubs used in the parking analysis:

- **Academic parking** areas serve all populations, which includes off-campus students, Main Campus student residents, faculty/staff, visitors, and community housing partners.
- **Residential parking** areas only serve students living on the Main Campus.
- **Multimodal hubs** are located at the academic parking areas at Inter-Garrison Road/Sixth Avenue and Divarty Street/General Jim Moore Boulevard. The multimodal hubs will be designed to serve several transportation modes, including carpool vehicles, pick-up/drop-off activities, transit vehicles, bicyclists, and other populations on campus.

The following is a description of the proposed seven parking areas (refer to **Figure 6**) for the parking area locations):

- Parking Area 1 - Academic and Residential Parking: Located along General Jim Moore Boulevard north of Fifth Street.
- Parking Area 2 - Academic Parking: Located on the southwest corner of the Divarty Street and General Jim Moore Boulevard intersection. This parking area will have a multimodal hub.
- Parking Area 3 - Academic Parking: Located on the northwest corner of the intersection of Inter-Garrison Road and Sixth Avenue. This parking area will have a multimodal hub.
- Parking Area 4 - Academic Parking: Located north and south of A Street between Sixth Avenue and Seventh Avenue.
- Parking Area 5 - Academic Parking: Parking lot for faculty and staff located along the northern side of Inter-Garrison Road west of General Jim Moore Boulevard.
- Parking Area 6 - Academic Parking: Parking lot for faculty and staff located along Sixth Avenue between B Street and Butler Street.
- Parking Area 7 - Residential Parking: Parking lot for student residents located at Promontory Housing, and at the intersection of Eighth Street and Imjin Road.

The Master Plan Guidelines and PDF-MO-1(c) include a requirement to develop a Parking Management Plan that defines measures to manage the parking demand to maintain the existing parking supply for the next phase of campus growth. The following section provides parking supply estimates based on the



parking demand data collected for this report and also the land area allocation from the Master Plan Circulation plan. Therefore the analysis establishes a base condition using existing travel characteristics (observed travel behavior data), which do not include future enhanced parking management and/or TDM programs, to provide a clear baseline to compare the effectiveness of the Parking Management and TDM Plan strategies to be implemented in the future. The results confirm that the CSUMB campus will have the available space to park vehicles and that the campus can provide a parking supply to accommodate a desired parking demand with the appropriate parking management strategies.

PARKING DEMAND SURVEY AND PARKING SUPPLY ESTIMATES

Existing Parking Demand

The future campus parking supply for the Project was estimated using existing parking inventory and parking occupancy data collected by Mott McDonald in the Fall of 2017. The existing parking inventory and occupancy data is presented in **Chapter 2**. Existing parking demand rates were determined for two types of parking: academic and residential.²² Existing academic parking demand rates were calculated by determining peak parking demand of existing parking lots not restricted to on-campus residents and dividing that demand by the existing student, faculty, and staff population presented in **Table 1**. Existing residential parking demand rates were calculated by determining peak parking demand of existing parking lots restricted to only on-campus residents and dividing that demand by the existing Main Campus residential population presented in **Table 1**. The existing academic and residential parking demand rates are summarized in **Table 3**, and calculations are presented in **Table I1** and **Table I2** of **Appendix I**. As presented in **Table 3**, the existing academic parking demand rate is 0.31 spaces per FTE, which is greater than the parking demand rate for residential parking (0.20 spaces per on-campus resident).

Future Parking Demand and Parking Supply Analysis

The parking area locations, estimated size of the parking lots provided by CSUMB, and vehicle occupancy (drive-alone, carpool, or transit) were used in this transportation analysis to develop the on-campus vehicle trip distribution and assignment (refer to **Chapter 3**) and this information was used as a starting point to project the future parking supply. Conservatively, the future academic and residential parking supply base scenario was estimated using the existing parking demand rates as presented in **Chapter 1**, the campus population and a circulation factor²³ of five percent.

²² Academic parking is defined as general parking utilized by students, faculty, and staff that are not restricted to only on-campus residents. Residential parking is parking reserved for on-campus residents.

²³ The existing parking demand rate is the accumulation of vehicles parked on-campus at the peak of the day on a per FTE basis. The parking supply is the total number of available spaces available, regardless of whether they are occupied or not. To ensure there are some available spaces for circulating vehicles a parking circulation factor of 5 percent is applied to the parking demand to estimate the campus parking supply.



The future academic parking supply was determined using the total student, faculty, and staff population of 14,476 FTEs as both off- and on-campus residents are expected to also use parking spaces for academic daily use. The number of future parking spaces needed per parking area was determined by multiplying the percentage of trips traveling to the six academic parking areas. This trip and parking space distribution, and parking supply per parking zone are presented in **Table 20**.

TABLE 20: FUTURE ACADEMIC PARKING SUPPLY BY PARKING ZONE – BASE SCENARIO

Parking Area	Percent of Total Trips	Future Academic Parking Supply (parking spaces)
Parking Area 1	25%	1,190
Parking Area 2	15%	714
Parking Area 3	16%	760
Parking Area 4	29%	1,380
Parking Area 5	7%	333
Parking Area 6	8%	381
Total	100%	4,758

Source: CSUMB, June 2018. Fehr & Peers, 2019.

The future residential parking supply was determined based on the proposed Main Campus residential population of 7,620 students. It is assumed that the Main Campus residential parking supply would be restricted to Main Campus residents and assumes there will be no future parking permit restrictions for on-campus student residents. This establishes a baseline for measuring the effectiveness of parking management and TDM plan strategies. The distribution of residential parking spaces between the two residential parking areas was assumed to be based on proximity to student housing. As the Promontory housing is part of the campus, the Promontory parking area supply was included and assumed to be the same as the existing, 382 spaces. The remaining residential parking spaces are expected to be co-located with the General Parking area along General Jim Moore Boulevard north of Fifth Street (Parking Area 1), which includes both academic and residential parking uses. **Table 21** summarizes the parking supply for the residential uses on campus.

TABLE 21: FUTURE RESIDENTIAL PARKING SUPPLY BY PARKING ZONE – BASE SCENARIO

Parking Area	Percent of Total Trips	Future Residential Parking (parking spaces)
Parking Area 1	76%	1,234
Parking Area 7	24%	382
Total	100%	1,616

Source: CSUMB, June 2018. Fehr & Peers, 2019.



As shown on **Table 22**, the future academic parking supply is estimated to be 4,758 spaces and the projected future residential parking supply would need to be 1,616 spaces assuming existing parking management and TDM measures. Thus, a total future supply of 6,374 spaces would be needed, which is 1,653 more than the existing inventory.

TABLE 22: EXISTING AND FUTURE (BASE SCENARIO) PARKING SUPPLY SUMMARY

Parking Type	Existing (parking spaces)	Future Parking Supply Base Scenario (parking spaces)
Academic	3,730	4,758
Residential	991	1,616
Total	4,721	6,374

Source: CSUMB data received May 2018. Fehr & Peers, 2019.

The future parking supply was estimated based on the Draft EIR Figure 3-7 parking land area allocation (acres). It was then assumed there would be 125 parking spaces per acre. This estimated future parking supply based on land area produces 5,651 parking spaces and is summarized by parking area below in **Table 23**. The future parking supply estimated by campus population growth under the Base Scenario is presented for comparison purposes.

TABLE 23: FUTURE PARKING SUPPLY BY PARKING ZONE (LAND AREA ALLOCATION AND BASE SCENARIOS)

Parking Area	Land Area Allocation Parking Supply Scenario (parking spaces) ¹	Future Parking Supply Base Scenario (parking spaces) ²
Parking Area 1	1,250	2,424
Parking Area 2	1,188	714
Parking Area 3	463	760
Parking Area 4	1,450	1,380
Parking Area 5	500	333
Parking Area 6	375	381
Parking Area 7	425	382
Total	5,651	6,374

Notes:

1. Land Area Allocation Parking Supply Scenario estimated by the CSUMB Master Plan land area allocation provided by CSUMB in June 2018.
2. Future Parking Supply Base Scenario estimated by campus population growth in a business as usual case based on methodology described in **Chapter 3** and tables shown in **Appendix I**.

Source: CSUMB, June 2018. Fehr & Peers, 2019.



The future parking supply base scenario which is estimated based on campus population growth would be 723 spaces greater than the land area allocation parking supply scenario based on the Master Plan land use map (PDF-LU-1).²⁴ Since the existing and proposed student housing would be located close to Parking Area 1 and a quarter of Project off-campus travel is expected to travel to Parking Area 1, the “needed” future parking supply at Parking Area 1 is expected to be higher than the other parking areas and, therefore, potentially more of the nearby land would need to be dedicated to provide parking.

Table 24 shows the summary of the academic and residential parking supply for the three scenarios.

TABLE 24: FUTURE PARKING SUPPLY SUMMARY (FUTURE PARKING SUPPLY BASE SCENARIO, LAND AREA ALLOCATION PARKING SUPPLY SCENARIO, AND MASTER PLAN VISION)

Parking Type	Future Parking Supply Base Scenario	Land Area Allocation Parking Supply Scenario	Master Plan Vision - Maintain Existing Parking Supply Scenario
Academic	4,758	4,451	3,730
Residential	1,616	1,200	991
Total	6,374	5,651	4,721

Source: CSUMB data received May 2018. Fehr & Peers, 2019.

CSUMB would manage the future parking supply by implementing parking and Transportation Demand Management programs and policies that focus on reducing the academic and residential parking demand, per PDF-MO-1. CSUMB campus is developing parking and TDM guidelines, *California State University, Monterey Bay Housing and Parking Management Guidelines, 2021 (Appendix J)*, to inform parking management and TDM programs and policies as part of PDF-MO-1. This guideline introduces the requirement for freshman and sophomores and 90 percent of internal program students to live in on-campus housing, and restricting freshman and sophomores from parking on campus and purchasing parking permits. Several parking pricing and management strategies that could be considered as part of this guideline and incorporated into the development of the parking management plan and TDM programs and policies as part of PDF-MO-1 include the following:

- Adjusting the cost of parking permits – This strategy could include higher cost for on-campus resident parking permits, tiered parking pricing based on the distance to the Main Campus core, and/or a tiered pricing from limited days (1-day, 2-day, etc.). These parking strategies would reduce the residential and academic parking demand.
- Establishing designated parking locations by academic program – This parking management strategy would help manage the academic parking demand.

²⁴ 6,374 parking spaces – 5,651 parking spaces = 723 parking spaces



- Restrict East Campus parking on the Main Campus – This parking management strategy would help manage staff and faculty demand of academic parking on the Main Campus.

MAIN CAMPUS INBOUND AM PEAK HOUR MODE SHARE

As a part of the TA, CSUMB conducted a person travel survey to gather data on existing mode shares. The results were used to estimate the future (with Project) mode shares. The results show that the CSUMB Main Campus would achieve a combined drive alone and shared ride mode share of 46.5 percent by housing more than half of the CSUMB population on-campus, and there is an opportunity for an enhanced TDM plan to reduce the drive alone usage for students, faculty, and staff living off-campus.

The CSUMB Person Travel Survey was conducted in Fall 2017 to better understand the travel choices of CSUMB students, faculty, and staff (refer to **Appendix A** for the sample person travel survey and the trip generation and mode share results). The Existing Conditions and estimated Project Conditions AM peak period inbound person mode shares for CSUMB students, faculty, and staff living on-campus, in East Campus or off-campus are shown in **Table 25**. Under Existing Conditions, the combined drive-alone and shared ride mode share is 62.5 percent while under Project Conditions the combined drive-alone and shared ride mode share is estimated to be less than 47 percent.

TABLE 25: AM PEAK PERIOD INBOUND PERSON MODE SHARE FOR ALL CSUMB STUDENTS, FACULTY AND STAFF

Mode	Existing Conditions ³	Project Conditions ⁴
Drive Alone ¹	53.8%	41.2%
Shared Ride ²	8.7%	5.3%
Sub-Total	62.5%	46.5%
Transit	9.6%	4.6%
Walk	24.2%	40.7%
Bicycle	3.1%	7.3%
Other	0.6%	0.9%

Notes:

1. Drive alone includes motorcycles.
2. Shared ride includes carpooling, vanpooling, drop-off, transportation network companies like Uber and Lyft, and taxis.
3. Existing Conditions mode share summarized from **Tables C-8** and **C-9** of the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix E** of this TA.
4. Project Conditions mode share accounts for 75 percent reduction in Main Campus student internal vehicle trips due to the change in parking locations. Weighted average AM peak period inbound person mode share of CSUMB students, faculty, and staff using Project Conditions campus populations estimates summarized in **Table 1** and person mode share data from **Table C-7** (of the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** of this TA) except student Main Campus mode share is adjusted as follows: from 12.4% to 3.1% for Drive-Alone; from 6.0% to 1.5% for Shared Ride; 4.6% transit; from 70.3% to 77.3% for walk; from 5.1% to 12% for bicycle; and 1.5 % for other to account for Satellite Campus parking locations.
5. Mode share goal expressed in Figure 7.7 of the *CSUMB Master Plan* (June 2017). This mode share applies to off-campus residents.

Source: Fehr & Peers, 2019.



Under Project Conditions, Main Campus student internal vehicle trip generation rates would be reduced due to two factors, both of which disincentivize vehicle use on campus. The first is that parking will be consolidated and relocated to select areas on the periphery of the campus core, less convenient locations for Main Campus students. Second, new infill student housing will be sited close to the academic core. Both of these changes are expected to shift student travel from vehicles to more convenient on-campus transit, bicycling, walking, and other non-vehicular modes of travel. Correspondingly, the Main Campus student internal vehicle trip generation rates were reduced by 75 percent, which was estimated from existing Main Campus student characteristics from the CSUMB Person Travel Survey. As shown in **Table 25**, the AM peak period inbound drive-alone and shared-ride mode share to Main Campus under Existing Conditions (62.5 percent) would be reduced under Project Conditions (46.5 percent).

The above discussion combines the travel behavior of on-campus and off-campus residents. As shown in the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** of this TA, student, faculty, and staff residents living on-campus drive far less than those living off-campus. Most off-campus student, faculty, and staff residents drive to the CSUMB Main Campus (refer to **Table 26**). The AM inbound drive-alone and shared-ride mode share to Main Campus under Existing Conditions (85.0 percent) would increase under Project Conditions (93.1 percent). This increase is due to faculty and staff who would be housed here driving more to the Main Campus as compared to students who currently live in East Campus housing. As a point of reference, the average combined work trip mode share for Monterey County or Santa Cruz County is 80 percent to 95 percent drive-alone and shared-ride (refer to the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** of this TA). The parking management and TDM programs to be developed as part of PDF-MO-1 could help reduce the vehicle trips generated by students, faculty, and staff living at the East Campus or Off-Campus under Project Conditions by 5 to 10 percentage points.



TABLE 26: AM PEAK PERIOD INBOUND PERSON MODE SHARE FOR CSUMB STUDENTS, FACULTY AND STAFF RESIDENTS OF EAST CAMPUS AND OFF-CAMPUS

Mode	Existing Conditions ³	Project Conditions ⁴
Drive Alone ¹	75.0%	83.6%
Shared Ride ²	10.0%	9.5%
Sub-Total	85.0%	93.1%
Transit	12.2%	4.5%
Walk	0.5%	0.3%
Bicycle	2.1%	2.0%
Other	0.1%	0.1%

Notes:

1. Drive alone includes motorcycles.
2. Shared ride includes carpooling, vanpooling, drop-off, transportation network companies like Uber and Lyft, and taxis.
3. Existing Conditions and Project Conditions mode share summarized from **Tables C-9** and **C-11** of the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** of this TA.
4. Weighted average AM peak period inbound person mode share of CSUMB students, faculty, and staff using Project Conditions campus populations estimates summarized in **Table 1** and person mode share data from **Table C-7** (of the *CSUMB Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** of this TA). Person mode share includes East Campus and Off-Campus residents.

Source: Fehr & Peers, 2019.

PROJECT PDFS TO REDUCE PROJECT VEHICLE TRIPS AND VMT

While the Project would not result in significant impacts relative to vehicle travel as determined by the previously presented impact analysis, the CSUMB intends to further develop and implement Parking Management and TDM policies per PDF-MO-1 that would further reduce vehicle trips and VMT. Revisions of the Project PDFs to include the following would assist in achieving these goals (PDF-MO-1 to PDF-MO-6 shown).

PDF-MO-1: TDM Plan – *The campus will continue to implement, enhance, and expand TDM strategies to reduce single-occupant vehicle trips as part of a formal TDM Plan. The TDM Plan will include the following components:*

- TDM Strategies - *Expand upon existing alternative transportation programs (carshare, universal transit pass, late night CSUMB-specific Line 19 downtown Monterey shuttle, Otter Cycle Center, bike rentals, bike repair, guided bike tours, and bike counter bike/scooter share programs) by using strategies taken from the CSU Transportation Demand Management (TDM) Manual (2019/2012) as a guide for project and program development.*
- Commuter Travel An Incentives Program - *Reduce commuter dependency on single-occupancy vehicle travel. Establish and promote an incentives-based commuter program*



to encourage students, faculty and staff commuters to carpool and take ~~alternative~~**active and transit** modes of travel to campus.

- c. Parking Management - ~~Develop parking management~~ Implement strategies and measures to **reduce parking demand**, including the following:
- Consolidate ~~general~~**academic** and/or residential parking on the periphery of the campus **and remove non-essential parking lots from the campus core** per Figure 3-9. (See also PDF-MO-2 for information about multimodal hubs.)
 - **Maintain the existing parking supply of 4,721 parking spaces at the consolidated lots by**
 - **implementing strategies, including, but not limited to, increased parking prices**
 - **and Restrict the number of permits restrictions for allocated to fFreshmen and sSophomores.**
 - Establish residential parking in proximity to new student residential development.
 - Establish parking permit programs/restrictions and lot assignments that discourage movement of vehicles between campus parking **locations (i.e., establish "park once" policy), Main and East Campus housing**, and encourage ~~alternative~~**active and transit** modes of travel.
 - ~~Establish~~ Designated parking stalls **in preferred locations** for the promotion of carpooling, vanpooling, ridesharing and low and zero emission vehicles.
 - Allow limited special parking stalls throughout campus to accommodate accessible and service vehicles, deliveries, loading and unloading activities.
- d. Transit Services - Analyze unmet transit needs and expand transit services in collaboration with MST and other local agencies as needed to provide the level of off-campus connections, inter-campus circulation and para-transportation identified in the TDM plan. (See also PDF-MO-7 through PDF-MO-11 for more information about transit services.)
- e. Bicycle and Pedestrian Improvements – Identify, prioritize, and design bicycle and pedestrian improvements **and create a separated trail network as shown in the Master Plan Guidelines** using connecting landscape features where appropriate. Implement improvements as part of nearby capital projects, where possible. Provide a maintenance plan that creates a system for maintaining pavement quality, signage, bicycle racks and painted markings. (See also PDF-MO-12 and PDF-MO-13 below.)



- f. Monitoring - ~~Maintain an annual~~**Conduct periodic** campus-wide travel surveys to collect data on **Main-Campus CSUMB student and faculty/staff** transportation behavior, experiences, ~~and~~, mode preferences, and ~~to monitor~~, mode **sharesplit**.
- g. TDM Program Administration - Expand and manage TDM services and programs. Establish new staff position(s) to coordinate TDM services and programs, and encourage office administration roles to take on advocacy roles for these programs within their offices. Establish an annual budget for non-capital transportation facilities maintenance and upgrades, planning, and TDM programs.

PDF-MO-2: Multimodal Infrastructure - Expand the campus ~~transportation system~~ multimodal **transportation system** infrastructure and programs. Establish two multimodal hubs, consistent with Figure 3-9, to provide centralized arrival points on campus from the four campus entries. The multimodal hubs will prioritize regional transit connections, shuttle service, carsharing, and visitors.

PDF-MO-3: Vehicle Restrictions - Establish restrictions to general vehicle travel through the campus core and locate vehicle circulation and parking on the campus periphery consistent with Figure 3-9. Establish consistent place-making roadway barriers, signs and landscaping to communicate restricted access roadway entrances. Eliminate the use of bollards, k-rails or industrial looking measures to restrict vehicle access. Maintain traffic speeds at safe levels for all road users and implement traffic calming measures where vehicle behavior routinely exceeds safe levels.

PDF-MO-4: Campus Entries - Create four major entries with signs which lead to two key arrival areas, including: Divarty Street and General Jim Moore Boulevard on the west side (Peninsula Gateway) and Inter-Garrison Road and Sixth Avenue on the east side (Valley Gateway) (see Figure 3-9).

PDF-MO-5: Wayfinding - Expand and maintain a comprehensive regional wayfinding sign sequence, in coordination with state and local agencies, from the primary campus entrances, to campus parking locations.

PDF-MO-6: Design Standards - Pursue universally accessible design throughout campus.

PDF-MO-14: Avoid Construction Conflicts - When construction projects require significant work within existing roadways CSUMB will require the design team and/or the project contractor and their qualified registered Civil Engineer to implement a construction traffic control plan. This requirement will be incorporated into construction bid packages. The plans will conform with the current version of the State of California Department of Transportation Standard Specifications, where applicable, and will be reviewed and approved by CSUMB prior to



implementation. The traffic control plan will include any detour plans and/or temporary traffic control devices warranted, per the current version of the California Manual on Uniform Traffic Controls Devices to provide for public safety, maintenance of access, temporary roadway closures, if needed, and construction-area signage. CSUMB shall inform emergency services of any roadway or lane closures and alternative travel routes to ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures.



7. OPERATIONS ANALYSIS AND PROJECT TRAFFIC FORECASTING METHODS (FOR INFORMATION PURPOSES ONLY)

The following analysis is presented for informational purposes only; that is, for purposes of CEQA analysis, impacts relating to vehicle travel are assessed based on VMT consistent with the requirements of the recently revised CEQA Guidelines (refer to **Chapter 5**). The analyses presented here are used to evaluate the traffic operations of study intersections, freeway segments, and freeway ramps within the context of level of service (LOS), which is no longer the metric used in assessing impacts relative to CEQA.

TRAFFIC ANALYSIS METHODS

The operations of roadway facilities are presented here within the context of LOS, a qualitative description of vehicular traffic flow based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, which reflects free-flow conditions where there is very little interaction between vehicles, to LOS F, where the vehicle demand exceeds the capacity and high levels of vehicle delay result. LOS E represents “at-capacity” operations. When traffic volumes exceed the capacity at an intersection, vehicles may wait through multiple signal cycles before traveling through the intersection; these operations are designated as LOS F. Examples of the various levels of service for a signalized intersection are illustrated in **Figure 13**.

SIGNALIZED INTERSECTIONS

For purposes of this analysis, the LOS method for signalized intersections is based on average control vehicular delay, as described in Chapter 18 of the *2010 Highway Capacity Manual (HCM)* by the Transportation Research Board. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections is calculated using the Synchro analysis software and is correlated to a LOS designation as shown in **Table 27**.

When conducting a LOS analysis, CSUMB uses a LOS D standard for local streets, as presented in the *California State University Transportation Impact Study Manual* (2012). Local streets in Marina and Monterey County have a LOS D standard, while Seaside has established a LOS C standard, and Caltrans uses a LOS C/D standard.



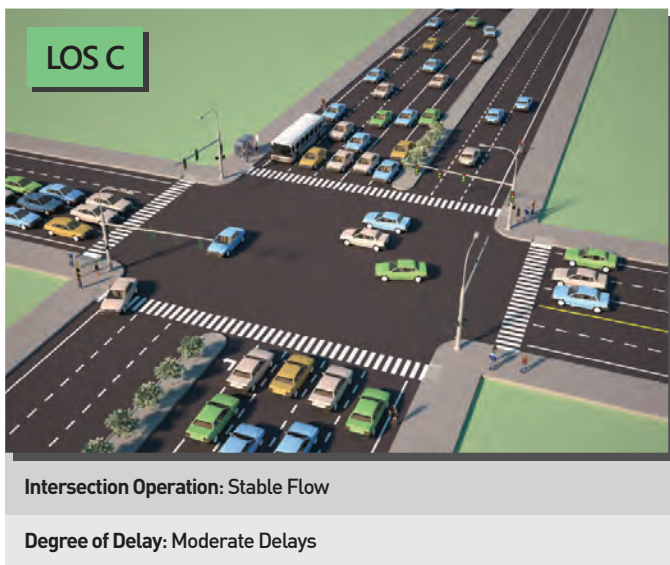
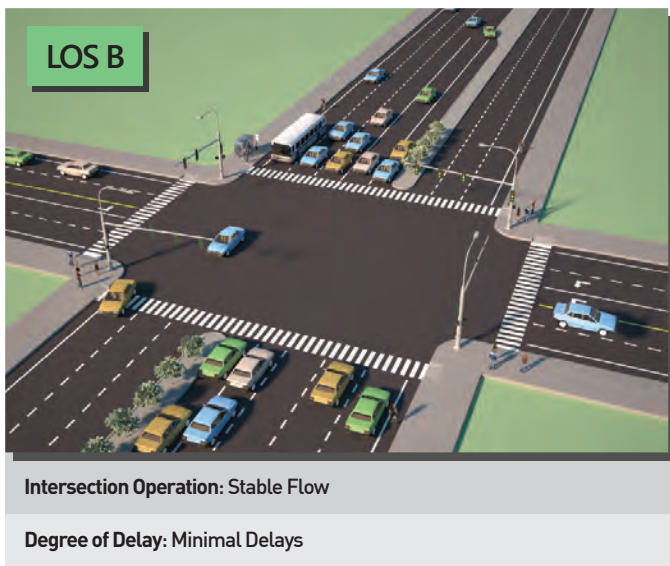


Figure 13
 Signalized Intersection Level of Service Examples

TABLE 27: SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and/or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with long delays indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

UNSIGNALIZED INTERSECTIONS AND ROUNDABOUTS

Operations of the unsignalized study area intersections and roundabouts were evaluated using the methods contained in Chapters 19, 20, and 21 of the *2010 HCM* and calculated using Synchro analysis software. LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At two-way or side-street-stop controlled intersections, control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, control delay is computed as the average of all movements in that lane. For all-way stop-controlled and roundabout locations, a weighted average delay for the entire intersection is presented. **Table 28** summarizes the relationship between delay and LOS for unsignalized intersections and roundabouts.

CSUMB does not have an adopted LOS policy for unsignalized intersections; however, CSUMB strives to maintain LOS D, which is a LOS standard that has been used in other traffic studies on the CSUMB campus. A typical improvement for unsignalized intersections is to install traffic signals. However, unsignalized intersections that operate at LOS E, or have critical movements that operate at LOS E, may not meet warrants established for the consideration of signalization. Therefore, for this analysis, a LOS F operation and fulfilling the peak hour signal warrant is the threshold for an intersection improvement. For two-way stop-controlled intersections, this analysis also determines the need for improvements based on turn movement operations



(such as queues overflowing the storage capacity) as well as peak hour traffic signal warrant analyses described below from the *California Manual on Uniform Traffic Control Devices (CA MUTCD)*.¹

Warrant 3 – Peak hour vehicle volume

This warrant determines if the minor street traffic suffers undue delay when entering or crossing the major street for a minimum of one hour of an average day. This is based on the major street left-turn volume, the higher-volume minor-street approach volume, and calculated delay for vehicles on the higher-volume minor-street approach.

TABLE 28: UNSIGNALIZED INTERSECTION AND ROUNDABOUT LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2010.

FREEWAY SEGMENTS

Freeway mainline segments were analyzed using the methods described in Chapter 11 of *HCM 2010*. This method takes into consideration peak hour traffic volumes, free-flow speeds, percentage of heavy vehicles, and number of travel lanes. These factors are used to determine the vehicle density, measured in passenger cars per mile per lane. The ranges of densities for freeway segment levels of service are shown in **Table 29**. The Caltrans standard for the freeway segments is LOS C/D threshold.

¹ Signal warrant analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared to a sub-set of the standard traffic signal warrants recommended in the 2014 *California Manual on Uniform Traffic Control Devices (CA MUTCD)* guidelines. While satisfying one or more of these warrants could justify the installation of a signal at an intersection, this analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated by an experienced engineer based on field-measured rather than forecast traffic data and a thorough study of traffic and roadway conditions. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals may lead to certain types of collisions.



TABLE 29: FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

Level of Service	Density (passenger cars per mile per lane)
A	≤ 11
B	11.1 to 18.0
C	18.1 to 26.0
D	26.1 to 46.0
E	46.1 to 58.0
F	> 58.0

Source: Highway Capacity Manual, Transportation Research Board, 2010.

FREEWAY ON- AND OFF-RAMPS

To identify the need for an additional freeway on- or off-ramp lane, maximum peak-hour capacity of 1,500 vehicles per hour per lane (veh/hr/ln) and 1,200 veh/hr/ln was used in analyzing direct and loop freeway ramps, respectively. These are planning-level thresholds and are intended to identify potential operational issues.

PROJECT TRAFFIC VOLUMES

For the purpose of this analysis, the amount of traffic associated with the Project was estimated using a three-step process:

1. **Trip Generation** – The *number* of vehicles that would be entering/exiting the Project site with the increased campus population was estimated. (Refer to the *California State University, Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum in **Appendix A** for a detailed description of the trip generation analysis).
2. **Trip Distribution** – The *directions* that vehicles would use to approach and depart the Project site were projected using the AMBAG travel model.
3. **Trip Assignment** – The number of vehicles that would be generated by the Project was then *assigned* to specific streets and intersection turning movements based on the AMBAG travel model and forecasting methods.

Each of these steps in the process is further described in the following sub-sections.

TRIP GENERATION

The trip generation approach and technical methods were tailored for the Project because of the size of the CSUMB campus, the unique travel behavior of each portion of the CSUMB population, and varied housing



locations of the CSUMB population. In establishing conditions tailored for the Project, the project trip generation is based on observed CSUMB travel characteristics and the assumption that the existing Parking Management and TDM measures would remain in place on the CSUMB campus, and those measures continue to be effective in reducing vehicle trip making and encourage the use of other modes of travel. Rather than calculating the net increase in Project vehicle trips due to the net increase in land uses like most projects, trip generation was prepared for the entire campus under both Existing Conditions and Project Conditions to capture the effects of increasing on-campus housing and shifting of student housing from East Campus to Main Campus. Specifically, the net new Project traffic is the difference in the Project Conditions and Existing Conditions CSUMB campus trip generation. As shown in the analysis, housing an average of 61 percent of the future campus population (students, faculty, and staff) on-campus increases the:

- Likelihood of trips staying within the campus (internal trips); and
- Likelihood of trips shifting to other modes (walking, bicycling, micro-mobility¹, and transit) for both on and off-campus travel.

A detailed discussion of the CSUMB trip generation can be found in the *California State University, Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum (refer to **Appendix A**). Total vehicle trip generation for the CSUMB campus under Existing Conditions and Project Conditions are presented in **Table 30** and **Table 31**, respectively. As shown, the total trip generation estimates are provided for the Main Campus and East Campus separately, as well as total numbers for the entire campus. Adjustments to account for internal trips are also illustrated.

¹ Micro-mobility is an emerging mode of travel that is characterized by new electric lightweight utility vehicles such as e-scooters and e-bikes.



TABLE 30: EXISTING CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB CAMPUS

Location Type	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips ²	E	142	12	11	1	8	1	7
Main Campus Internal Trips ³	D	669	272	148	124	140	63	77
Main Campus External Trips	A	10,029	919	633	286	1,005	432	573
Main Campus Trips with East Campus	C	2,171	317	263	54	307	93	214
Main Campus Total [A] A+C+D+E		13,011	1,520	1,055	465	1,460	589	871
East Campus								
East Campus Trips with Main Campus	C	2,171	317	54	263	307	214	93
East Campus External Trips	B	7,846	482	80	402	452	270	182
East Campus Total [B] B+C		10,017	799	134	665	759	484	275
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-142	-12	-11	-1	-8	-1	-7
Main Campus Internal Trips ³	D	-669	-272	-148	-124	-140	-63	-77
Main Campus Trips with East Campus	C	-2,171	-317	-263	-54	-307	-93	-214
East Campus Trips with Main Campus	C	-2,171	-317	-54	-263	-307	-214	-93
Trip Adjustment [C] C+D+E		-5,153	-918	-476	-442	-762	-371	-391
External Campus Trip Total [A+B+C]⁴	A+B	17,875	1,401	713	688	1,457	702	755

Notes:

1. Trip type shown on Figure 1 in **Appendix A**.
 2. Promontory Housing is an existing residential building for on-campus student residents and is located on Eighth Street in the Main Campus.
 3. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
 4. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.
- Source: Fehr & Peers, 2019.

As shown in **Table 30**, for the purpose of the analysis presented here, existing external vehicle trip generation is calculated as approximately 17,875¹ daily vehicle trips, 1,401 AM peak-hour trips (713 inbound and 688 outbound) and 1,457 PM peak-hour trips (702 inbound and 755 outbound).

As shown in **Table 31**, under Project Conditions the campus external vehicle trip generation would increase to approximately 30,385 daily vehicle trips, 2,290 AM peak-hour trips (1,188 inbound and 1,102 outbound) and 2,495 PM peak-hour trips (1,203 inbound and 1,292 outbound).

¹ This excludes vehicle through trips not associated with the CSUMB campus.



TABLE 31: CSUMB CAMPUS VEHICLE TRIP GENERATION FOR PROJECT CONDITIONS

Trip Type	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips	E	40	3	3	0	2	0	2
Main Campus Internal Trips ²	D	970	495	261	234	253	120	133
Main Campus External Trips	A	23,953	1,722	1,093	629	2,089	926	1,163
Main Campus Trips with East Campus	C	1,867	434	361	73	488	152	336
Main Campus Total [A]	A+C+D+E	26,830	2,654	1,718	936	2,832	1,198	1,634
East Campus								
East Campus Trips with Main Campus	C	1,867	434	73	361	488	336	152
East Campus External Trips	B	6,432	568	95	473	406	277	129
East Campus Total [B]	B+C	8,299	1,002	168	834	894	613	281
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-40	-3	-3	-0	-2	-0	-2
Main Campus Internal Trips ²	D	-970	-495	-261	-234	-253	-120	-133
Main Campus Trips with East Campus	C	-1,867	-434	-361	-73	-488	-152	-336
East Campus Trips with Main Campus	C	-1,867	-434	-73	-361	-488	-336	-152
Trip Adjustment [C]	C+D+E	-4,744	-1,366	-698	-668	-1,231	-608	-623
External Campus Trip Total [A+B+C]³	A+B	30,385	2,290	1,188	1,102	2,495	1,203	1,292

Notes:

1. Trip type shown on Figure 1 in **Appendix A**.
2. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
3. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.

Source: Fehr & Peers, 2019.

The amount of Project traffic that would be added to the road network is estimated by subtracting campus-related trip generation under Existing Conditions from campus-related trip generation under Project Conditions. As shown in **Table 32**, based on this calculation, the Project would generate a total of 12,510 additional external daily trips, including 889 additional external AM peak hour trips and 1,038 additional external PM peak hour trips.

By housing a large percentage of students, faculty, and staff on-campus, and consolidating parking to the periphery, the Project would convert a large number of potential off-campus-based trips to on-campus generated trips, thereby reducing the number of external campus trips both to and from campus. Related, because of the increasing in the number of students living on-campus, the number of Project-generated external trips made by on-campus students for purposes such as recreational activities, off-campus dining, visiting family and friends, etc. would increase in absolute terms over existing levels.



TABLE 32: CSUMB CAMPUS VEHICLE TRIP GENERATION RESULTS

Scenario	Daily	AM peak Hour			PM Peak Hours		
		Total	In	Out	Total	In	Out
Existing Conditions [A]	17,875	1,401	713	688	1,457	702	755
Project Conditions [B]	30,385	2,290	1,188	1,102	2,495	1,203	1,292
Additional External Trips [B-A]	12,510	889	475	414	1,038	501	537

Source: Fehr & Peers, 2019.

TRIP DISTRIBUTION

Campus vehicle trips are generated by students, faculty, staff, community housing partners, campus support (trips made by police staff, maintenance, landscapers, custodians staff, etc.), and visitors traveling to/from the CSUMB campus. The AMBAG travel model was used to distribute the vehicle trips from the CSUMB campus to nearby communities for each analysis scenario (Existing Conditions, Existing with Project Conditions, Cumulative Conditions without Project, and Cumulative with Project Conditions). The distribution of Project traffic is described in detail in **Appendix F** and **Chapter 9**, and considered: 1) regional land use destinations outside of the Campus, and 2) ease and convenience of access to nearby freeways and regional streets.

The distribution of vehicle traffic going to/coming from the nearby communities of Castroville (and farther north), Marina, Salinas, Seaside, and Monterey to the CSUMB Campus is presented in **Table 33**. The distribution, as used in determine the study area, is summarized for the inbound direction during the AM peak hour and the outbound direction for the PM peak hour under Existing with Project Conditions and Cumulative with Project Conditions; the distribution of CSUMB campus traffic is similar during the AM and PM peak hours under each scenario.

As shown on **Table 33**, vehicle trips to/from the north account for 25 to 29 percent of all vehicle trips. The communities south of the CSUMB campus account for 36 to 39 percent of vehicle trips. Finally, communities east of the CSUMB campus (Salinas) account for 34 to 37 percent of the vehicle trips.



**TABLE 33: DISTRIBUTION OF CSUMB EXTERNAL VEHICLE TRIPS TO NEARBY COMMUNITIES
(AMBAG MODEL)**

Direction	Existing with Project Conditions		Cumulative with Project Conditions	
	AM Inbound Peak Hour	PM Outbound Peak Hours	AM Inbound Peak Hour	PM Outbound Peak Hours
North				
Castroville and North	18%	17%	20%	17%
Marina	9%	8%	9%	10%
North Total	27%	25%	29%	27%
East				
Salinas	37%	37%	34%	34%
East Total	37%	37%	34%	34%
South				
Seaside	13%	15%	14%	16%
Monterey and West	23%	23%	23%	23%
South Total	36%	38%	37%	39%

Source: Fehr & Peers, 2019.

Distribution to Main Campus Parking Areas

In this analysis it was assumed that once vehicles arrive on the Main Campus, drivers could use any one of the seven parking areas shown in **Figure 6**. The Project trips are distributed to these seven parking areas based on the parking area's proximity to the nearby communities, possible routings, estimated size of the parking areas provided by CSUMB, and vehicle occupancy (drive-alone, carpool or transit). The resulting distribution to each parking area is shown in **Table 34** and additional details and assumptions are provided in **Appendix I**.



TABLE 34: CSUMB MAIN CAMPUS TOTAL DAILY VEHICLE TRIPS

Parking Areas ¹	Number and Percent of Total Trips
1. General Parking (General Jim Moore/Fifth-Eighth)	6,961 (26%)
2. Multimodal Hub/Visitor & Carpool Parking (General Jim Moore/Divarty)	3,994 (15%)
3. Multimodal Hub/Visitor & Carpool Parking (Sixth/Inter-Garrison)	3,698 (14%)
4. General Parking (Seventh/A Street)	7,413 (28%)
5. Inter-Garrison Road between Second & General Jim Moore Boulevard	1,240 (5%)
6. Sixth Street between B and Colonel Durham Street	1,912 (7%)
7. Promontory	1,612 (6%)
Total	26,830 (100%)

Notes:

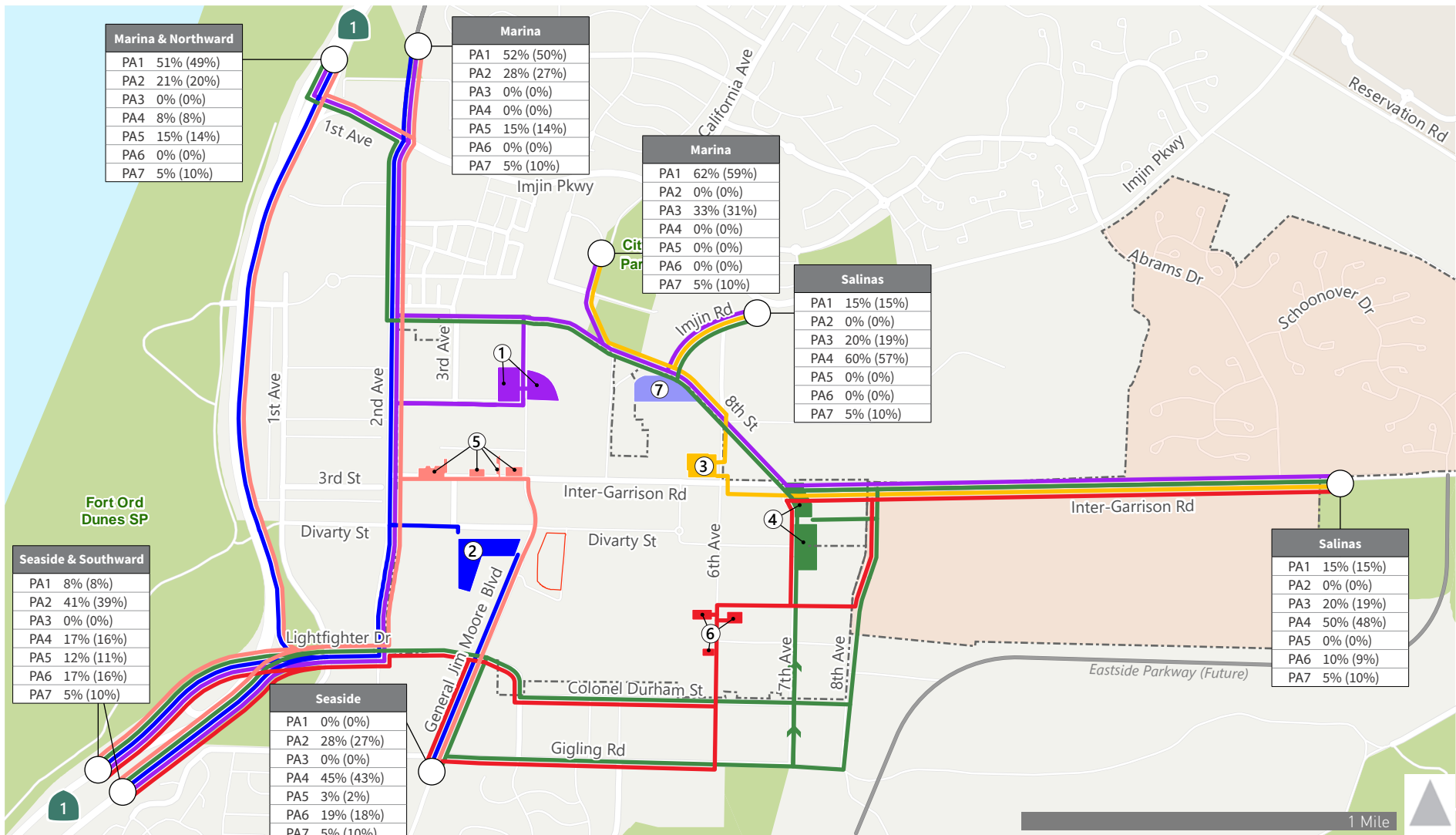
1. Further details on the Parking Areas are provided in **Chapter 6** section of the report and **Appendix I**.

Source: Fehr & Peers, 2019.

TRIP ASSIGNMENT

The trips generated by the Project were assigned to the roadway system based on the directions of approach and departure and the distribution to the on-campus parking lots. On-campus vehicle trip assignment was based on the vehicle paths shown in **Figure 14** and **Figure 15**. These parking area routes were determined in consideration of existing travel routes to/from the campus and proposed changes to the on-campus vehicle street system described in **Chapter 1**.





- California State University Monterey Bay Campus
- New/Extended Roadway
- Restricted Access Streets

Parking Area Route

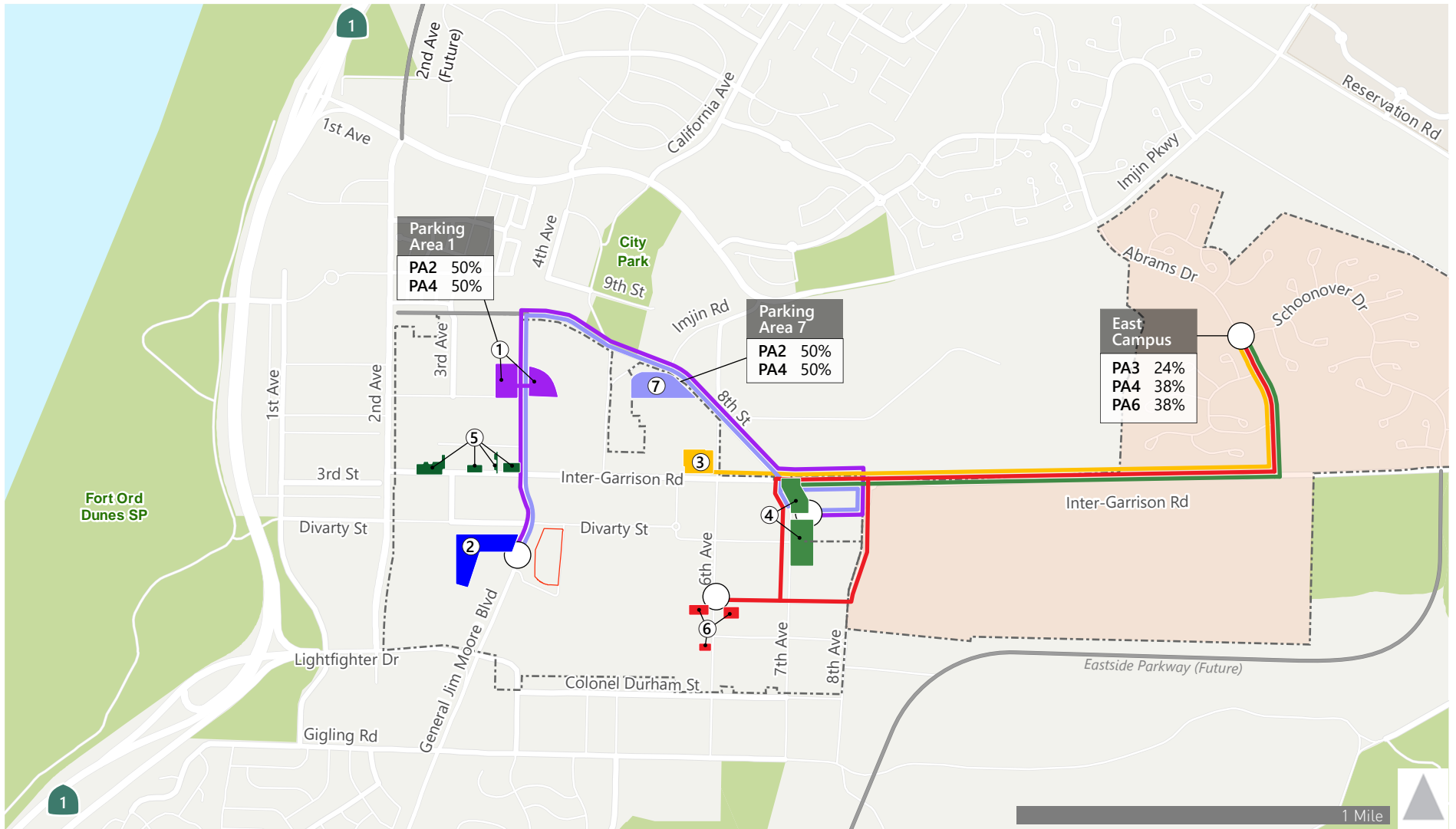
- From/to Parking Area 1
- From/to Parking Area 2
- From/to Parking Area 3
- From/to Parking Area 4
- From/to Parking Area 5
- From/to Parking Area 6





Route Distribution

PA1	AM(PM)
PA2	AM(PM)
PA3	AM(PM)
PA4	AM(PM)
PA5	AM(PM)
PA6	AM(PM)



Figure 14
 Parking Area Ingress/Egress Routes for External Trips



-  California State University Monterey Bay Campus
-  New/Extended Roadway
-  Multi-modal Hub
-  Staff/Faculty Parking

Parking Area Route








-  From/to Parking Area 1
-  From/to Parking Area 2
-  From/to Parking Area 3
-  From/to Parking Area 4
-  From/to Parking Area 5
-  From/to Parking Area 6
-  From/to Parking Area 7



Figure 15
 Parking Area Ingress/Egress Routes for Internal Trips

8. EXISTING WITH PROJECT CONDITIONS (FOR INFORMATION PURPOSES ONLY)

This chapter evaluates the effects of the Project on the surrounding roadway system under Existing with Project Conditions and with the results of the level of service calculations. Existing with Project Conditions are defined as Existing Conditions with the addition of vehicle traffic generated by the Project and modifications to the existing campus parking and transportation facilities. Intersection and freeway segment deficiencies under this scenario are then identified by comparing the level of service results under Existing with Project Conditions to those under Existing Conditions.

EXISTING WITH PROJECT INTERSECTION LEVELS OF SERVICE

Level of service calculations were conducted to evaluate intersection operations under Existing with Project Conditions. The intersection volumes are shown in **Appendix K** and the results of the LOS analysis are summarized in **Table L-2** of **Appendix L**. The results for Existing Conditions are included for comparison purposes. The deficiency criteria in **Chapter 11** are used to identify deficiencies in the roadway system. The corresponding LOS calculation sheets are included in **Appendix E**.

The deficiencies identified in the with Project Condition on the surrounding transportation system, and recommended measures to improve deficiencies, are described in **Chapter 11**.

SIGNAL WARRANT ANALYSIS

For the purpose of this TA, the peak-hour signal warrant was evaluated for unsignalized intersections that operate below their designated LOS threshold under Existing with Project Conditions. The results of the peak-hour warrant analysis presented in **Table M-1** in **Appendix N** indicates the following intersections, which exceed their designated LOS threshold, would meet peak hour warrants:

- Int 16. Second Avenue and Eighth Street (AM and PM peak hour)
- Int 22. Eighth Avenue and Inter-Garrison Road (AM and PM peak hour)
- Int 23. Abrams Drive and Inter-Garrison Road (AM and PM peak hour)
- Int 29. Second Avenue and Divarty Street (PM peak hour)
- Int 47. General Jim Moore Boulevard and Coe Avenue (AM and PM peak hour)

Although at the SR 1 Northbound Ramps and Imjin Parkway (Int. 4), the worst movement delay (northbound approach) exceeds the local jurisdiction's designated LOS threshold, the intersection does not meet the peak hour signal warrant as the minor street right turn volumes would be considered negligible. The right turn volumes from the SR 1 Northbound off-ramp continue onto Imjin Parkway through an added lane



without conflict to the eastbound through traffic entering the intersection on a separate receiving lane; therefore, based on guidance from CA MUTCD shown below the northbound approach is evaluated as a one-lane approach with only the northbound through and left turn traffic.

Section 4C.01.10

Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

EXISTING WITH PROJECT FREEWAY LEVELS OF SERVICE

Freeway segments of SR 1 were analyzed with the added Project traffic (refer to **Appendix M**). Results of the analysis identifying the segments exceeding Caltrans' standard are presented in **Table 35**. Measured against the Caltrans level of service standard, the following freeway segments exceed the level of service standard (that is, they operate at LOS D or worse):

- Southbound SR 1 between Reservation Road and Canyon Del Rey Boulevard during the AM peak hour (all 5 southbound SR 1 segments)
- Northbound SR 1 between Imjin Parkway and Lightfighter Drive during the PM peak hour
- Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the PM peak hour

Freeway segment deficiencies and improvements are addressed in **Chapter 11**.



TABLE 35: EXISTING WITHOUT AND WITH PROJECT CONDITIONS FREEWAY SEGMENT LOS

Freeway Segment	Peak Hour ¹	Capacity	Existing without Project			Existing with Project			Project Percent of Capacity
			Volume	Density ^{2,3}	LOS ⁴	Volume	Density ^{2,3}	LOS ⁴	
State Route 1 – Southbound									
Reservation Road and Del Monte Boulevard	AM	4,700	2,705	29.1	D	2,790	30.4	D	1.6%
	PM		1,418	11.3	B	1,420	11.3	B	1.5%
Del Monte Boulevard and Imjin Parkway	AM	7,050	4,055	26.7	D	4,150	27.5	D	1.4%
	PM		2,088	11.3	B	2,110	11.5	B	1.3%
Imjin Parkway and Lightfighter Drive	AM	7,050	4,560	30.1	D	4,530	29.8	D	0.9%
	PM		2,859	15.5	B	2,820	15.3	B	0.2%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	4,778	30.5	D	4,850	31.2	D	2.1%
	PM		3,177	16.9	B	3,720	17.4	B	1.9%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	AM	4,700	3,843	34.7	D	3,890	35.4	E	2.2%
	PM		2,629	21.2	C	2,700	21.7	C	2.3%
State Route 1 – Northbound									
Reservation Road and Del Monte Boulevard	AM	4,700	1,172	9.6	A	1,230	10.1	A	1.3%
	PM		2,671	21.2	C	2,790	22.1	C	1.9%
Del Monte Boulevard and Imjin Parkway	AM	7,050	1,725	9.9	A	1,790	10.3	A	1.0%
	PM		4,231	22.8	C	4,360	23.6	C	1.6%
Imjin Parkway and Lightfighter Drive	AM	7,050	2,397	13.6	B	2,410	13.7	B	0.3%
	PM		4,906	26.7	D	4,880	26.5	D	0.9%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	2,708	15.2	B	2,810	15.7	B	1.7%
	PM		4,728	25.2	C	4,840	26.0	C	2.3%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard	AM	4,700	2,355	20.1	C	2,440	20.8	C	1.7%
	PM		3,745	32.1	D	3,820	33.1	D	3.5% ⁵

Notes: **Bold** text indicates below the applicable level of service standard (LOS D for Caltrans designated facilities). **Bold and highlighted text** indicates freeway segment deficiency as described in **Chapter 11**.

1. AM = AM peak hour, PM = PM peak hour.
2. Measured in passenger cars per mile per lane. Mixed = Mixed-Flow Lanes.
3. If volume/capacity ratio is greater than 1, density is not applicable.
4. Level of service (LOS) based on density.
5. The vehicle demand for the PM outbound peak hour direction of the next freeway segment (CA-1 between Canyon Del Rey and Casa Verde Way) is less than the project percent capacity. Therefore, the last freeway segment to be studied south of CSUMB campus is between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard.

Source: Fehr & Peers, 2019.



EXISTING WITH PROJECT RAMP ANALYSIS

A freeway ramp analysis was conducted to assess changes in peak hour ramp volumes with the addition of Project traffic and its effects on freeway and local street operations. Ramp capacity is an operational consideration that is managed over time by Caltrans and local jurisdictions.

Freeway ramp segments to/from State Route 1 were analyzed during the AM and PM peak hours with added Project traffic. Results of the analysis identifying the ramps with volumes that exceed the ramp capacity are presented in **Table 36** and **Table 37**. Most of the ramp volumes increase in the Existing with Project Conditions, with the exception of the SR 1 and Imjin Parkway southbound on-ramp during both peak hours, and the SR 1 and Imjin Parkway northbound off-ramp during the PM peak hour. Decreases in volumes under Existing with Project Conditions are due to the displacement and reassignment of existing traffic when the Project volume is added to the roadway network.

As shown in **Table 36** and **Table 37**, under Existing with Project Conditions, all ramp volumes will be less than the ramp capacity during the AM and PM peak hours.

TABLE 36: EXISTING WITHOUT AND WITH PROJECT CONDITIONS RAMP AM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type	Lanes	Capacity ¹	Existing without Project (vehicles per hour)	Existing with Project (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	126	200
	SB	Diagonal On-Ramp	1	1,500	964	950
	NB	Diagonal Off-Ramp	2	3,000	805	830
	SB	Diagonal Off-Ramp	1	1,500	414	530
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	197	220
	SB	Diagonal On-Ramp	2	3,000	739	850
	NB	Diagonal Off-Ramp	2	3,000	460	570
	SB	Loop Off-Ramp	1	1,200	431	440

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



**TABLE 37: EXISTING WITHOUT AND WITH PROJECT CONDITIONS RAMP PM PEAK HOUR
VOLUMES AND CAPACITIES**

Location	Direction	Ramp Type ¹	Lanes	Capacity ¹	Existing without Project (vehicles per hour)	Existing with Project (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	431	570
	SB	Diagonal On-Ramp	1	1,500	993	980
	NB	Diagonal Off-Ramp	2	3,000	1,192	1,170
	SB	Diagonal Off-Ramp	1	1,500	261	300
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	661	670
	SB	Diagonal On-Ramp	2	3,000	538	680
	NB	Diagonal Off-Ramp	2	3,000	384	540
	SB	Loop Off-Ramp	1	1,200	167	180

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



9. CUMULATIVE WITHOUT EASTSIDE PARKWAY CONDITIONS (FOR INFORMATION PURPOSES ONLY)

This chapter evaluates the effects of the Project on the surrounding roadway system under Cumulative without and with the Project Conditions and with the results of the level of service calculations. Cumulative traffic volumes are based on 2035 forecasts from the AMBAG travel model, including the land uses, and transportation network infrastructure described in the AMBAG constrained transportation list and modifications described in the *Association of Monterey Bay Area Governments Travel Model Validation* memorandum included in **Appendix F**. The peak hour vehicle trip estimates into and out of CSUMB are based on the Project vehicle trip estimates discussed in **Chapter 3**.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS TRAFFIC VOLUMES

Cumulative without and with Project off-campus vehicle assignment was determined by the AMBAG travel model. On-campus vehicle trip assignment was refined using the Existing Conditions and Project Conditions trip generation described in **Chapter 3** and vehicle paths shown on **Figure 14** and **Figure 15**. Future model land use changes are described in **Appendix F** and roadway network changes are described below.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS ROADWAY IMPROVEMENTS

The Cumulative without and with Project analysis adds cumulative volumes to the existing transportation network plus funded street improvements planned by the FORA¹, City of Marina, and the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)*. Intersection improvements incorporated into the Cumulative Conditions analysis are based on the funded roadways improvements described in **Table 13**: and presented in **Table 38**. The Cumulative with Project analysis also includes Project transportation facility changes to the campus as described in **Chapter 1** and shown on **Figure 6**.

¹ FORA will sunset on June 30, 2020 and transportation facilities in the FORA CIP is being assigned to the local jurisdiction.



TABLE 38: CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Intersection	Geometry Changes	Intersection Control Changes
			City ³	FORA ⁴	RTP ⁵			
City of Marina Capital Improvement Program								
R 05	Second Avenue Extension	Extend Second Avenue as a 2-lane arterial between Imjin Parkway and Reindollar Avenue	X	X	2	Patton Parkway and Second Avenue Extension	3-way signalized intersection (NB, SB, and EB legs), one lane in each direction with left turn pockets with 120 feet of vehicle storage	Signalized ⁶
R 34	Eighth Street	Upgrade/construct Eighth Street as a 2-lane arterial from Second Avenue to Inter-Garrison Road	X	X	16	Eighth Street and Second Avenue	Refer to Improvement R 61	Signalized
					18	Eighth Street and Imjin Road	SB: change from a shared through-left and right turn to one lane entering the roundabout EB: change from a shared through-left and right turn to one lane entering the roundabout WB: change from a shared through-left and right turn to one lane entering the roundabout	Roundabout
R 37	Patton Parkway Extension	Extension of Patton Parkway from Del Monte Boulevard to Crescent Street	X	X	2	Patton Parkway and Second Avenue Extension	Refer to Improvement R 05	Refer to Improvement 1



TABLE 38: CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Intersection	Geometry Changes	Intersection Control Changes
			City ³	FORA ⁴	RTP ⁵			
R 61	Second Avenue Widening	Widen Second Avenue from Tenth Street to Inter-Garrison Road. Remove Class II bike lanes and restripe for two lanes each direction	X		15	Ninth Street and Second Avenue	SB: change from a shared through-left and 1 right turn to 1 left, 1 through, 1 shared through-right NB: change from 1 left turn and 1 through/right to 1 left, 1 through and 1 a shared through-right	Signalized
					16	Eighth Street and Second Avenue	SB: Change to 2 through lanes and 1 left turn lane NB: Change to 1 through lane and 1 shared through-right	Signalized
					19	Inter-Garrison Road and Second Avenue	SB: from 1 left turn and 1 through to 1 left, 2 through lanes NB: from 1 through and 1 right turn lanes to 1 through and 1 shared through-right lanes	Signalized
TI 06	Traffic Intersection	Intersection Improvement	X		6	Imjin Parkway and Third Avenue	No geometry changes	Signalized
TI 09	Traffic Intersection	Intersection Improvement	X		7	Imjin Parkway and Fourth Avenue	No geometry changes	Signalized
TI 27	Traffic Intersection	Intersection Improvement	X		11	Imjin Parkway and Abrams Drive	Install double left turn lanes on Imjin Pkwy, left and right turn lanes on Abrams Drive	Signalized
TI 44	Traffic Intersection	Intersection Improvement	X		23	Inter-Garrison Road and Abrams Drive	Second SB left-turn.	Signalized



TABLE 38: CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Intersection	Geometry Changes	Intersection Control Changes
			City ³	FORA ⁴	RTP ⁵			
TI 42	Traffic Intersection	Intersection Improvement	X		21	Inter-Garrison Road and Eighth Street/Seventh Avenue	Add EB and WB left-turn pockets	Signalized
TI 45	Traffic Intersection	Intersection Improvement	X		29	Divarty Street and Second Avenue	No geometry changes	Signalized
Fort Ord Reuse Authority (FORA)								
FO 6	Inter-Garrison Road Widening	Widen Inter-Garrison Road to a 4-lane arterial from Eastside Parkway to Reservation Road		X	25	Inter-Garrison Road and Inter-Garrison Road Connection	WB: 1 shared through-right EB: 1 left turn lane and 1 through lane	AWSC
FO 7	Gigling Road	Widen Gigling Road to a 4-lane arterial from General Jim Moore Boulevard to Eastside Parkway near Eighth Avenue		X	39-44	Gigling from General Jim Moore Boulevard to Eastside Parkway	Add a through lane both EB/WB on Gigling	Signalized
AMBAG Regional Transportation Plan (RTP)								
MON-MAR001-MA	Reservation Road Widening	Widen Reservation Road to 4 lanes between East Garrison Gate and Davis Road		X	X 27	Watkins Gate Road and Reservation Road	NB: from one shared through/right/left lane to 1 through, 1 through/right and 1 left turn lane SB: from one shared through/right/left lane to 1 through, 1 through/right and 1 left turn lane EB: 1 left turn and 1 right turn lane	None



TABLE 38: CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Intersection	Geometry Changes	Intersection Control Changes
			City ³	FORA ⁴	RTP ⁵			
						28 Reservation Road and Davis Road	SB: from 1 left turn lane and a through lane to 1 left turn lane, 1 through lane, and 1 shared through-right NB: from 1 left turn lane and a through lane to 1 left turn lane, 1 shared through-right EB and WB remain the same	None
MON-MAR001-MA	Imjin Parkway Widening	Widen Imjin Parkway to four lanes from Imjin Road to Reservation Road	X		X	11 Imjin Parkway and Abrams Drive	EB and WB: Install 1 left turn lane, 1 through lane, and 1 shared through/right NB and SB: left and right turn lanes on Abrams Drive	None
						12 Imjin Parkway and Reservation Road	EB: Change to 2 left turn lanes, 1 through lane, and 2 right turn lanes	None

Notes:

1. Project ID Number based on leading agency from source document.
2. Projects appearing in multiple source lists are described and denoted by source.
3. Listed in City of Marina's 5 Year Capital Improvement Project List, Revised March 2016.
4. Listed in Fort Ord Reuse Authority's Capital Improvement Program Fiscal Year 2017/18 through 2027/28, and Fort Ord Reuse Authority Fee Reallocation Study: Deficiency Analysis and Fee Reallocation (2017).
5. Listed in the 2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018).
6. Improvement from source does not define control.

Source: Fehr & Peers, 2019.



CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION LEVELS OF SERVICE

Level of service calculations were conducted to evaluate intersection operations under Cumulative without Project and without Eastside Parkway Conditions and Cumulative with Project and without Eastside Parkway Conditions. The intersection volumes are shown in **Appendix D** and results of the LOS analysis are summarized in **Table L-3** of **Appendix L**. The deficiency criteria in **Chapter 11** are used to identify deficiencies in the transportation system. The corresponding LOS calculation sheets are included in **Appendix E**.

The deficiencies identified in the with Project Condition on the surrounding transportation system, and potential improvements, are described in **Chapter 11**.

SIGNAL WARRANT ANALYSIS

For the purpose of this TA, the peak-hour signal warrant was also evaluated for unsignalized intersections that operate below their designated LOS threshold under Cumulative with Project and without Eastside Parkway Conditions. The results of the peak-hour warrant analysis presented in **Table M-1** in **Appendix N** indicates the following intersections, which exceed their designated LOS threshold, would meet peak hour warrants:

- Int 22. Eighth Avenue and Inter-Garrison Road (AM and PM peak hour)
- Int 25. Inter-Garrison Road Connection and Inter-Garrison Road (AM and PM peak hour)
- Int 47. General Jim Moore Boulevard and Coe Avenue (AM and PM peak hour)

As described in **Signal Warrant Analysis** section of **Chapter 3**, SR 1 Northbound Ramps and Imjin Parkway (Int. 4) worst movement delay (minor street delay), northbound approach delay, is below the LOS threshold, though the intersection does not meet the peak hour signal warrant as the minor street northbound right traffic would not conflict with the major street eastbound through traffic.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS FREEWAY LEVELS OF SERVICE

Freeway segments of SR 1 were analyzed during the AM and PM peak hours to calculate the amount of Project traffic projected to be added (refer to **Appendix M**). Results of the analysis identifying the segments exceeding Caltrans' standard are presented in **Table 39**. Measured against the Caltrans level of service standard, the following freeway segments would exceed the level of service standard (that is, they operate at LOS D or worse):



- Southbound SR 1 between Reservation Road and Canyon Del Rey Boulevard during the AM peak hour (all 5 southbound SR 1 segments)
- Southbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the PM peak hour
- Northbound SR 1 between Del Monte Boulevard and Imjin Parkway during the PM peak hour
- Northbound SR 1 between Imjin Parkway and Canyon Del Rey Boulevard the PM peak hour
- Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the AM peak hour

Freeway segment deficiencies and potential improvements are addressed in **Chapter 11**.



TABLE 39: CUMULATIVE WITHOUT AND WITH PROJECT CONDITIONS FREEWAY SEGMENT LEVEL

Freeway Segment	Peak Hour ¹	Capacity	Cumulative without Project			Cumulative with Project			Project Percent of Capacity
			Volume	Density ^{2,3}	LOS ⁴	Volume	Density ^{2,3}	LOS ⁴	
State Route 1 – Southbound									
Reservation Road and Del Monte Boulevard	AM	4,700	3,480	44.7	E	3,560	N/A⁴	F	1.9%
	PM		1,830	14.6	B	1,870	14.9	B	1.7%
Del Monte Boulevard and Imjin Parkway	AM	7,050	5,060	36.9	E	5,150	38.0	E	1.5%
	PM		3,200	17.4	B	2,920	15.9	B	1.4%
Imjin Parkway and Lightfighter Drive	AM	7,050	5,230	37.3	E	5,250	37.6	E	0.9%
	PM		3,490	19.0	C	3,450	18.7	C	0.2%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	5,450	37.6	E	5,550	38.9	E	2.1%
	PM		3,920	20.8	C	4,010	21.3	C	1.9%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	AM	4,700	4,470	-	F	4,540	N/A⁴	F	2.5%
	PM		3,170	25.9	C	3,240	26.6	D	2.3%
State Route 1 – Northbound									
Reservation Road and Del Monte Boulevard	AM	4,700	1,500	12.3	B	1,520	12.4	B	1.4%
	PM		2,970	23.7	C	3,050	24.4	C	2.2%
Del Monte Boulevard and Imjin Parkway	AM	7,050	2,410	13.8	B	2,440	14.0	B	1.1%
	PM		4,850	26.7	D	4,940	27.3	D	0.9%
Imjin Parkway and Lightfighter Drive	AM	7,050	3,070	17.5	B	3,070	17.5	B	0.3%
	PM		5,530	31.3	D	5,520	31.2	D	1.8%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	3,480	19.5	C	3,580	20.0	C	1.7%
	PM		5,380	29.7	D	5,470	30.4	D	2.3%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard	AM	4,700	2,970	25.7	C	3,040	26.4	D	2.0%
	PM		4,290	40.5	E	4,350	41.6	E	2.6%⁵

Notes: **Bold** text indicates below the applicable level of service standard (LOS D for Caltrans designated facilities). **Bold and highlighted text** indicates freeway segment deficiency as described in **Chapter 11**.

1. AM = AM peak hour, PM = PM peak hour.
2. Measured in passenger cars per mile per lane. Mixed = Mixed-Flow Lanes.
3. If volume/capacity ratio is greater than 1, density is not applicable.
4. Level of service (LOS) based on density.
5. The vehicle demand for the PM outbound peak hour direction of the next freeway segment (CA-1 between Canyon Del Rey and Casa Verde Way) is less than the project percent capacity. Therefore, the last freeway segment to be studied south of CSUMB campus is between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard.

Source: Fehr & Peers, 2019.



CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS RAMP LEVELS OF SERVICE

A freeway ramp analysis was conducted for Cumulative conditions to assess changes in peak hour ramp volumes with the addition of Project traffic and its effects on freeway and local street operations.

Freeway ramp segments to/from State Route 1 were analyzed during the AM and PM peak hours to calculate the amount of Project traffic projected to be added. Results of the analysis identifying the segments that exceed the ramp capacity are presented in **Table 40** and **Table 41**. All of the ramp volumes would increase under Cumulative with Project and without Eastside Parkway Conditions, with the exception of the SR 1 and Imjin Parkway southbound on-ramp in the PM peak hour, and the SR 1 and Imjin Parkway northbound off-ramp during AM peak hour. Decreases in volume under Cumulative with Project and without Eastside Parkway Conditions are due to the displacement and reassignment of cumulative traffic when the Project volume is added to the roadway network.

As shown on **Table 40** and **Table 41**, under Cumulative with Project and without Eastside Parkway Conditions, all ramp volumes would be less than the ramp capacity during the AM and PM peak hours.

TABLE 40: CUMULATIVE WITHOUT AND WITH PROJECT CONDITIONS RAMP AM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type	Lanes	Capacity ¹	Cumulative without Project (vehicles per hour)	Cumulative with Project (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	430	460
	SB	Diagonal On-Ramp	1	1,500	1,180	1,190
	NB	Diagonal Off-Ramp	2	3,000	1,080	1,080
	SB	Diagonal Off-Ramp	1	1,500	920	990
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	380	400
	SB	Diagonal On-Ramp	2	3,000	600	700
	NB	Diagonal Off-Ramp	2	3,000	750	860
	SB	Loop Off-Ramp	1	1,200	520	540

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



TABLE 41: CUMULATIVE WITHOUT AND WITH PROJECT CONDITIONS RAMP PM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type ¹	Lanes	Capacity ¹	Cumulative without Project (vehicles per hour)	Cumulative with Project (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	860	940
	SB	Diagonal On-Ramp	1	1,500	1,270	1,250
	NB	Diagonal Off-Ramp	2	3,000	1,590	1,580
	SB	Diagonal Off-Ramp	1	1,500	590	670
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	770	800
	SB	Diagonal On-Ramp	2	3,000	800	930
	NB	Diagonal Off-Ramp	2	3,000	520	650
	SB	Loop Off-Ramp	1	1,200	320	310

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



10. CUMULATIVE WITH EASTSIDE PARKWAY CONDITIONS (FOR INFORMATION PURPOSES ONLY)

This chapter presents the results of the level of service calculations under Cumulative with and without Project, and with the assumption that the Eastside Parkway is constructed. Eastside Parkway is the future two lane arterial connection that would connect General Jim Moore Boulevard and Inter-Garrison Road. At the time of this analysis FORA was responsible for providing the necessary funding for the roadway connection although, as of this writing, when FORA sunsets (June 30, 2020), the local jurisdiction will have the sole responsibility to arrange for the funding of all required road mitigation measures from such Jurisdiction's own resources. TAMC will assume responsibility for collecting Regional Impact Development fees to fund impacts to regional roads resulting from development projects on underlying Jurisdiction's property. Thus, a specific source of funding for future roads has not been identified or when such funding would be available, nor has a final Eastside Parkway project alignment been determined. Currently, FORA is leading the first phase of the environmental review of the roadway project. Cumulative traffic volumes are based on forecasts from the AMBAG travel model, including the land uses and transportation network infrastructure described in **Chapter 9**, plus the Eastside Parkway assumed to be constructed between Inter-Garrison Road and General Jim Moore Boulevard. The peak hour vehicle trip estimates into and out of CSUMB are based on the Project vehicle trip estimates discussed in **Chapter 3**.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS ROADWAY IMPROVEMENTS

The Cumulative without and with Project with Eastside Parkway scenario was evaluated to determine the effects of adding Eastside Parkway and its associated improvements to the results previously presented in **Chapter 9**. As noted above, Eastside Parkway is the planned future two lane arterial connection that would connect General Jim Moore Boulevard and Inter-Garrison Road. The connection would begin at General Jim Moore Boulevard and Coe Avenue (Int. 47) as a continuation of Eucalyptus Road to the east and end at Schoonover Road and Inter-Garrison Road (Int 24). Based on information presently available, the following intersection improvements were assumed part of the Eastside Parkway roadway improvements:

- Int 24. Schoonover Road and Inter-Garrison Road: Signalized intersection. Addition of a northbound approach with a left turn lane, through lane, and right turn lane. Addition of an eastbound shared right/through lane and southbound shared left/through lane.
- Int 45. Eastside Parkway and Gigling Road: Open signalized intersection with Gigling Road. Addition of a northbound approach with a left turn lane and shared right/through lane. Addition of a southbound approach with a left turn lane, through lane, and right turn lane.



- Int 47. General Jim Moore Boulevard and Coe Avenue: Addition of a westbound leg with one left turn lane, one through lane, and one right turn lane. Opening of the southbound left turn lanes, northbound right turn lane, and eastbound through lane. Signalization of the intersection.

The Cumulative with Project and with Eastside Parkway analysis also includes the transportation facility changes to the campus that would be built as part of the Project, as described in **Chapter 1**, and shown on **Figure 2**.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS INTERSECTION LEVELS OF SERVICE

The following intersections that would exceed the applicable LOS threshold under the Cumulative with Project and without Eastside Parkway Conditions (refer to **Chapter 9** and **Appendix L**) would not exceed the applicable level of service threshold in the Cumulative with Project and with Eastside Parkway Conditions (refer to **Table L-4** in **Appendix L**):

- Int 10. Imjin Road and Imjin Parkway (PM peak hour),
- Int 17. Fourth Avenue and Eighth Street (AM peak hour),
- Int 23. Abrams Drive and Inter-Garrison Road (AM and PM peak hour), and
- Int 37. Seventh Avenue and Colonel Durham Street (PM peak hour).

For travel between Seaside and SR 1 from/to Salinas and eastward, the addition of Eastside Parkway is expected to result in a traffic shift from other east-west roadways such as Imjin parkway, Inter-Garrison Road, Eighth Street, and Colonel Durham Street, onto Eastside Parkway. The shift of traffic that would result from this new connector would result in increased travel along Reservation Road to access Eastside Parkway from Inter-Garrison Road. As a result of the redistribution of traffic, the following intersection, which meets the applicable level of service thresholds under the Cumulative with Project and without Eastside Parkway Conditions, would exceed the threshold under Cumulative with Project and with Eastside Parkway Conditions:

- Int 27. Reservation Road and Watkins Gate Road

SIGNAL WARRANT ANALYSIS

The addition of Eastside Parkway as a part of planned improvements would change the intersections that exceed their designated LOS threshold and meet peak hour warrants under Cumulative with Project without Eastside Parkway Conditions. That is, the same intersections operating below their designated LOS threshold and meeting peak hour warrants under the Cumulative with Project without Eastside Parkway Conditions would remain unchanged under the Cumulative with Project and with Eastside Parkway Conditions.



CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS FREEWAY LEVELS OF SERVICE

Freeway segments of SR 1 were analyzed during the AM and PM peak hours to calculate the effect of Eastside Parkway on the Cumulative without and with Project Conditions. The results of the analysis are presented in **Table 39**. As shown on the table, overall, the same southbound segments would operate below the level of service standard. In the northbound direction, the following segments that exceed the level of service standard in the Cumulative with Project and without Eastside Parkway Condition would not exceed the level of service standard in the Cumulative with Project and with Eastside Parkway Condition:

- Del Monte Boulevard and Imjin Parkway
- Imjin Parkway and Lightfighter Drive

The reason for the improved operations on the above two segments is because, as previously noted, the addition of Eastside Parkway would result in shifts of traffic in the area. This includes a shift of the traffic traveling northward/eastward of the Campus, exiting SR 1 earlier, and using Eastside Parkway to access these destinations. Volume shifts as described would reduce volumes on these segments of SR 1 and, therefore, improve operations in the Cumulative without and with Project and with Eastside Parkway versus the Cumulative without and with Project, and without Eastside Parkway.



**TABLE 42: CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY
CONDITIONS FREEWAY SEGMENT LEVEL OF SERVICE**

Freeway Segment	Peak Hour ¹	Capacity	Cumulative without Project and with Eastside Parkway			Cumulative with Project and with Eastside Parkway			Project Percent of Capacity
			Volume	Density ^{2,3}	LOS ⁴	Volume	Density ^{2,3}	LOS ⁴	
State Route 1 – Southbound									
Reservation Road and Del Monte Boulevard	AM	4,700	3,460	44.2	E	3,497	N/A⁴	F	1.9%
	PM		1,870	14.9	B	1,890	15.1	B	1.7%
Del Monte Boulevard and Imjin Parkway	AM	7,050	5,050	36.7	E	4,633	32.0	D	1.5%
	PM		2,910	15.8	B	2,940	16.0	B	1.4%
Imjin Parkway and Lightfighter Drive	AM	7,050	5,080	35.5	E	4,767	32.1	D	0.9%
	PM		3,380	18.4	C	3,340	18.1	C	0.2%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	5,490	38.1	E	5,153	34.2	D	1.9%
	PM		3,940	20.9	C	4,030	21.4	C	1.3%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey	AM	4,700	4,540	-	F	4,747	N/A⁴	F	2.5%
	PM		3,230	26.5	D	3,300	27.2	D	2.3%
State Route 1 – Northbound									
Reservation Road and Del Monte Boulevard	AM	4,700	1,480	12.1	B	1,520	12.4	B	1.4%
	PM		2,740	21.7	C	3,086	24.7	C	2.2%
Del Monte Boulevard and Imjin Parkway	AM	7,050	2,400	13.8	B	2,450	14.1	B	1.1%
	PM		4,510	24.5	C	4,207	22.7	C	1.8%
Imjin Parkway and Lightfighter Drive	AM	7,050	2,950	16.8	B	2,950	16.8	B	0.3%
	PM		4,570	24.6	C	4,524	24.3	C	0.9%
Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard	AM	7,050	3,440	19.2	C	3,550	19.9	C	1.7%
	PM		4,720	25.2	C	5,167	28.2	D	2.2%
Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard	AM	4,700	3,000	26.0	D	3,070	26.7	D	1.9%
	PM		3,570	30.0	D	4,648	N/A⁴	F	2.6%

Notes: **Bold** text indicates below the applicable level of service standard (LOS D for Caltrans designated facilities). **Bold and highlighted text** indicates freeway segment deficiency as described in **Chapter 11**.

1. AM = AM peak hour, PM = PM peak hour.
2. Measured in passenger cars per mile per lane. Mixed = Mixed-Flow Lanes.
3. If volume/capacity ratio is greater than 1, density is not applicable.
4. Level of service (LOS) based on density.
5. The vehicle demand for the PM outbound peak hour direction of the next freeway segment (CA-1 between Canyon Del Rey and Casa Verde Way) is less than the project percent of capacity.

Source: Fehr & Peers, 2019.



CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS RAMP LEVELS OF SERVICE

Similar to the Cumulative with Project and without Eastside Parkway Conditions, under Cumulative with Project and with Eastside Parkway Conditions, all ramp volumes would be less than the ramp capacity during the AM and PM peak hours. Cumulative without and with Project and with Eastside Parkway Conditions would result in a shift of ramp volumes from the Imjin Parkway southbound on-ramp and northbound on-ramp to the same ramps at Lightfighter. As described above for the **Freeway Level of Service** section, the addition of Eastside Parkway would affect the travel between SR 1 to/from northward/eastward of the Campus.

TABLE 43: CUMULATIVE WITHOUT AND WITH PROJECT, AND WITH EASTSIDE PARKWAY CONDITIONS RAMP AM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type	Lanes	Capacity ¹	Cumulative without Project with Eastside Parkway (vehicles per hour)	Cumulative with Project with Eastside Parkway (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	430	490
	SB	Diagonal On-Ramp	1	1,500	1,050	1,050
	NB	Diagonal Off-Ramp	2	3,000	970	980
	SB	Diagonal Off-Ramp	1	1,500	930	1,010
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	380	380
	SB	Diagonal On-Ramp	2	3,000	760	870
	NB	Diagonal Off-Ramp	2	3,000	820	930
	SB	Loop Off-Ramp	1	1,200	510	530

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



TABLE 44: CUMULATIVE WITHOUT AND WITH PROJECT, AND WITH EASTSIDE PARKWAY CONDITIONS RAMP PM PEAK HOUR VOLUMES AND CAPACITIES

Location	Direction	Ramp Type ¹	Lanes	Capacity ¹	Cumulative without Project with Eastside Parkway (vehicles per hour)	Cumulative with Project with Eastside Parkway (vehicles per hour)
SR 1 and Imjin Parkway	NB	Diagonal On-Ramp	1	1,500	860	970
	SB	Diagonal On-Ramp	1	1,500	1,210	1,180
	NB	Diagonal Off-Ramp	2	3,000	1,200	1,230
	SB	Diagonal Off-Ramp	1	1,500	690	730
SR 1 and Lightfighter Drive	NB	Diagonal On-Ramp	1	1,500	770	770
	SB	Diagonal On-Ramp	2	3,000	890	1,020
	NB	Diagonal Off-Ramp	2	3,000	960	1,070
	SB	Loop Off-Ramp	1	1,200	290	290

Notes: **Bold** text indicates volumes above capacity.

1. Peak hour ramp capacity is 1,500 veh/hr/ln (vehicles per hour per lane) and 1,200 veh/hr/ln for diagonal and loop ramps, respectively.

Source: Fehr & Peers, 2019.



11. TRANSPORTATION FACILITY DEFICIENCIES AND POTENTIAL IMPROVEMENTS (FOR INFORMATION PURPOSES ONLY)

This chapter discusses the Project's potential effects to the study intersections and study freeway segments. First, the deficiency criteria are described. Next, the deficiencies and potential improvements are presented for each transportation facility type (intersections and freeway segments).

DEFICIENCIES CRITERIA

The deficiency criteria presented in the California State University *Transportation Impact Study Manual* (2012) are used to identify the Project's deficiencies, with a refinement to the freeway deficiency criteria in that criteria based on Caltrans guidance and removal of the construction deficiency criteria.

The deficiencies attributable to the Project were determined by comparing the results of the level of service calculations under Existing with Project Conditions to the results under Existing Conditions without Project to determine Project's effects on existing conditions. In the case of cumulative impacts, the Cumulative with Project and without Eastside Parkway Conditions was compared to the Cumulative without Project and without Eastside Parkway Conditions to determine whether the Project's contribution to that deficiency is cumulatively considerable. Cumulative without and with Project, and with the Eastside Parkway Conditions were similarly evaluated to determine the effects of Eastside Parkway on Cumulative with Project and without Eastside Parkway Conditions.

Below are the deficiency criteria as applied to the Project.

OFF-SITE TRAFFIC OPERATIONS

- A roadway segment or signalized intersection operates at LOS D or better under a no project scenario and the addition of project trips causes overall traffic operations on the facility to operate at LOS E or F. Roadway segment operations criteria are further refined below based on Caltrans guidance from Chapter 11 of the *HCM 2010*.
- A roadway segment or signalized intersection operates at LOS E or F under a no project scenario and the project adds both 10 or more peak hour trips and 5 seconds or more of peak hour delay, during the same peak hour. Roadway segment operations criteria are further refined below based on Caltrans guidance from Chapter 11 of the *HCM 2010*.
- If a signalized intersection operates at a very poor LOS F (control delay of 120 seconds or more), the significance criterion shall be an increase in v/c ratio of 0.02 or more.



- Operational deficiencies on freeway segments in study area within Monterey County were determined to occur when the addition of Project traffic causes:
 - Peak hour freeway segment operations to deteriorate from an acceptable level (LOS C/D threshold or better) under the without Project conditions to an unacceptable level (LOS D or worse) under with Project conditions; or
 - There is an increase in traffic of more than two percent of the capacity on a segment that operates unacceptably under without Project Conditions.
- Deficiencies are said to occur when the with Project scenario results in the average intersection delay for an all-way stop-controlled intersection, or the worst movement/approach for a side-street stop-controlled intersection, to degrade to LOS F and the intersection satisfies the peak hour traffic signal warrant from the *California Manual of Uniform Traffic Control Devices* (MUTCD) (2014).²⁹

DEFICIENCIES ANALYSIS AND POTENTIAL IMPROVEMENTS

The following section summarizes the deficiencies and potential improvements for intersections, freeway segments and freeway ramps. Each section includes a discussion of deficiencies under Existing with Project Conditions, Cumulative with Project and without Eastside Parkway Conditions, and Cumulative with Project and with Eastside Parkway Conditions.

INTERSECTION LEVEL OF SERVICE

The following physical improvements would improve the identified intersection deficiencies by increasing capacity. The improved intersection LOS calculations are presented in **Appendix O**.

Existing with Project Conditions

Under Existing with Project Conditions, implementation of the Project would increase motor vehicle traffic and congestion, resulting in operational deficiencies at the following intersections. The localized improvements identified below would incrementally improve intersection operations and, in some cases, improve street connectivity. The intersections with operation deficiencies and corresponding improvements are further described below.

²⁹ The peak-hour signal warrant analysis should not serve as the only basis for deciding whether and when to install a traffic signal. To reach such a decision, the full set of warrants should be investigated based on a thorough study of traffic and roadway conditions by an experienced engineer. The decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



Intersection 3: SR 1 Southbound Ramps and Imjin Parkway (Caltrans): Adding a second westbound left turn lane and converting the southbound off-ramp to a loop off-ramp would improve intersection operations and queuing. This would address the deficiency at this intersection.

Intersection 16: Second Avenue and Eighth Street (Marina): Adding a second southbound through lane; converting the northbound left lane to a shared left-through lane; and converting the northbound through lane and northbound right lane to a shared northbound through-right would improve intersection operations and queuing. These southbound changes match the future southbound geometry planned as part of the City of Marina's 5 Year Capital Improvement Project List. This intersection meets peak hour signal warrant in the Existing with Project Conditions; therefore, the improvements evaluated include signalization and optimization of the cycle length and splits. This would address the deficiency at this intersection.

Intersection 22: Eighth Avenue and Inter-Garrison Road (Monterey County/CSUMB): Two improvement options have been identified:

- Option 1 – Signalization of intersection: This intersection meets peak hour signal warrant in the Existing with Project Conditions; therefore, the improvements evaluated for Option 1 include signalization and optimization of the cycle length and splits. This would improve the intersection operations to an acceptable level of service.
- Option 2 – Add second inside turning lane in roundabout and add a westbound left approaching lane: This option enhances intersection operations of the existing roundabout. Adding a second inside turning lane, a dedicated westbound left lane, and a second receiving leg on the south leg would improve the intersection operations and queuing during the AM peak hour. This improvement would address the deficiency at this intersection.

Intersection 23: Abrams Drive and Inter-Garrison Road (CSUMB/Monterey County): Adding a second southbound left lane would improve intersection operations and queuing. This intersection meets peak hour signal warrant in the Existing with Project Conditions; therefore, the improvements evaluated include signalization and optimization of the cycle length and splits. This improvement would address the deficiency at this intersection.

Intersection 29: Second Avenue and Divarty Street (Marina/CSUMB): Adding a through lane to both the northbound and southbound directions, converting the northbound right lane to a shared northbound through-right, and converting the southbound right lane to a shared southbound through-right lane would improve intersection operations and queuing. These changes match the future geometry planned at this intersection. This would address the deficiency at this intersection.

Intersection 47: General Jim Moore Boulevard and Coe Avenue (Seaside): This intersection meets the peak hour signal warrant. Signalizing the intersection and optimizing the cycle length and splits would improve intersection operations and queuing. This would address the deficiency at this intersection.



Table 45 shows the peak hour delays and LOS results for without and with potential improvements for each of the intersections with a level of service deficiency under Existing with Project Conditions. As shown on the table, with implementation of the improvements, operations at each intersection would improve, and the Project’s impacts would be reduced below the local jurisdiction’s thresholds at the six intersections.

TABLE 45: EXISTING WITH PROJECT CONDITIONS INTERSECTION IMPROVEMENTS SUMMARY

Intersection	Improvements ³	Peak Hour ¹	Intersection Operations					
			Without Project Conditions Without Improvements		With Project Conditions Without Improvements		With Project Conditions With Improvements	
			Delay	LOS ²	Delay	LOS ²	Delay	LOS ²
3	SR 1 Southbound Ramps and Imjin Parkway ⁴	AM	36.6	D	61.3	E	0.0	A
		PM	17.2	B	19.6	B	0.0	A
16	Second Avenue and Eighth Street	AM	56.3	F	>120	F	8.2	A
		PM	12.8	B	23.3	C	6.2	A
22	Eighth Avenue and Inter-Garrison Road	AM	32.1	D	114.3	F	1.4	A
		PM	8.6	A	25.9	E	9.9	A
	AM	Option 1 - Signalize, optimize signal timings	32.1	D	114.3	F	1.4	A
		Option 2 - Add second circulating lane to the roundabout and Add WBL	8.6	A	25.9	D	23.0	C
23	Abrams Drive and Inter-Garrison Road	AM	60.3	F	>120	F	21.3	C
		PM	12.8	B	78.8	F	3.9	A
29	Second Avenue and Divarty Street	AM	31.1	D	>120	F	9.2	A
		PM	9.4	A	50.9	F	10.1	B
47	General Jim Moore Boulevard and Coe Avenue	AM	92.2	F	103.2	F	12.6	B
		PM	18.4	C	23.0	C	6.0	A

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency.

*Indicates unsignalized intersection.

1. AM = AM peak hour, PM = PM peak hour.

2. LOS = Level of Service. The method described in the *Highway Capacity Manual (HCM)* (Transportation Research Board) was used to prepare the LOS calculations for the signalized study intersections. This method analyzes intersection operations based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using Synchro analysis software and is correlated to a LOS designation

3. EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound; T = Through, L = Left-turn, R = Right-turn, LTR = Shared Left-Through-Right Lane, TR = Shared Through-Right Lane, TL = Shared Through-Left Lane.

4. The draft improvement would remove potential conflicting turn movements at this intersection, which removes vehicle control delay at this intersection.

Source: Fehr & Peers, 2019.



Cumulative with Project and without Eastside Parkway Conditions

Under Cumulative with Project and without Eastside Parkway Conditions, implementation of the Project would increase motor vehicle traffic and congestion, resulting in operational deficiencies at the following intersections. The localized improvements identified below would incrementally improve intersection operations and, in some cases, improve street connectivity. The intersections with operation deficiencies and corresponding improvements are further described below.

Intersection 3: SR 1 Southbound Ramps and Imjin Parkway (Caltrans): Adding a second westbound left turn lane and converting the southbound off-ramp into a loop off-ramp would address the deficiency at this intersection.

Intersection 5: Second Avenue and Imjin Parkway (Marina): Reconfigure the intersection to follow improvements identified in *The Dunes at Monterey Bay EIR (2005)*. These improvements include:

- Adding a third northbound left lane and a second northbound right lane.
- Adding a third westbound left lane, two westbound through lanes, and converting a shared westbound through-right lane to a westbound right lane.
- Adding a second southbound left lane, a second southbound through lane, and converting a shared southbound through-right lane to a southbound right lane.
- Adding a second eastbound left lane, a third eastbound through lane, and converting a shared eastbound through-right lane to two eastbound right lanes.
- Converting a shared westbound through-right lane to a westbound right lane, a shared southbound through-right lane to a southbound right lane, and a shared eastbound through-right lane to two eastbound right lanes.

These improvements would address the deficiency at this intersection; however, an important design consideration is the secondary effects to pedestrian and bicyclist operations. The widening would affect the crossing length and time bicyclists and pedestrians spend in front of vehicles. The improvement to widen the northbound approach for additional turning lanes would require widening beyond restriping, which would affect the available right of way for a future parallel separated shared use path.

Intersection 10: Imjin Road and Imjin Parkway (Marina): Adding a second westbound left lane would improve intersection operations and queuing. This would address the deficiency at this intersection.

Intersection 12: Reservation Road and Imjin Parkway (Marina): Adding a third southbound through lane would improve intersection operations and queuing. However, this would not improve the intersection operations to an acceptable level of service. To improve the intersection operations, additional widening, such as adding a northbound through lane, could be consider. Though, this creates a secondary effect on bicyclists and pedestrians as widening an intersection that already has a large footprint would have a



detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles.

Intersection 14: Inter-Garrison Road and Reservation Road (Monterey County): Adding a second northbound left lane would improve intersection operations and queuing. This would address the deficiency at this intersection.

Intersection 22: Eighth Avenue and Inter-Garrison Road (Monterey County/CSUMB): The following potential improvements were evaluated:

- Option 1 – Signalization of intersection: Adding a second northbound left lane, two westbound left lanes, and converting the shared westbound through-left lane to a westbound through lane only would improve intersection operations and queuing. However, this would not improve the intersection operations to an acceptable level of service. Therefore, the deficiency remains under Cumulative with Project and without Eastside Parkway Conditions. Although further widening could be considered as an improvement, an important design consideration is the secondary effects to pedestrian and bicyclist operations; therefore, no other improvements are feasible due to the increased secondary effect to pedestrian and bicyclist operations.
- Option 2 – Add second inside turning lane in roundabout and add a westbound left approaching lane: Adding a second inside turning lane to the roundabout, a dedicated westbound left lane, and a second receiving lane to the south leg would improve intersection operations and queuing. However, this would not improve the intersection operations to an acceptable level of service. Therefore, the deficiency remains under Cumulative with Project and without Eastside Parkway Conditions.

Although further widening could be considered as an improvement, an important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Refer to further discussion of the impact of multi-lane roundabouts to bicyclists and pedestrians in the **Secondary Effects of Intersection Improvements** section.

Intersection 23: Abrams Drive and Inter-Garrison Road (Monterey County): Adding a second eastbound left lane would improve intersection operations and queuing. This would address the deficiency at this intersection.

Intersection 28: Davis Road and Reservation Road (Monterey County): Adding a second eastbound left lane would improve intersection operations and queuing. This physical improvement would address the deficiency at this intersection in the AM peak hour; though, the intersection would remain deficient in the PM peak hour.

Intersection 33: General Jim Moore Boulevard and Lightfighter Road (Seaside): The following improvements were evaluated:



- Option 1 – Lane geometry improvements: Reconfiguring the intersection to follow the improvements identified in *The Dunes at Monterey Bay EIR (2005)* would address the deficiency at this intersection. The subject improvements include:
 - Adding a third northbound left lane and a second northbound through lane.
 - Adding a southbound right lane with overlap phase.
 - Adding a second eastbound left lane.
 - Adding a second westbound left lane, and a second westbound through lane.
 - Cycle length and splits are optimized.

As previously noted, increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. With intersection improvements for approaches on Lightfighter Drive, there would be secondary effect on bicyclist and pedestrian travel along the existing crossings and planned Class IV bicycle facilities for Lightfighter Drive as level of comfort for pedestrians and bicyclists decreases with widening of streets. Please refer to the discussion of potential secondary effects resulting from implementation of the road improvements below.

- Option 2 – Roundabout: A two-lane roundabout is proposed at this intersection under the Campus Town Specific Plan and is in line with the goals of the new *Seaside 2040 General Plan*. A roundabout was also tested to improve the deficiencies at this intersection and was found to address the deficiency. Delays were found to be slightly less than Option 1 (signalized intersection).

As previously noted, an important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Refer to further discussion of the impact of multi-lane roundabouts to bicyclists and pedestrians in the **Secondary Effects of Intersection Improvements** section.

Intersection 39: General Jim Moore Boulevard and Gigling Road (Seaside): Two improvement options at this intersection are possible.

- Option 1 – Lane geometry improvement: Adding a second westbound left lane would improve intersection operations and queueing. This would address the deficiency at this intersection.

As previously noted, increasing vehicle capacity by widening streets generally has a detrimental effect on bicyclists and pedestrians because adding lanes increases the distance bicyclists and pedestrians must cross to navigate the intersection, increasing their exposure to vehicles. With intersection improvements for approaches on Gigling Road, the secondary effect on planned bicycle facilities for Gigling Road would continue as level of comfort for bicyclists decreases with widening of streets. Please refer to the discussion of potential secondary effects resulting from implementation of the road improvements below.



- **Option 2 – Roundabout:** A two-lane roundabout is proposed at this intersection under the Campus Town Specific Plan and is in line with the goals of the new *Seaside 2040 General Plan*. A roundabout was tested to improve the deficiencies at this intersection due to the CSUMB expansion and was found to address the deficiency. Delays were found to be slightly less than Option 1 (signalized intersection).

As previously noted, an important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Specifically, multi-lane roundabouts without controlled pedestrian and bicycling crossings have an inherent “double threat” to pedestrians and bicyclists. For example, a visually impaired pedestrian needs adequate guidance (design features and/or control devices) to know when to enter the street as vehicles and bicyclist yield to the pedestrian. Therefore, each double lane approach/departure should include sufficient design features (staged crossing one lane at a time, bypass lanes) and control devices (signalization, yield control, etc.) to accommodate all users, especially visually impaired pedestrians and elderly users.

Intersection 47: General Jim Moore Boulevard and Coe Avenue (Seaside): Signalizing the intersection and optimizing the cycle length and splits would improve intersection operations and queuing. This intersection met peak hour signal warrants. These improvements would address the deficiency at this intersection.

Improvements are summarized in **Table 46**. As shown on the table, with implementation of the improvements, operations at each intersection would improve, and deficiencies attributed to the Project would be reduced below the local jurisdiction’s thresholds at nine of the 12 intersections; the three exceptions are: Reservation Road and Imjin Parkway (Int. 12); Eighth Avenue and Inter-Garrison Road (Int. 22); and Davis Road and Reservation Road (Int. 28), which would each continue to exceed the applicable LOS threshold, even with implementation of the improvements. **Appendix O** shows the delays, LOS results for without and with improvements for all study intersections with a level of service deficiency under Cumulative with Project and without Eastside Parkway Conditions.



**TABLE 46: CUMULATIVE WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS
INTERSECTION IMPROVEMENTS SUMMARY**

Intersection	Improvements ³	Peak Hour ¹	Intersection Operations					
			Without Project Conditions Without Improvements		With Project Conditions Without Improvements		With Project Conditions With Improvements	
			Delay	LOS ²	Delay	LOS ²	Delay	LOS ²
3 SR 1 Southbound Ramps and Imjin Parkway ⁴	Add WBL. Convert off-ramp to loop ramp equivalent	AM	>120	F	>120	F	0.0	A
		PM	>120	F	>120	F	0.0	A
5 Second Avenue and Imjin Parkway	Add third NBL, second NBR. Add third WBL, two WBT, and convert shared WBTR to WBR. Add second SBL, second SBT, convert shared SBTR to SBR. Add second EBL, third EBT, convert shared EBTR to two SBR	AM	51.2	D	59.9	F	20.7	C
		PM	73.6	E	81.2	F	24.7	C
10 Imjin Road and Imjin Parkway	Add second WBL	AM	14.4	B	28.3	C	13.5	B
		PM	24.7	C	62.2	E	30.3	C
12 Reservation Road and Imjin Parkway	Add third SBT	AM	43.8	D	48.4	D	37.2	D
		PM	107.0	F	119.7	F	96.2	F
14 Inter-Garrison road and Reservation Road	Add second NBL	AM	22.1	C	43.3	D	13.9	B
		PM	41.8	D	80.4	F	43.8	D
22 Eighth Avenue and Inter-Garrison Road	Option 1 - Signalize, optimize signal timings, and add two WBL Option 2 - Add second circulating lane to roundabout and add WBL	AM	107.6	F	>120	F	64.6	E
		PM	28.5	D	114.3	F	97.9	F
23 Abrams Drive and Inter-Garrison Road	Add second EBL	AM	33.4	C	76.9	E	42.7	D
		PM	32.6	C	74.1	E	12.5	B
25 East Garrison Road and Reservation Road	Signalize intersection optimize cycle length and splits	AM	39.9	E	80.7	F	24.1	C
		PM	17.3	C	34.5	D	16.7	B
28 Davis Road and Reservation Road	Add second EBL	AM	88.8	F	>120	F	52.1	D
		PM	>120	F	>120	F	96.6	F



TABLE 46: CUMULATIVE WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS SUMMARY

Intersection	Improvements ³	Peak Hour ¹	Intersection Operations					
			Without Project Conditions Without Improvements		With Project Conditions Without Improvements		With Project Conditions With Improvements	
			Delay	LOS ²	Delay	LOS ²	Delay	LOS ²
33 General Jim Moore Boulevard and Lightfighter	<u>Option 1</u> - Add third NBL, second NBT. Add SBR and overlap phase. Add second EBL. Add second WBL and second WBT. Optimize cycle length and splits	AM	33.7	C	79.6	E	17.8	B
		PM	24.4	C	29.1	C	27.6	C
		AM	33.7	C	79.6	E	13.7	B
		PM	24.4	C	29.1	C	12.2	B
		AM	30.6	C	51.8	D	23.3	C
		PM	22.5	C	56.0	E	36.9	D
39 General Jim Moore Boulevard and Gigling Road	<u>Option 2</u> - Roundabout design	AM	30.6	C	51.8	D	24.8	C
		PM	22.5	C	56.0	E	14.0	B
47 General Jim Moore Boulevard and Coe Avenue	Signalize intersection and optimize signal timings	AM	113.7	F	>120	F	21.7	C
		PM	30.4	D	35.2	E	6.0	A

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency.

*Indicates unsignalized intersection.

1. AM = AM peak hour, PM = PM peak hour.

2. LOS = Level of Service. The method described in the *Highway Capacity Manual* (HCM) (Transportation Research Board) was used to prepare the LOS calculations for the signalized study intersections. This method analyzes intersection operations based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using Synchro analysis software and is correlated to a LOS designation

3. EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound; T = Through, L = Left-turn, R = Right-turn, LTR = Shared Left-Through-Right Lane, TR = Shared Through-Right Lane, TL = Shared Through-Left Lane.

4. The draft improvement would remove potential conflicting turn movements at this intersection, which removes vehicle control delay at this intersection.

Source: Fehr & Peers, 2019.

Cumulative with Project and without Eastside Parkway Conditions – Planned Roundabouts Improvements

The *Draft Seaside 2040 General Plan and the Campus Town Specific Plan* proposes roundabouts for General Jim Moore Boulevard and Lightfighter Drive (Int. 33) and General Jim Moore Boulevard and Gigling Road (Int. 39). Along with these proposed roundabouts, there are two roundabouts proposed as part of the



concepts for the Imjin Parkway widening, which is a planned regional transportation plan improvement. The roundabouts associated with the Imjin Parkway widening would be constructed at Imjin Road and Imjin Parkway (Int. 10), and Abrams Drive and Imjin Parkway (Int. 11). The planned roundabout configurations are described below. These planned roundabout improvements were evaluated in the Cumulative without and with Project and without Eastside Parkway Conditions to determine if the desired improvements serve the future traffic, including the Project. **Table 47** summarizes the delays and LOS results with the roundabout improvements for Cumulative with Project and without Eastside Parkway Conditions.

- Int 10. Imjin Parkway widening at Imjin Road and Imjin Parkway:
 - Two-Lane Roundabout
 - Northbound: Two entry lanes (left lane and right turn lane) and one exit lane
 - Eastbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
 - Westbound: Two entry lanes (shared through-left and through lane) and two exit lanes
- Int 11. Abrams Drive and Imjin Parkway:
 - Two-Lane Roundabout
 - Northbound: One entry through-left lane and bypass right turn lane, and one exit lane
 - Eastbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
 - Southbound: One entry through-left lane and bypass right turn lane, and one exit lane
 - Westbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
- Int 33. General Jim Moore Boulevard and Lightfighter Drive:
 - Two-Lane Roundabout
 - Northbound: Two entry lanes (left lane and shared left-through-right lane) and two exit lanes
 - Eastbound Leg: Two entry lanes (shared left-through-right lane and right lane) and two exit lanes
 - Southbound: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
 - Westbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
- Int 39. General Jim Moore Boulevard and Gigling Road:
 - Two-Lane Roundabout
 - Northbound: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes



- o Eastbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
- o Southbound: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes
- o Westbound Leg: Two entry lanes (shared through-left and shared through-right lane) and two exit lanes

The roundabout improvements would increase the delay of the Imjin Parkway intersections and would result in deficient operations in the PM peak hour at Abrams Drive and Imjin Parkway (Int. 11), which was not previously identified as a deficient intersection in the analysis above. The roundabout improvements for the General Jim Moore Boulevard intersections would result in reduced delay. The roundabout improvements are also presented above for General Jim Moore Boulevard and Lightfighter Drive (Int. 33) and General Jim Moore Boulevard and Gigling Road (Int. 39) to address the intersection deficiencies.

TABLE 47: ROUNDABOUT IMPROVEMENTS INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control	Jurisdiction (LOS Standard) ¹	Peak Hour ²	Cumulative without Project without Roundabout Improvement		Cumulative with Project without Roundabout Improvement		Cumulative with Project with Roundabout Improvement	
					Delay ³	LOS ⁴	Delay ³	LOS ⁴	Delay ³	LOS ⁴
10	Imjin Road and Imjin Parkway	Roundabout	M (D)	AM	14.4	B	28.3	C	28.7	D
				PM	24.7	C	62.2	E	85.2	F
11	Abrams Drive and Imjin Parkway	Roundabout	M (D)	AM	15.3	B	20.9	C	26.5	D
				PM	17.4	B	23.9	C	71.2	F
33	General Jim Moore Boulevard and Lightfighter Drive	Roundabout	S (C)	AM	33.7	C	79.6	E	13.7	B
				PM	24.4	C	29.1	C	12.2	B
39	General Jim Moore Boulevard and Gigling Road	Roundabout	S (C)	AM	30.6	C	51.8	D	24.8	C
				PM	22.5	C	56.0	E	14.0	B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency.

*Indicates unsignalized intersection.

1. Intersection jurisdiction and associated LOS threshold applied.

i. City of Marina = M



- ii. City of Seaside = S
2. AM = AM peak hour, PM = PM peak hour.
3. LOS = Level of Service. The method described in the *Highway Capacity Manual* (HCM) (Transportation Research Board) was used to prepare the LOS calculations for the signalized study intersections. This method analyzes intersection operations based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using Synchro analysis software and is correlated to a LOS designation
Source: Fehr & Peers, 2019.

Cumulative with Project and with Eastside Parkway Conditions

Under the Cumulative with Project and with Eastside Parkway Conditions, implementation of the Project would increase motor vehicle traffic and congestion, resulting in operational deficiencies at the following intersections. The localized improvements identified below would incrementally improve intersection operations and, in some cases, improve street connectivity. The intersections with operation deficiencies and corresponding improvements are further described below.

However, because all but one of the improvements under this “with Eastside Parkway” scenario were previously described under the “without Eastside Parkway” scenario presented above, no further description of these improvements is necessary and reference to the preceding section is provided; description is provided only as to those improvements not previously described.

Intersection 3: SR 1 Southbound Ramps and Imjin Parkway (Caltrans): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 5: Second Avenue and Imjin Parkway (Marina): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 12: Reservation Road and Imjin Parkway (Marina): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 14: Inter-Garrison Road and Reservation Road (Monterey County): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 22: Eighth Avenue and Inter-Garrison Road (Monterey County/CSUMB): Two improvement options have been identified:

- Option 1 – Signalization of intersection: This intersection meets peak hour signal warrant in the Cumulative with Project and with Eastside Parkway Conditions; therefore, the improvements evaluated for Option 1 include signalization and optimization of the cycle length and splits. This would address the deficiency at the intersection.
- Option 2 – Add second inside turning lane in roundabout and add a westbound left approaching lane: This option explores improvements that consider enhance the operations of the intersection



assuming the intersection remains as a roundabout. Adding a second inside turning lane, a dedicated westbound left lane, and a second receiving leg on the south leg would make a significant improvement to the intersection operations and queuing during both the AM and PM peak hours. This would address the deficiency at the intersection.

Intersection 25: East Garrison Road and Reservation Road (Monterey County): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 28: Davis Road and Reservation Road (Monterey County): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 33: General Jim Moore Boulevard and Lightfighter Road (Seaside): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 39: General Jim Moore Boulevard and Gigling Road (Seaside): Refer to prior discussion under Cumulative with Project and without Eastside Parkway Conditions.

Intersection 46: General Jim Moore Boulevard and Normandy Road (Seaside): Reconfigure the intersection based on the improvements identified in *The Dunes at Monterey Bay EIR (2005)*. These improvements include:

- Adding a third northbound through lane and third southbound through lane
- Optimizing traffic signal cycle length and splits

Appendix O shows the delays, LOS, and changes in critical volume-to-capacity ratio and delay used to identify deficiencies at the study intersections under the Cumulative with Project and with Eastside Parkway Conditions. Improvements are described below and summarized in **Table 48**. As shown on the table, with implementation of the improvements, operations at each intersection would improve, and deficiencies attributed to the Project would be reduced below the local jurisdiction's thresholds at six of the ten intersections; the three exceptions are: Inter-Garrison Road and Reservation Road (Int. 14); East Garrison Road and Reservation Road (Int. 25); Davis Road and Reservation Road (Int. 28); and General Jim Moore Boulevard and Normandy Road (Int. 46), which would each continue to exceed the applicable LOS threshold, even with implementation of the improvements.



**TABLE 48: CUMULATIVE WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS
INTERSECTION IMPROVEMENTS SUMMARY**

Intersection	Improvements ³	Peak Hour ¹	Intersection Operations					
			Without Project Conditions Without Improvements		With Project Conditions Without Improvements		With Project Conditions With Improvements	
			Delay	LOS ²	Delay	LOS ²	Delay	LOS ²
3 SR 1 Southbound Ramps and Imjin Parkway ⁴	Refer to Cumulative with Project Improvement in Table 46.	AM	>120	F	>120	F	0.0	A
		PM	>120	F	>120	F	0.0	A
5 Second Avenue and Imjin Parkway	Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	55.3	E	60.8	E	20.2	C
		PM	54.8	D	65.6	E	21.6	C
12 Reservation road and Imjin Parkway	Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	25.7	C	26.1	C	23.6	C
		PM	55.6	E	61.5	E	49.9	D
14 Inter-Garrison road and Reservation Road	Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	117.8	F	>120	F	16.3	B
		PM	>120	F	>120	F	66.6	E
22 Eighth Avenue and Inter-Garrison Road	<u>Option 1</u> – Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	50.5	F	>120	F	12.7	B
		PM	14.7	B	33.9	D	11.3	B
		AM	50.5	F	>120	F	12.2	B
		PM	14.7	B	33.9	D	14.1	B
25 East Garrison Road and Reservation Road	Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	>120	F	>120	F	56.8	E
		PM	>120	F	>120	F	51.3	D
28 Davis Road and Reservation Road	Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	>120	F	>120	F	77.7	E
		PM	>120	F	>120	F	>120	F



TABLE 48: CUMULATIVE WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS INTERSECTION IMPROVEMENTS SUMMARY

Intersection	Improvements ³	Peak Hour ¹	Intersection Operations					
			Without Project Conditions Without Improvements		With Project Conditions Without Improvements		With Project Conditions With Improvements	
			Delay	LOS ²	Delay	LOS ²	Delay	LOS ²
33 General Jim Moor Boulevard and Lightfighter	Option 1 – Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	71.6	E	>120	F	19.2	B
		PM	33.0	C	43.6	D	18.4	B
		AM	71.6	E	>120	F	15.1	C
		PM	33.0	C	43.6	D	12.3	B
39 General Jim Moore Boulevard and Gigling Road	Option 1 – Refer to Cumulative with Project and without Eastside Parkway Conditions Improvement in Table 46.	AM	38.5	D	65.3	E	17.9	B
		PM	114.7	F	>120	F	17.2	B
		AM	38.5	D	65.3	E	24.6	C
		PM	114.7	F	>120	F	32.4	D
46 General Jim Moore Boulevard and Normandy Road	Add third NBT, third SBT, optimized cycle length and splits	AM	65.3	E	70.4	E	59.4	E
		PM	18.7	B	20.4	C	13.6	B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency.

*Indicates unsignalized intersection.

1. AM = AM peak hour, PM = PM peak hour.

2. LOS = Level of Service. The method described in the *Highway Capacity Manual* (HCM) (Transportation Research Board) was used to prepare the LOS calculations for the signalized study intersections. This method analyzes intersection operations based on average control delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay is calculated using Synchro analysis software and is correlated to a LOS designation

3. EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound; T = Through, L = Left-turn, R = Right-turn, LTR = Shared Left-Through-Right Lane, TR = Shared Through-Right Lane, TL = Shared Through-Left Lane.

4. The draft improvement would remove potential conflicting turn movements at this intersection, which removes vehicle control delay at this intersection.

Source: Fehr & Peers, 2019.



Although the improvements would not improve operations at the intersection to an acceptable LOS, the improvements would reduce the intersection AM peak hour delay below the Cumulative without Project with Eastside Parkway scenario results and address the deficiency.

While the improvements would reduce the Project's identified deficiency, an important design consideration is the secondary impacts to pedestrian and bicyclist operations. The road widening would affect the crossing length and time bicyclists and pedestrians spend in front of vehicles. The intersection improvement to further widen the northbound and southbound approach for additional turning lanes would require widening beyond restriping, which would affect the available right of way used of existing and proposed Class I shared use path along General Jim Moore Boulevard. Please refer to the discussion of potential secondary effects resulting from implementation of the road improvements below.

FREEWAY SEGMENTS

Deficiencies for freeway segments were determined based on the criteria described in the **Deficiencies Criteria** section of this chapter.

Existing with Project Conditions

For the Existing with Project Conditions, the Project would result in deficiencies at the following segments:

- Southbound SR 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard during the AM peak hour
- Southbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the AM Peak hour
- Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the PM Peak hour

Cumulative with Project and without Eastside Parkway Conditions

For the Cumulative with Project and without Eastside Parkway Conditions, the Project's effect on traffic would be cumulatively considerable, thereby resulting in deficiencies at the following segments:

- Southbound SR 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard during the AM peak hour
- Southbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the AM Peak hour and PM peak hour
- Northbound SR 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard during the PM peak hour



- Northbound SR 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey during the PM Peak hour

Cumulative with Project and with Eastside Parkway Conditions

Similar to the Cumulative with Project and without Eastside Parkway Conditions, the Cumulative with Project and with Eastside Parkway Conditions would have the same freeway deficiencies, except at the southbound segment between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard in the AM peak hour. The addition of the Eastside Parkway would result in shifts of traffic that could result in a reduced number of Project traffic traveling along this segment of SR 1, thereby eliminating the deficiency at this location.

Freeway Improvements

As part of the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy* (2018), there is a planned improvement to widen SR 1 to six lanes from Fremont Boulevard-Del Monte Boulevard to Canyon Del Rey Boulevard. This planned improvement would increase capacity and could improve operations along a segment that performs deficiently with the addition of Project traffic and PDFs; thus, addressing the deficiencies on the northbound and southbound SR 1 segments between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard. However, since there is no assurance that the funding will be available, the deficiency would remain as there is no other feasible mitigation.

There are no planned widening improvements for SR 1 north of Fremont Boulevard-Del Monte Boulevard that would address the between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard. As part of the TAMC 2014 Regional Transportation Plan, the proposed improvements for transit capacity along SR 1 and widening of interchanges of SR 1 would not widen or directly increase vehicle capacity along SR 1. As such, there is no feasible improvement available, and the deficiency would remain.

SECONDARY EFFECTS OF INTERSECTION IMPROVEMENTS

As discussed above, various types of intersection improvements could address the identified deficiencies. These improvements vary in size and type, including reconfiguring intersection approaches, adding lanes, and other types of improvements. Secondary effects associated with widening intersections for vehicle movements include effects relating to pedestrians and bicyclists; that is, the need for additional right of way, removal of trees, relocation of utilities, lengthening of crosswalks, and/or modification of signal phasing could increase the crossing distance/time for pedestrians and bicyclists, thereby resulting in potential safety related impacts.

Where dual right-turn lanes are proposed, they could result in a double threat condition for pedestrians and bicyclists. The double threat for pedestrians and bicyclist may be reduced by implementing a no right-turn on red for movements that have two right-turn lanes. However, despite the implementation of the no



right-turn on red, there continues to be a secondary impact to pedestrians and bicyclists caused by the increased crossing distance on all legs of the intersection.

Widening of a roundabout as discussed for Eighth Avenue and Inter-Garrison Road (Int. 22) would result in the need for additional right of way and widening of approaches and exiting lanes. The widening of approaches and exiting lanes would lengthen crosswalks. Although a separated shared use path is provided for bicyclists through the roundabout, there continues to be a secondary impact to bicyclists caused by increased crossing distances and widening affecting the width and length of the separated shared use path unless a tunnel or bridge are constructed. An important design consideration for multi-lane roundabouts is the bicycle and pedestrian crossings across two approach/departure lanes. Specifically, multi-lane roundabouts without controlled pedestrian and bicycling crossings could have an inherent “double threat” to pedestrians and bicyclists. For example, a visually impaired pedestrian needs adequate guidance (design features and/or control devices) to know when to enter the street as vehicles and bicyclist yield to the pedestrian. Therefore, each double lane approach/departure should include sufficient design features (staged crossing one lane at a time, bypass lanes) and control devices (signalization, yield control, etc.) to accommodate all users, especially visually impaired pedestrians and elderly users.



**APPENDIX A: CSUMB MASTER PLAN EIR – TRIP GENERATION
EVALUATION METHODS AND ESTIMATES**





MEMORANDUM

Date: November 9, 2021

To: Anya Spear and Matt McCluney, California State University Monterey Bay
Steve Lohr and Dawn Theodora, California State University Office of the Chancellor
Ann Sansevero, Dudek

From: Daniel Rubins, Jane Bierstedt, and Matt Haynes, Fehr & Peers

Subject: California State University Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates

SJ17-1728

This memorandum describes the trip generation for the proposed California State University Monterey Bay (CSUMB) Master Plan, including Project Design Features (PDFs) drawn from the CSUMB Master Plan Guidelines (the Project).

MEMORANDUM ORGANIZATION

This technically oriented memorandum provides an overview of the Project relative to transportation related matters with four sections: (1) project description, (2) technical methods, (3) trip generation estimates, and 4) summary. The purpose of each section is described below.

- Project Description: This section describes the populations under Existing Conditions and Project Conditions for the CSUMB Main Campus and East Campus that are the basis of this trip generation analysis.
- Technical Methods: The trip generation approach and technical methods are unique because of the size of the CSUMB campus, the unique travel behavior of each portion of the CSUMB population, and varied housing locations of the CSUMB population. Rather than calculating the net increase in project vehicle trips due to the net increase in land use intensity like most projects, the trip generation is prepared for the entire campus (see **Figure 1** for CSUMB campus boundary encompassing Main Campus, East Campus Open Space and East Campus) under Existing Conditions and Project Conditions to capture the



effects of adding student on-campus housing to the Main Campus and shifting of student housing from East Campus to Main Campus, and increasing the portion of faculty and staff living in the East Campus. Specifically, the net new project traffic is the difference between the Project Conditions and Existing Conditions CSUMB campus trip generation. As shown in the analysis, housing a greater percentage of students, faculty and staff on-campus increases the:

- Likelihood of trips staying within the campus (internal trips); and
- Likelihood of trips shifting to other modes (walking, bicycling, micro-mobility, and transit) for both on- and off-campus travel.

This section has three subsections:

- Trip Types and Assumptions: This section describes and illustrates the five trip types studied for the CSUMB Campus and the boundaries used for the trip generation analysis. It also discusses key assumptions and definitions.
- Existing Trip Generation and Travel Characteristics: The Existing Conditions trip generation estimates for the Main Campus and East Campus are based on the *CSUMB Person Trip Travel Survey* conducted by CSUMB staff and analyzed by Fehr & Peers, Main Campus cordon trips from the annual *CSUMB 2016-2017 Traffic Generation* report (Mott MacDonald, November 2017), and the East Campus vehicle cordon counts conducted by Fehr & Peers. This section summarizes the person trip generation, vehicle trip generation and mode share data for those traveling between East Campus and Main Campus, and between Main Campus and off-Campus.
- Trip Generation Rates: This section summarizes the trip generation rates for two vehicle cordons and three sub-cordons. This section also summarizes by reference to an attachment the Existing Conditions and Project Conditions vehicle trip generation rates for the three campus population types (students, faculty and staff) on an FTE basis.
- Trip Generation Estimates: The vehicle trip generation for the CSUMB campus under Existing Conditions and Project Conditions is presented in this section. The total trip generation estimates are provided for the Main Campus and East Campus, as well as total numbers for the entire campus.



- Summary: The memorandum concludes with a summary of the net increase in trip generation between Existing Conditions and Project Conditions. This is the amount of added project traffic that will be evaluated in the transportation analysis (TA).

PROJECT DESCRIPTION

The Project is the CSUMB Master Plan. Project elements that affect the transportation system include the proposed increase in enrollment, the on-campus housing for students, faculty, and staff, and a Main Campus street and parking system that facilitates and prioritizes walking, bicycling, and transit use over vehicle travel. Upon buildout, the Project would accommodate an increase in campus enrollment from the existing 6,634 full time equivalent students (FTES)¹ and 1,024 full time equivalent faculty/staff (FTEF),² to 12,700 FTES and 1,776 FTEF. Under Project Conditions, it is projected that the Project would house at least 60 percent of enrolled students and 65 percent of faculty and staff on campus (PDF-LU-5 and PDF-LU-6, as described in Chapter 3 of the proposed CSUMB Master Plan Draft EIR). As explained in the *California State University, Monterey Bay Proposed Master Plan Housing Memorandum* (see **Attachment A**), the Project Conditions on-campus student housing rate is similar to the existing on-campus student rates, and the Project Conditions on-campus faculty and staff housing rate is expected to increase based on various policies, programs and procedures to be implemented over the coming years.

Table 1 summarizes the number and percentage of students, faculty, and staff presently residing on- and off-campus (Existing Conditions), and the number forecasted to reside on- and off-campus under Project Conditions when FTES enrollment and FTEF employment total reaches 14,476.

¹ Full-time equivalent (FTE) is the unit of measurement used to convert class load to student enrollment. At CSUMB, one FTE is equal to 15 units. Thus, one FTE is equal to one student enrolled in 15 units or three students each enrolled in 5 units. A related unit of measurement is "headcount." In the case of one student taking 15 units, the headcount is 1; in the case of three students collectively taking 15 units, the headcount is 3.

² According to CSUMB Institutional Assessment and Research, 1 FTE = full time faculty or staff headcount + part time faculty or staff headcount divided by 3. The faculty and staff category also includes affiliates, which are companies that have been contracted by the Corporation to provide services that the auxiliary has been asked to provide by the university (e.g., dining, bookstore, etc.), and the affiliate's employee works full-time on campus in that capacity. They are also referred to as contractors. The Auxiliary includes staff of the Corporation, Student Union and Foundation.



TABLE 1: CSUMB POPULATION TYPE BY HOUSING LOCATION

Housing Location	Existing Conditions (FTES or FTEF) ¹	Project Conditions (FTES or FTEF) ¹	Change (Project – Existing) ²
Student Population			
Main Campus	2,600 (39.2%)	7,620 ³ (60.0%)	+5,200
East Campus ⁴	1,380 (20.8%)	0 (0%)	-1,380
Off-Campus	2,654 (40.0%)	5,080 (40.0%)	+2,426
<i>Subtotal [A]</i>	<i>6,634 (100%)</i>	<i>12,700 (100%)</i>	<i>+6,066</i>
Faculty/Staff Population			
East Campus ⁴	463 (45.2%)	1,154 ³ (65.0%)	+691
Off-Campus	561 (54.8%)	622 (35.0%)	+61
<i>Subtotal [B]</i>	<i>1,024 (100%)</i>	<i>1,776 (100%)</i>	<i>+752</i>
Student, Faculty, and Staff Population (Campus Population)			
Main Campus and East Campus (Students, Faculty and Staff)	4,443 (58.0%)	8,774 (60.6%)	+4,331
Off-Campus (Students, Faculty and Staff)	3,215 (42.0%)	5,702 (39.4%)	+2,487
Total [A + B = C]	7,658 (100%)	14,476 (100%)	+6,818
Campus Population with Community Housing Partners			
East Campus (Community Housing Partners) [D]	280	66	-214
Total [C+D = E]	7,938	14,542	+6,604

Notes:

1. FTES = Full time equivalent students; FTEF = Full time equivalent faculty/staff.
2. Change (Project - Existing) = Project Conditions column – Existing Conditions column.
3. The transportation trip generation analysis uses a campus population that, meets but does not exceed the 60 percent student housing goal and the 65 faculty and staff housing goal under Project Conditions.
4. Under Existing Conditions 1,380 students, 463 faculty/staff, and 280 community housing partners live in the East Campus housing. Under Project Conditions 1,154 faculty/staff and 66 community housing partners live in the East Campus housing unless housing is needed by for campus employees.

Source: Fehr & Peers, 2019.



The total on-campus housed population (i.e., the number of students, faculty, and staff residing in either Main Campus or East Campus housing) is forecasted to increase from the existing 58 percent (4,443 of 7,658) to 61 percent (8,774 of 14,476). As space permits, community housing partners³ will also reside in the East Campus housing. While community housing partners live on-campus, they are not associated with on-campus housing for students, faculty and staff, and therefore are not included in the student, faculty, and staff population total but are included in the entire campus population total in **Table 1**.

In terms of actual on-campus housing facilities, the Project would provide housing to accommodate an increase in campus population from the existing approximately 6,634 FTES to 12,700 FTES, and an increase in employees (i.e., faculty and staff) from approximately 1,024 FTEF to 1,776 FTEF.⁴

TECHNICAL METHODS

The addition of students, faculty, and staff as part of the Project will increase the overall campus person and vehicle trip generation. The following sections provided a detailed accounting of the trip generation estimates by trip type, CSUMB campus population, and housing location.

TRIP TYPES AND ASSUMPTIONS

Because of the large size of the CSUMB campus, some vehicle trips will start and end within the campus and, as such, are designated internal trips (e.g., vehicle trips between the Main Campus and East Campus or trips within Main Campus). These internal vehicle trips are considered part of the on-campus transportation analysis, and do not affect the operations of off-campus intersections and freeway segments. Only trips that travel off campus (external trips) are used to evaluate the Project's effects on external intersections and freeway segments.

To properly estimate trip generation for the entire campus, five types of vehicle trips were defined based on their origins and destinations: 1) External trips between Main Campus and Off Campus (designated below as "A" trip type), 2) External trips between East Campus and Off Campus ("B" trip type), 3) Internal trips between Main Campus and East Campus ("C" trip type), 4) Internal trips within Main Campus ("D" trip type), and 5) Internal trips between The Promontory and Main Campus ("E" trip type).

³ Community housing partners are made up of affiliates (a subcategory of CSUMB staff), educational partners and military partners, and public sector employees working in the Monterey area.

⁴ Existing student, faculty and staff quantities based on 2016 baseline figures provided by CSUMB staff.



The five trip types are illustrated in **Figure 1** and described below:

- **A – External Trips between Main Campus and Off Campus:**
 - This trip type is made, for example, by students living on-campus and going off-campus, students, faculty/staff living off-campus traveling to campus, as well as campus supporting/visitor trips (by visitors, deliveries, transit, and other supporting activities) that enter or exit the CSUMB Main Campus cordon. These include trips to/from Seaside, Marina, Salinas, and other nearby communities.
- **B – External Trips between East Campus and Off Campus:**
 - This trip type is made, for example, by students and faculty/staff living on East Campus that travel off-campus. This includes trips between East Campus and Seaside, Marina, Salinas, and other nearby communities.
- **C – Internal Trips between Main Campus and East Campus:**
 - This trip type is made, for example, by students and faculty/staff that travel between CSUMB's Main Campus and East Campus. These trips are internal campus trips because both trip ends are located within the entire campus cordon.
- **D – Internal Trips within Main Campus:**
 - This trip type is made, for example, by students, and campus support vehicles that travel within CSUMB's Main Campus. These trip pairs are internal campus trips because both trip ends are located within the Main campus cordon.
- **E – Internal Trips between The Promontory and Main Campus:**
 - This trip type is made, for example, by students and campus support vehicles that travel between The Promontory residential buildings and CSUMB's Main Campus. These trips are internal campus trips because both trip ends are located within the Main Campus cordon.

The Project trip generation estimates are based on existing CSUMB travel data observed at each cordon (or boundary defining a portion of the campus): 1) the Main Campus Cordon, 2) East Campus Cordon, 3) the entire CSUMB campus, 4) East Campus Sub-Cordon for Students, and 5) East Campus Sub-Cordon for faculty, staff and community housing partners (see **Figure 1** for the location of each cordon).



SJ17_1728_Fig01_CSUMB Trip Pairs_v5.ai

- California State University Monterey Bay Campus
- Main Campus Cordon
- East Campus Cordon
- Agency Boundary

- A. External Trips between Main Campus and Off-Campus
- B. External Trips between East Campus and Off-Campus
- C. Internal Trips between Main Campus and East Campus
- D. Internal Trips within Main Campus
- E. Internal Trips between The Promontory and Main Campus

- Promontory Housing Sub-Cordon Location
- East Campus Sub-Cordon for Students
- East Campus Sub-Cordon for Faculty, Staff, and Community Housing Partners



Figure 1
CSUMB Cordons and Trip Types



The Main Campus trip generation is the sum of Main Campus internal vehicle trips and Main Campus Cordon vehicle trips (e.g., vehicle trips to/from Promontory, East Campus, and off-campus locations). East Campus Cordon count/total trip generation is the sum of the East Campus internal vehicle trips with Main Campus and East Campus external trips. This trip generation format is used throughout the memo.

In addition to the trip types, and campus cordon locations described above, the following concepts are intended to assist the reader in understanding the trip generation methods and analysis assumptions presented in the subsequent sections:

- The CSUMB campus population is the sum of full-time equivalent students, faculty, and staff. The entire campus population is the sum of full-time equivalent students, faculty, staff and Community Housing Partners.
- The CSUMB trip generation estimates do not include pass-through traffic (e.g., vehicles that use campus streets to travel through the university to other destinations without stopping).
- The CSUMB External Campus Trip Total is the sum of all Type A and B vehicle trips generated by students, faculty, staff, community housing partners plus campus supporting vehicle trips (e.g., deliveries, maintenance, etc.) and visitor trips.
- The Existing Main Campus Trip Generation is based on the Main Campus daily vehicle cordon count from the annual *CSUMB 2016-2017 Traffic Generation* memorandum, and most of the daily and peak hour vehicle data comes from the *CSUMB Person Trip Travel Survey*, and the inbound/outbound split are from either the annual *CSUMB 2016-2017 Traffic Generation*, the *CSUMB Person Trip Travel Survey*, or a combination of the two data sources.
- The Existing Main Campus Trip Generation for this analysis includes all Main Campus trips (Trip Types A, C, D, and E). In comparison, the Annual Monitoring Cordon Total Trips from the annual *CSUMB 2016-2017 Traffic Generation* memorandum includes only a portion of these trips by excluding a portion of the vehicle trips from the Promontory student housing and internal supporting vehicle trips. Thus, the daily vehicle trip generation reported for this Main Campus Cordon Trips is greater than and defined differently than the Annual Monitoring Cordon Total Trips.
- The Existing East Campus Cordon Total for this analysis includes all East Campus trips (Trip Types B and C) and is based on the East Campus Cordon counts collected in the Fall of 2017 and includes the daily and peak hour data collected from the *CSUMB Person Trip Travel Survey*.



- The Project trip generation estimates presented in this memorandum assume the existing Transportation Demand Management (TDM) and Parking Management measures remain in place on the CSUMB campus, and those measures continue to be as effective in reducing vehicle trip-making and encouraging the use of other modes. It furthermore assumes no growth in TDM and parking measures despite plans to expand these programs.
- On-campus housing vehicle trip rates are less than off-campus vehicle trip rates. Therefore, as the portion of the CSUMB population living on-campus increases, the per person vehicle trip generation rate will decrease.
- Main Campus students, campus supporting vehicle trips (e.g., deliveries, maintenance, etc.) and visitor vehicle trips are included in the trip estimates as one group because of the limited fidelity in the available travel data.

EXISTING TRIP GENERATION AND TRAVEL CHARACTERISTICS

The vehicle trip generation estimates for Existing Conditions are based on the data sources listed below and discussed in greater detail in this section:

1. Person and Vehicle Trip Generation Data: *CSUMB Person Trip Travel Survey* conducted by CSUMB staff and analyzed by Fehr & Peers (Fall 2017);
2. Main Campus Cordon Trips: Main Campus cordon trips from the annual *CSUMB 2016-2017 Traffic Generation* report (Mott MacDonald, November 2017); and
3. East Campus Cordon Trips: East Campus Vehicle Cordon Count collected along the boundary of this portion of the campus (conducted November 2017 by Fehr & Peers).

These studies provide information on the travel behavior of students, faculty and staff living off-campus, living on the Main Campus, and living on the East Campus. Additional detail regarding the person and vehicle trip generation data, Main Campus Cordon Trips, and East Campus Cordon Trips are described in more detail below. The reader may find it useful to refer back to **Figure 1** for specific trip type or campus location definitions.

- Person and Vehicle Trip Generation Travel Data: The *CSUMB Person Trip Travel Survey (Attachment B)* includes questions of the Main Campus population to determine travel choices to/from the Main Campus, primary mode of travel, arrival and departure time on each day of the week, frequency of travel, and the frequency of vehicle use. The 2,410 responses were summarized to determine the person trip generation, vehicle trip generation and primary mode share data for those traveling between East Campus and



Main Campus, and between Main Campus and off-Campus (**Attachment C**). **Tables C-1** through **C-4** summarize the directional personal and vehicle trip rates from the Survey responses. The person and vehicle trips rates in **Tables C-5** and **C-6** were used for the peak commute direction (inbound in the morning peak hour and outbound in the evening peak hour) as described later in the memo.

Most CSUMB students, faculty, and staff residing off-campus travel to/from the campus by passenger vehicle. As shown in **Tables C-7** and **C-8** off-campus residents (see the fourth and last columns from the left in **Table C-7**) have a higher combined drive-alone and shared-ride mode share than the average work trip mode share for Monterey or Santa Cruz counties (see the third through sixth columns from the left in **Table C-8**). In contrast, on-campus residents have a lower drive-alone and shared ride mode share than either County's combined work drive-alone or shared ride mode share.

The drive-alone mode share for the Main Campus, with on- and off-campus students, is approximately 54 percent; the number is approximately 75 percent when excluding on-campus student residents (see **Table C-9**). Thus, including the on-campus student residents has a notable influence on the inbound morning peak hour mode share and illustrates the benefit on-campus housing has on shifting travel behavior from the personal vehicle to walking, bicycling and transit.

Existing Conditions vehicle trip generation rates for the Main Campus and East Campus were derived from the cordon trip counts. The Main Campus cordon trips are a calculated value per the steps described below. East Campus Cordon count comes from the counts collected along the boundary of this portion of the campus. The vehicle trip rates are further divided by campus population using the person trip travel survey trip rates referenced previously and provided in **Attachment C**.

- Main Campus Cordon Vehicle Trips: The Main Campus Cordon Trips is a calculated value that uses several data sources using the following steps.
 - Step 1 – Summary of Daily Trip Generation from Annual Trip Generation report: This step establishes daily trip generation using the Main Campus and Promontory daily trip generation estimate from the annual *CSUMB 2016-2017 Traffic*



Generation report. The Main Campus daily vehicle trip generation⁵ is sourced from the annual *CSUMB 2016-2017 Traffic Generation* report. As shown in **Table 2**, the annual monitor cordon trips of 10,545 daily vehicles (see line 1), Promontory trip count of 1,518 (sum of external (see line 2) and internal (see line 3) trips), and internal campus supporting trips of 948 (line 4) are added together to estimate the Main Campus trip generation of 13,011 daily vehicles (line 5). The internal trips in the annual *CSUMB 2016-2017 Traffic Generation* report were derived from visual CSUMB permit surveys, external delivery travel data provided by CSUMB staff.

TABLE 2: CSUMB MAIN CAMPUS DAILY VEHICLE TRIP GENERATION AND CORDON COUNTS

	Location (Population Type)	Trip Types¹	Daily Vehicle Trips
1	Annual Monitoring Cordon Total Trips ²	A+C	10,545
2	Promontory External Trips ³	A	+661
3	Promontory Internal Trips ⁴	E	+857
4	Main Campus Internal Trips ⁵	D	+948
5	Main Campus Trip Generation	A+C+D+E	13,011

Notes:

FTE = Full time equivalent.

1. Trip pairs shown on Figure 1.

2. From Total CSUMB Int-Ext/Ext-Int Trips line in Exhibit 3 of the annual *CSUMB 2016-2017 Traffic Generation* memorandum.

3. From footnote 7 of Exhibit 3 of the annual *CSUMB 2016-2017 Traffic Generation* memorandum.

4. From Internal Trips line of Exhibit 3 of the annual *CSUMB 2016-2017 Traffic Generation* memorandum.

5. Calculated based on daily vehicle trip generation rate summarized in Attachment C-6 for Main Campus students. This value is calculated as follow: 142 daily vehicle trips = 0.188 daily vehicle trips per student x 756 promontory students.

Source: Fehr & Peers, 2019.

- Step 2 – Daily Trip Generation Using for CSUMB Environmental Analysis: This step allocates the CSUMB Main Campus Trip Generation of 13,011 daily vehicle trips from step 1 based on the daily vehicle trip rates derived from the *CSUMB Person Trip Travel Survey* (see **Attachment C Table C-6**), and the Promontory parking lot driveway data from the annual *CSUMB 2016-2017 Traffic Generation* report (see **Attachment D**). The daily vehicle trips for each location and population type are

⁵ The Main Campus trip generation is the sum of all external vehicle trips generated by students, faculty, staff, visitors, and campus supporting personnel such as security and maintenance staff vehicles such as deliveries.



shown in **Table 3** (see notes for the daily trip rate source). For this trip generation analysis, the Main Campus Supporting Internal Trips (Trip Type D), and the Main Campus Supporting Trips and Visitor Trips (Trip Type A) are the remaining vehicle trips after applying the daily trip rates to the other housing location and population type. By using the person and vehicle trip generation data, the estimate of internal student and supporting trips is less than stated in the annual *CSUMB 2016-2017 Traffic Generation* report.

TABLE 3: CSUMB DAILY MAIN CAMPUS TRIP GENERATION BY LOCATION AND POPULATION TYPE

Location (Population Type)	Trip Types ¹	Population Size (FTE)	Daily Trip Rate (Vehicle Trips per FTE) ²	Daily Vehicle Trips
Main Campus Housing (Students) ³	A	1,844	2.079	3,832
Promontory Housing (Students) ³	A	756	2.079	1,572
Off-Campus Housing (Students) ²	A	2,654	1.285	3,411
Off-Campus Housing (Faculty and Staff) ²	A	561	1.602	899
East Campus Housing (Students) ²	C	1,380	1.030	1,422
East Campus Housing (Faculty and Staff) ²	C	463	1.618	749
Main Campus Housing Internal Trips (Students) ²	D	1,844	0.188	348
Promontory Housing Internal Trips (Students) ²	E	756	0.188	142
Main Campus Supporting Internal Trips (Campus Population) ⁴	D	7,658	0.042	321
Campus Supporting Trips and Visitor Trips (Campus Population) ⁴	A	7,658	0.041	315
Main Campus Trip Generation	A+C +D+E	7,658	1.699	13,011

Notes:

FTE = Full time equivalent.

1. Trip pairs shown on Figure 1.

2. Calculated based on daily vehicle trip rate from **Attachment C Table C-6**.

3. Calculated vehicle trip rate for Main Campus and Promontory Housing vehicle trip rate based on daily Promontory driveway count minus Promontory internal vehicle trips. This value is calculated as (1,714 Promontory vehicle trips – 142 Promontory housing vehicle trips)/756 Promontory Students = 2.079 vehicle trips per FTES.

4. Campus Supporting Internal Trips, and Campus Supporting Trips and Visitor Trips are the remaining daily vehicle trips (split approximately evenly) to sum to the Main Campus Trip Generation.

Source: Fehr & Peers, 2019.

The internal student and campus supporting trips are excluded from the Main Campus Trip Generation to derive the daily Main Campus Cordon Trips. **Table 4**



shows the 142 internal Promontory vehicle trips (see line 2) and 669 daily internal student and campus supporting vehicle trips (see line 3) that are removed. The resulting Main Campus Cordon Trips (12,200) is the number of daily vehicle trips that leave the Main Campus cordon boundary (see line 4).

TABLE 4: CSUMB MAIN CAMPUS CORDON TRIPS

Location (Population Type)	Trip Types ¹	Daily Vehicle Trips
1 Main Campus Trip Generation	A+C+D+E	13,011
2 Promontory Internal Trips ²	E	-142
3 Main Campus Students and Campus Supporting Trips ³	D	-669
4 Main Campus Cordon Trips	A+C	12,200

Notes:

FTE = Full time equivalent.

1. Trip pairs shown on Figure 1.

2. Promontory Internal Trips = 756 Promontory Students * 0.188 vehicle trips per FTES = 142 vehicle trips.

3. Main Campus Supporting Internal Trips (321 daily vehicle trips) and Main Campus Housing Internal Trips (348 daily vehicle trips) = Main Campus Students and Campus Supporting Trips (669 daily vehicle trips).

Source: Fehr & Peers, 2019.

- Step 3 – Peak Hour Trip Generation: The number of morning and evening peak hour vehicle trips were determined by factoring the daily Main Campus Trip Generation by the ratios of peak hour trips to daily trips. The Main Campus trip generation of 1,520 morning peak hour vehicle trips is approximately 11.7% of the 13,011 daily trips. While the Main Campus trip generation of 1,460 evening peak hour vehicle trips is approximately 11.2% of the 13,011 daily trips.
- Step 4 – Peak Hour Directional Trip Generation: This step estimates the inbound and outbound splits are based on the vehicle trip rates shown in **Attachment D Table D-2**. These peak hour directional trip rates are derived from sources such as the vehicle trip rates derived from the *CSUMB Person Trip Travel Survey*, the annual *CSUMB 2016-2017 Traffic Generation* report, the Promontory parking lot driveway data from the annual *CSUMB 2016-2017 Traffic Generation* report (see **Attachment D**), and the East Campus Cordon Trips. The result is a 69%/31% in/out split during the morning peak hour and a 40%/60% in/out split during the evening peak hour. The results are similar to the in/out splits from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* 10th Edition for University/College land use code 550 (78%/22% in/out split during the morning peak hour and 32%/66% in/out split during the evening peak hour). The results are summarized in **Table 5**.



The split of inbound, outbound and internal trip estimates are shown in **Table 5** and are the result of using the trip rates described in **Attachment E**. The reader can review the Existing Conditions trip generation estimates by population type in **Attachment F**. The internal trips are summarized on line 3 of **Table F-1**, the Main Campus Cordon Count Trips is on line 10 of **Table F-1**, and the Main Campus Trip Generation is shown on line 14 of **Table F-1**. As shown in **Table 5**, the Main Campus Cordon Count is estimated by subtracting the Main Campus Internal Trips from the Main Campus Trip Generation.

TABLE 5: EXISTING CSUMB MAIN CAMPUS PEAK HOUR VEHICLE TRIP GENERATION AND CORDON COUNTS

Location (Population Type)	Population Size (FTE)	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Vehicle Trip Generation									
Main Campus Trip Generation (Students, Faculty and Staff)	7,658	A+C+ D+E	13,011	1,520	1,055	465	1,460	589	871
Main Campus Internal Student and Campus Supporting Trips	7,658	D+E	-811	-284	-159	-125	-148	-64	-84
Vehicle Cordon									
Main Campus Cordon (Students, Faculty and Staff)	7,658	A+C	12,200	1,236	896	340	1,312	525	787
Vehicle Sub-Cordon									
Promontory Housing	756	A+E	1,714	56	17	39	113	53	60

Notes:

FTE = Full time equivalent.

1. Trip types shown on Figure 1.

Source: Fehr & Peers, 2019.

- East Campus Cordon Trips: The East Campus Cordon Count study collected vehicle counts from collected from the three East Campus neighborhoods (e.g., Frederick Park I, Frederick Park II, and Schoonover Park). Counts were collected Tuesday through Wednesday during the week of November 7th and Tuesday through Thursday during the week of November 14th, 2017. The count results are summarized in **Table 6**.

Unlike the calculated Main Campus Cordon Counts, the East Campus Cordon count data is directly related to the observed vehicle trips from either students or



faculty/staff/community housing partners. Since students live in Frederick Parks I & II neighborhoods and faculty/staff and community housing partners live in Schoonover Park, it is clear which population type is generating trips.

TABLE 6: EXISTING CSUMB EAST CAMPUS CORDON VEHICLE COUNTS

Location (Population Type)	Population Size (FTE)	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Vehicle Cordon									
East Campus Cordon (Students, Faculty, Staff and Community Housing Partners) ²	2,123	B+C	10,017	799	134	665	759	484	275
Vehicle Sub-Cordon									
East Campus Sub- Cordon (Faculty, Staff and Community Housing Partners) ^{2,3}	743	B+C	4,667	519	86	433	444	305	139
East Campus Sub- Cordon (Students) ^{2,4}	1,380	B+C	5,350	280	48	232	315	179	136

Notes:

FTE = Full time equivalent.

1. Trip types shown on Figure 1.
2. Under Existing Conditions, 1,380 students, 463 faculty/staff, and 280 community housing partners (affiliate agency and other government employees) live in the East Campus housing.
3. East Campus Cordon count for faculty, staff, and community housing partners living along Schoonover Road.
4. East Campus Cordon count for students living along Bunker Hill and Manassas Drive.

Source: Fehr & Peers, 2019.

TRIP GENERATION RATES

As previously noted, the existing campus vehicle trip generation rates were calculated based on the *CSUMB Person Trip Travel Survey* data, the annual *CSUMB 2016-2017 Traffic Generation* report data (which includes Main Campus cordon trips and the driveway counts taken at the Promontory student housing and reported in the annual *CSUMB 2016-2017 Traffic Generation* report), and the East Campus vehicle cordon counts conducted by Fehr & Peers.

Table 7 shows the trip rates at two vehicle cordon locations and three sub-cordon locations, which are calculated by dividing the vehicle cordon trip generation summarized in **Tables 5** and **6** by the respective population sizes.



**TABLE 7: EXISTING CONDITIONS CSUMB CAMPUS CORDON
 VEHICLE TRIP GENERATION RATES¹**

Location (Population Type)	Population Size (FTE)	Trip Type ²	Daily	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Vehicle Cordon									
Main Campus Cordon (Students, Faculty and Staff)	7,658	A+C	1.59	0.16	0.12	0.04	0.17	0.07	0.10
East Campus Cordon (Students, Faculty, Staff and Community Housing Partners) ²	2,122	B+C	4.72	0.38	0.06	0.32	0.36	0.23	0.13
Vehicle Sub-Cordon									
Promontory Housing	756	A+E	2.27	0.07	0.02	0.05	0.15	0.07	0.08
East Campus Sub-Cordon (Faculty, Staff and Community Housing Partners) ^{2,3}	743	B+C	6.28	0.70	0.12	0.58	0.60	0.41	0.19
East Campus Sub-Cordon (Students) ^{2,4}	1,380	B+C	3.88	0.20	0.03	0.17	0.23	0.13	0.10

Notes:

FTE = Full time equivalent.

1. Vehicle trip generation rates represent vehicles per FTE. For presentation purposes, these rates are rounded to the nearest hundredth.
2. Trip type shown on Figure 1.
3. Under Existing Conditions, 1,380 students, 463 faculty/staff, and 280 community housing partners live in the East Campus housing.
4. East Campus Cordon count for faculty, staff, and community housing partners living along Schoonover Road.
5. East Campus Cordon count for students living along Bunker Hill and Manassas Drive.

Source: Fehr & Peers, 2019.

The Existing Conditions and Project Conditions trip generation rates were calculated separately by location and for the various campus population types and housing location, which show vehicle trips per FTE in **Attachment E**. **Attachment E** also presents a description of each of the CSUMB trip types.

Under Project Conditions, the Main Campus student internal vehicle trip generation rates would be reduced due to two factors, both of which disincentives vehicle use on campus. The first is that parking will be consolidated and relocated to select areas on the periphery of the campus core, a non-convenient location for Main Campus students. Second, new infilled student housing will be close to the academic core. Both of these changes are expected to shift student travel from vehicles



to more convenient on-campus transit, bicycling, walking and other non-vehicle modes of travel. The Main Campus student internal vehicle trip generation rates were reduced by 75 percent.

Attachment F presents the Existing Conditions vehicle trip generation for CSUMB by population type and housing location.

TRIP GENERATION ESTIMATES

Total vehicle trip generation for the CSUMB campus under both Existing Conditions and Project Conditions are presented in **Tables 8** and **9**, respectively. The total trip generation estimates are provided for the Main Campus and East Campus separately, as well as total numbers for the entire campus.

As shown in **Table 8**, under Existing Conditions the Campus external vehicle trip generation is approximately 17,875 daily vehicle trips, 1,401 morning peak-hour trips (713 inbound and 688 outbound) and 1,457 evening peak-hour trips (702 inbound and 755 outbound). A detailed Existing Conditions trip generation table is included as **Attachment E**. The trip estimates are presented by campus population and housing location.



TABLE 8: EXISTING CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB CAMPUS

Location Type	Trip Type ¹	Daily	Morning Peak Hour			Evening Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips	E	142	12	11	1	8	1	7
Main Campus Internal Trips ²	D	669	272	148	124	140	63	77
Main Campus External Trips	A	10,029	919	633	286	1,005	432	573
Main Campus Trips with East Campus	C	2,171	317	263	54	307	93	214
Main Campus Total [A]	A+C+D+E	13,011	1,520	1,055	465	1,460	589	871
East Campus								
East Campus Trips with Main Campus	C	2,171	317	54	263	307	214	93
East Campus External Trips	B	7,846	482	80	402	452	270	182
East Campus Total [B]	B+C	10,017	799	134	665	759	484	275
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-142	-12	-11	-1	-8	-1	-7
Main Campus Internal Trips ²	D	-669	-272	-148	-124	-140	-63	-77
Main Campus Trips with East Campus	C	-2,171	-317	-263	-54	-307	-93	-214
East Campus Trips with Main Campus	C	-2,171	-317	-54	-263	-307	-214	-93
Trip Adjustment [C]	C+D+E	-5,153	-918	-476	-442	-762	-371	-391
External Campus Trip Total [A+B+C]³	A+B	17,875	1,401	713	688	1,457	702	755

Notes:

1. Trip type shown on Figure 1.
 2. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
 3. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.
- Source: Fehr & Peers, 2019.



As shown in **Table 9**, under Project Conditions the campus external vehicle trip generation would be approximately 30,385 daily vehicle trips, 2,290 morning peak-hour trips (1,188 inbound and 1,102 outbound) and 2,495 evening peak-hour trips (1,203 inbound and 1,292 outbound). A detailed Project Conditions trip generation table is included as **Attachment F**. The trip estimates are presented by person type and housing location.

TABLE 9: CSUMB CAMPUS VEHICLE TRIP GENERATION FOR PROJECT CONDITIONS

Trip Type	Trip Type ¹	Daily	Morning Peak Hour			Evening Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips	E	40	3	3	0	2	0	2
Main Campus Internal Trips ²	D	970	495	261	234	253	120	133
Main Campus External Trips	A	23,953	1,722	1,093	629	2,089	926	1,163
Main Campus Trips with East Campus	C	1,867	434	361	73	488	152	336
Main Campus Total [A]	A+C+D+E	26,830	2,654	1,718	936	2,832	1,198	1,634
East Campus								
East Campus Trips with Main Campus	C	1,867	434	73	361	488	336	152
East Campus External Trips	B	6,432	568	95	473	406	277	129
East Campus Total [B]	B+C	8,299	1,002	168	834	894	613	281
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-40	-3	-3	-0	-2	-0	-2
Main Campus Internal Trips ²	D	-970	-495	-261	-234	-253	-120	-133
Main Campus Trips with East Campus	C	-1,867	-434	-361	-73	-488	-152	-336
East Campus Trips with Main Campus	C	-1,867	-434	-73	-361	-488	-336	-152
Trip Adjustment [C]	C+D+E	-4,744	-1,366	-698	-668	-1,231	-608	-623
External Campus Trip Total [A+B+C]³	A+B	30,385	2,290	1,188	1,102	2,495	1,203	1,292

Notes:

1. Trip type shown on Figure 1.
2. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
3. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.

Source: Fehr & Peers, 2019.

The amount of added traffic generated by the Project is estimated by subtracting the trip generation for Existing Conditions from the trip generation for Project Conditions. As shown in **Table 10**, the Project would generate 12,510 additional external daily trips, 889 additional external morning peak hour trips and 1,038 additional external evening peak hour trips.



SUMMARY

By housing a large portion of students, faculty, and staff on-campus, and consolidating parking to the periphery, CSUMB would convert many potential off-campus-based trips to on-campus generated trips, thereby reducing both the number of external campus trips to and from campus. Relatedly, by increasing the number of on-campus students, the number of CSUMB external trips made by on-campus students for purposes such as recreational activities, off-campus dining, visiting family and friends, etc. would increase in absolute terms over existing levels.

By comparing **Tables 8** and **9** we can see the net change in vehicle trips due to the Main Campus population growth, the additional on-campus student housing, and faculty and staff moving into residential units currently occupied by students and community housing partners in the East Campus housing. Thus, the net increase in trip generation between Existing Conditions and Project Conditions is the Project increment studied in the transportation analysis. As noted earlier in the document, this trip generation estimate assumes the existing Transportation Demand Management (TDM) and Parking Management measures remain in place on the CSUMB campus, and those measures continue to be as effective in reducing vehicle trip-making and encouraging the use of other modes. **Table 10** presents the net increase in external campus trips between Existing Conditions and Project Conditions.

TABLE 10: CSUMB CAMPUS VEHICLE TRIP GENERATION RESULTS

Scenario	Daily	Morning Peak Hour			Evening Peak Hours		
		Total	In	Out	Total	In	Out
Existing Conditions [A]	17,875	1,401	713	688	1,457	702	755
Project Conditions [B]	30,385	2,290	1,188	1,102	2,495	1,203	1,292
Additional External Trips [B-A]	12,510	889	475	414	1,038	501	537

Source: Fehr & Peers, 2019.

ATTACHMENTS

- Attachment A: California State University, Monterey Bay Proposed Master Plan Housing Memorandum
- Attachment B: CSUMB Person Trip Travel Survey
- Attachment C: CSUMB Person Trip Travel Survey Trip Rates and Primary Mode of Travel Results
- Attachment D: Promontory Driveway Count and Vehicle Trip Rates
- Attachment E: Trip Type Descriptions and Existing and Project Conditions Trip Generation Rates
- Attachment F: Existing and Project Conditions Vehicle Trip Generation for CSUMB by Population Type and Housing Location

Attachment A:
California State University, Monterey Bay
Proposed Master Plan Housing
Memorandum

Refer to Appendix C-1 of the CSUMB Master Plan EIR

Attachment B:
CSUMB Person Trip Travel Survey



California State University MONTEREY BAY

Fall 2017 Travel Survey

Dear Campus Community,

This short survey is intended to support campus planning efforts to improve our transportation systems. The results will also contribute data to the Comprehensive Master Plan.

Individual information collected in this survey will remain confidential. Only aggregated data will be made public.

* 1. What is your primary affiliation with CSUMB?

- Student
- Faculty
- Staff (state or corporation)
- Other (please specify)

* 2. Where do you currently reside?

- Main Campus Housing (Main Quad, North Quad or Promontory)
- East Campus Housing (Frederick's Park or Schoonover Park)
- Other (off-campus)



California State University MONTEREY BAY

Fall 2017 Travel Survey

* 3. Please enter the ZIP code where you currently live?

* 4. What is your primary mode of travel to Main Campus?

- Drive alone
- Motorcycle
- Carpool or Vanpool
- Dropped Off - by family or friends
- Dropped Off - by transportation company (taxi, Uber, Lyft, etc.)
- Bus
- Bicycle
- Walk
- Skateboard
- Other (please specify)



California State University MONTEREY BAY

Fall 2017 Travel Survey

* 5. Do you have a valid CSUMB Main Campus parking permit?

- Yes.
- No.
- No, but I do pay for daily meter rate at least once a week on average.

* 6. How many miles per gallon (mpg) does the vehicle you drive (or ride in) to Main Campus typically achieve?

- I don't know
- Less than 19 mpg
- 19-44 mpg
- Hybrid Vehicle and/or 45 mpg or higher
- All Electric Vehicle. If so, Level I, II or III?

* 7. Where do you typically park on Main Campus?

- In a lot off the Main Quad (lots 1, 12, 16, 18, 205 or 208)
- Across Divarty St., Inter-Garrison Rd., Fourth Ave. or Fifth Ave. from the Main Quad (lots 19, 23, 71, 72, 97, 98, 508)
- Near North Quad or Promontory (lots 300, 301, Promontory)
- Near Campus Police, Otter Sports Center or Athletics area (lots 80, 82, 84, 86, 90, 91, 100, 106, 107, 902, 903)
- Near World Theater, Student Services or University Center (lots 13, 28, 29, 30, 42, 45, 201, 490)
- Off campus on periphery roadways

* 8. How often do you use your vehicle to drive between Main Campus locations during the day?

- 5 to 7 days a week
- 3 to 5 days a week
- 1 to 2 days a week
- 1 to 2 days a month
- Never

* 9. How often do you use your vehicle to leave and return to Main Campus throughout the day? (Not counting your commute)

- Several times a day
- Nearly once a day
- A few days a week
- A few days a month
- Rarely
- Never



California State University MONTEREY BAY

Fall 2017 Travel Survey

* 10. During a typical week, how many days do you travel to Main Campus?

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7

* 11. What is your typical travel time to Main Campus using your primary mode from where you currently live?

- 1-10 mins
- 10-15 mins
- 15-30 mins
- 30-60 mins
- More than 60 mins

* 12. Please select what time you typically ARRIVE on Main Campus each day?

	Monday	Tuesday	Wednesday	Thursday	Friday	Satur
Date						
/						
Time						

* 13. Please select what time you typically DEPART Main Campus each day?

	Monday	Tuesday	Wednesday	Thursday	Friday	Satur
Date						
/						
Time						



California State University
MONTEREY BAY

Fall 2017 Travel Survey

* 14. Do you live within a 5 min walk of a bus stop?

- Yes
- No
- I don't know

* 15. Do you live within a 30 min walk or bike of Main Campus?

- Yes
- No
- I don't know

* 16. How often do you ride the bus to Main Campus?

- Every weekday
- A few days a week
- A few days a month
- On the rare occasion I need to
- I do not ride the bus



California State University MONTEREY BAY

Fall 2017 Travel Survey

* 17. What factors are most important to you in choosing your means of transportation to Main Campus?
(select your top 3)

- Environmental impact
- Amount of things I need to carry
- Cost
- Accessibility
- Stress reduction
- Ability to do other things while commuting
- Travel time or schedule
- Comfort and safety
- Other (please specify)

* 18. If you usually drive alone to Main Campus, what is preventing you from using a commute alternative such as carpooling, riding transit, bicycling or walking? (select your top 3)

- I don't know what other options would work for me
- Transit does not route near my home
- Transit schedules do not work for me
- Need to make stops on my commute
- Can not get home in emergency
- Difficult to find others to carpool
- Use my car on the job
- Prefer to drive my car
- Child or family care responsibilities
- Work/Class at irregular or unpredictable hours
- Inadequate bicycle or pedestrian routes/paths
- I do not have access to a bicycle
- I don't usually drive alone
- Other (please specify)



California State University MONTEREY BAY

Fall 2017 Travel Survey

* 19. If you usually drive alone to Main Campus, which commute alternative would you be willing to try out one or more days per week?

- Carpool/Vanpool
- Drop-off (by family, friend or transport company)
- Bus
- Bicycle or skateboard
- Walk
- Other (please specify)

* 20. If you usually drive alone to Main Campus, which of the following incentives and services would encourage you to use a commute alternative, such as carpool, public transit or bicycle? (select your top 3)

- ANY: A safer, cleaner and better lit route
- ANY: A Commute Club, with incentives for participating members only
- ANY: Employee rebate benefits for not driving to campus
- ANY: More information provided on each commute alternative option
- CARPOOL or LOW EMISSION VEHICLE/EV: Reduced parking permit price and/or designated parking stalls for carpool or low emission vehicle/electric vehicle
- BUS: Altered bus schedule or increased frequency
- BUS: Closer bus stop to residence/campus destination
- BIKE: Access to free or discounted bicycle (rental or bikeshare)
- BIKE: Free or discounted bicycle gear (locks and helmets)
- BIKE: More shower and/or changing room facilities on campus
- BIKE: More covered and secure bicycle parking on campus
- None, I do not wish to carpool, bus, bike or walk to campus
- Other (please specify)

* 21. Which campus transportation programs are unfamiliar to you? Select all that apply.

- MST bus service with your OtterCard
- Electric Vehicle Charging Stations
- Zipcar
- Otter Cycle Center (bike rentals, repair shop, bike bunker indoor parking and community rides)
- Bike locker rentals (Residence Hall Association)
- Emergency Ride Home program (TAMC)
- N/A

* 22. Which campus transportation programs have you used at least once? Select all that apply.

- MST bus service with your OtterCard
- Electric Vehicle Charging Stations
- Zipcar
- Otter Cycle Center (bike rentals, repair shop, bike bunker indoor parking and community rides)
- Bike locker rentals (Residence Hall Association)
- Emergency Ride Home program (TAMC)
- N/A

THANK YOU!

Your feedback is critical for the further development of campus transportation infrastructure and programs.

If you have questions regarding any of the services you read about in this survey, please visit csumb.edu/transportation

Attachment C:
**CSUMB Person Trip Travel Survey Trip Rates
and Primary Mode of Travel Results**

**TABLE C-1: CSUMB PERSON TRAVEL SURVEY – INBOUND DIRECTION FOR PERSON TRIP
OBSERVATIONS FOR MAIN CAMPUS**

Trip Pair	Student				Faculty and Staff				Total [A+B] D+E +C+A
	Main Campus	East Campus	Off- Campus	Sub- total [A] D+E +C+A	Main Campus	East Campus	Off- Campus	Sub- total [B] C+A	
	D+E	C	A		N/A	C	A		
Response Rate Summary									
Survey Responses	711	332	1,122	2,165	N/A	115	136	251	2,416
Current Population	2,600	1,380	2,654	6,634	N/A	463	561	1,024	7,658
Response Rate	27%	24%	42%	33%	N/A	25%	24%	25%	32%
Observations by Time-of-Day									
12:00 am – 5:59 am	29	2	2	33	0	0	0	0	33
6:00 am – 6:59 am	7	7	13	27	0	7	5	12	39
7:00 am – 7:59 am	54	48	157	259	0	40	46	86	345
8:00 am – 8:59 am	81	41	116	238	0	42	46	88	326
9:00 am – 9:59 am	73	74	167	314	0	9	12	21	335
10:00 am – 11:59 am	82	45	122	249	0	5	7	12	261
12:00 pm – 2:59 pm	74	32	111	217	0	1	1	2	219
3:00 pm – 5:59 pm	20	28	99	147	0	1	1	2	149
6:00 pm – 11:59 pm	12	6	31	49	0	1	0	1	50
Observation Summary by Time Period									
Daily Observations	432	283	818	1,533	0	106	118	224	1,757
AM Peak Hour ¹	68	45	137	250	0	41	46	87	337
PM Peak Hour ²	9	13	45	67	0	0	0	0	67
Person Trip Rates by Time Period									
Daily Observations	0.61	0.85	0.73	0.71	NA	0.92	0.87	0.89	0.73
AM Peak Hour	0.09	0.13	0.12	0.12	NA	0.36	0.34	0.35	0.14
PM Peak Hour	0.01	0.04	0.04	0.03	NA	0.00	0.00	0.00	0.03

Notes:

1. AM Peak Hour observations are an average of responses for 7:00 – 7:59 am and 8:00 – 8:59 am.
2. PM Peak Hour observations are factored using a peak period to peak hour factor from the evening outbound observations. Since the survey only has hourly data for the peak direction (outbound), we used the peak hour (5:00 – 6:00 pm) trip value (273) divided by the peak period (3:00 – 6:00 pm) trip value (612) which results in a peak period to peak hour factor of $273/612 = 0.45$. See Table C-2 for values.

Source: Fehr & Peers, 2019.

TABLE C-2: CSUMB PERSON TRAVEL SURVEY – OUTBOUND DIRECTION FOR PERSON TRIP OBSERVATIONS FOR MAIN CAMPUS

Trip Pair	Student				Faculty and Staff				Total [A+B] D+E +C+A
	Main Campus	East Campus	Off-Campus	Sub-total [A]	Main Campus	East Campus	Off-Campus	Sub-total [B]	
	D+E	C	A	D+E +C+A	N/A	C	A	C+A	
Response Rate Summary									
Survey Responses	711	332	1,122	2,165	N/A	115	136	251	2,416
Current Population	2,600	1,380	2,654	6,634	N/A	463	561	1,024	7,658
Response Rate	27%	24%	42%	33%	N/A	25%	24%	25%	32%
Observations by Time-of-Day									
12:00pm - 2:59 pm	71	39	158	268	0	4	1	5	273
3:00 pm - 3:59 pm	28	27	67	122	0	3	3	6	128
4:00 pm - 4:59 pm	37	40	92	169	0	15	27	42	211
5:00 pm - 5:59 pm	44	28	78	150	0	61	62	123	273
6:00 pm - 6:59 pm	51	38	101	190	0	11	15	26	216
7:00 pm - 7:59 pm	41	20	72	133	0	6	3	9	142
8:00 pm - 11:59 pm	97	71	185	353	0	4	6	10	363
12:00 am - 5:59 am	9	4	9	22	0	0	0	0	22
6:00 am - 9:59 am	13	5	15	33	0	0	0	0	33
10:00 am - 11:59 am	19	11	36	66	0	0	1	1	67
Observation Summary by Time Period									
Daily Observations	410	283	813	1,506	0	104	118	222	1,728
AM Peak Hour ¹	4	2	5	11	0	0	0	0	11
PM Peak Hour ²	69	46	129	244	0	5	5	10	254
Person Trip Rates by Time Period									
Daily Observations	0.58	0.85	0.72	0.70	NA	0.90	0.87	0.88	0.72
AM Peak Hour	0.01	0.00	0.00	0.01	NA	0.00	0.00	0.00	0.00
PM Peak Hour	0.07	0.10	0.08	0.08	NA	0.31	0.28	0.30	0.10

Notes:

1. AM Peak Hour represents 7:00 am – 7:59 am. AM Peak Hour observations are factored using a peak period to peak hour factor from the morning observations. Since the survey only has hourly data for the peak direction (inbound), we used the peak hour (7:00 – 7:59 am) trip value (345) divided by the peak period (6:00 – 10:00 am) trip value (1,045) which results in a peak period to peak hour factor of 345/1,045 = 0.33. See Table C-1 for values.
2. PM Peak Hour observations are an average of responses for 5:00 – 5:59 pm and 6:00 – 6:59 pm.

Source: Fehr & Peers, 2019.

TABLE C-3: CSUMB PERSON TRAVEL SURVEY – INBOUND DIRECTION FOR VEHICLE TRIP OBSERVATIONS FOR MAIN CAMPUS

Trip Pair	Student				Faculty and Staff			Sub-total [B]	Total [A+B]
	Main Campus	East Campus	Off-Campus	Sub-total [A]	Main Campus	East Campus	Off-Campus		
	D+E	C	A	D+E+C+A	N/A	C	A	C+A	D+E+C+A
Response Rate Summary									
Survey Responses	711	332	1,122	2,165	N/A	115	136	251	2,416
Current Population	2,600	1,380	2,654	6,634	N/A	463	561	1,024	7,658
Response Rate	27%	24%	42%	33%	N/A	25%	24%	25%	32%
Observations by Time-of-Day									
12:00 am – 5:59 am	5	1	2	8	0	0	0	0	8
6:00 am – 6:59 am	2	5	11	18	0	7	5	12	30
7:00 am – 7:59 am	8	32	139	179	0	38	40	78	257
8:00 am – 8:59 am	13	25	99	137	0	34	43	77	214
9:00 am – 9:59 am	13	41	146	200	0	8	12	20	220
10:00 am – 11:59 am	10	24	104	138	0	5	7	12	150
12:00 pm – 2:59 pm	11	19	95	125	0	1	1	2	127
3:00 pm – 5:59 pm	3	17	92	112	0	1	1	2	114
6:00 pm – 11:59 pm	3	5	28	36	0	1	0	1	37
Observation Summary by Time Period									
Daily Observations	68	169	716	953	0	95	109	204	1,157
AM Peak Hour ¹	13	33	123	169	0	21	28	49	219
PM Peak Hour ²	1	8	42	51	0	0	0	0	51
Vehicle Trip Rates by Time Period									
Daily Observations	0.10	0.51	0.64	0.44	NA	0.83	0.80	0.81	0.48
AM Peak Hour	0.01	0.09	0.11	0.07	NA	0.31	0.31	0.31	0.10
PM Peak Hour	0.00	0.02	0.04	0.02	NA	0.00	0.00	0.00	0.02

Notes:

1. AM Peak Hour observations are an average of responses for 7:00 – 7:59 am and 8:00 am – 8:59 am.
2. PM Peak Hour observations are factored using a peak period to peak hour factor from the evening outbound observations. Since the survey only has hourly data for the peak direction (outbound), we used the peak hour (5:00 – 6:00 pm) trip value (194) divided by the peak period (3:00 – 6:00 pm) trip value (424) which results in a peak period to peak hour factor of $194/424 = 0.46$. See Table C-4 for values.

Source: Fehr & Peers, 2019.

**TABLE C-4: CSUMB PERSON TRAVEL SURVEY – OUTBOUND DIRECTION FOR VEHICLE TRIP
OBSERVATIONS FOR MAIN CAMPUS**

Trip Pair					Faculty and Staff			Sub-total [B] C+A	Total [A+B] D+E +C+A
	Main Campus	East Campus	Off-Campus	Sub-total [A] D+E +C+A	Main Campus	East Campus	Off-Campus		
	D+E	C	A		N/A	C	A		
Response Rate Summary									
Survey Responses	711	332	1,122	2,165	N/A	115	136	251	2,416
Current Population	2,600	1,380	2,654	6,634	N/A	463	561	1,024	7,658
Response Rate	27%	24%	42%	33%	N/A	25%	24%	25%	32%
Observations by Time-of-Day									
12:00pm - 2:59 pm	10	26	148	184	0	2	2	4	188
3:00 pm - 3:59 pm	6	16	60	82	0	2	3	5	87
4:00 pm - 4:59 pm	7	24	77	108	0	12	23	35	143
5:00 pm - 5:59 pm	6	16	65	87	0	55	52	107	194
6:00 pm - 6:59 pm	7	22	87	116	0	12	19	31	147
7:00 pm - 7:59 pm	9	14	68	91	0	6	4	10	101
8:00 pm - 11:59 pm	13	36	157	206	0	2	5	7	213
12:00 am - 5:59 am	3	6	17	26	0	0	0	0	26
6:00 am - 9:59 am	1	3	15	19	0	0	0	0	19
10:00 am - 11:59 am	4	10	32	46	0	0	1	1	47
Observation Summary by Time Period									
Daily Observations	66	173	726	965	0	91	109	200	1,165
AM Peak Hour ¹	0	1	5	6	0	0	0	0	6
PM Peak Hour ²	7	19	76	102	0	34	36	70	172
Vehicle Trip Rates by Time Period									
Daily Observations	0.09	0.52	0.65	0.45	NA	0.79	0.80	0.80	0.48
AM Peak Hour	0.00	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00
PM Peak Hour	0.01	0.06	0.07	0.05	NA	0.29	0.26	0.27	0.07

Notes:

1. AM Peak Hour represents 7:00 am – 7:59 am. AM Peak Hour observations are factored using a peak period to peak hour factor from the morning observations. Since the survey only has hourly data for the peak direction (inbound), we used the peak hour (7:00 – 7:59 am) trip value (257) divided by the peak period (6:00 – 10:00 am) trip value (721) which results in a peak period to peak hour factor of 257/721 = 0.36. See Table C-3 for values.
2. PM Peak Hour observations are an average of responses for 5:00 – 5:59 pm and 6:00 – 6:59 pm.

Source: Fehr & Peers, 2019.

TABLE C-5: CSUMB PERSON TRAVEL SURVEY - PERSON TRIP GENERATION RATES TO/FROM MAIN CAMPUS¹

Housing Location	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Students								
Main Campus ³	D+E	1.19	0.10	0.09	0.01	0.08	0.01	0.07
East Campus	C	1.70	0.13	0.13	0.00	0.14	0.04	0.10
Off-Campus	A	1.45	0.12	0.12	0.00	0.12	0.04	0.08
Faculty and Staff								
Main Campus				N/A ⁴				
East Campus	C	1.82	0.36	0.36	0.00	0.31	0.00	0.31
Off-Campus	A	1.74	0.34	0.34	0.00	0.28	0.00	0.28

Notes:

1. For presentation purposes, person trip generation rates are rounded up to the nearest hundredth.
2. Trip pairs shown on Figure 1.
3. Main campus student trips are internal to the Main Campus Cordon.
4. Faculty and staff are not housed on the Main Campus.

Source: Fehr & Peers, 2019.

TABLE C-6: CSUMB PERSON TRAVEL SURVEY - VEHICLE TRIP GENERATION RATES TO/FROM MAIN CAMPUS¹

Housing Location	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Students								
Main Campus ³	D+E	0.19	0.02	0.02	0.00	0.01	0.00	0.01
East Campus	C	1.03	0.09	0.09	0.00	0.08	0.02	0.06
Off-Campus	A	1.29	0.11	0.11	0.00	0.11	0.04	0.07
Faculty and Staff								
Main Campus				N/A ⁴				
East Campus	C	1.62	0.31	0.31	0.00	0.29	0.00	0.29
Off-Campus	A	1.60	0.31	0.31	0.00	0.26	0.00	0.26

Notes:

1. For presentation purposes the vehicle trip rates are rounded to the nearest hundredth.
2. Trip pairs shown on Figure 1.
3. Main campus student trips are internal to the Main Campus Cordon.
4. Faculty and staff are not housed on the Main Campus.

Source: Fehr & Peers, 2019.

TABLE C-7: CSUMB PERSON TRAVEL SURVEY - PRIMARY MODE OF TRAVEL TO MAIN CAMPUS OBSERVATIONS

Housing Location	Main Campus	Student		Faculty and Staff		
		East Campus	Off-Campus	Main Campus	East Campus	Off-Campus
Survey Responses	711	332	1,122	N/A	115	136
Current Population	2,600	1,380	2,654	N/A	463	561
Drive Alone	12.5%	52.5%	82.9%	N/A	85.3%	85.3%
Shared Ride	6.0%	10.8%	10.6%	N/A	4.3%	10.3%
Transit	4.6%	32.8%	4.8%	N/A	4.3%	2.9%
Walk	70.3%	0.9%	0.4%	N/A	0.0%	0.0%
Bicycle	5.1%	3.0%	1.1%	N/A	6.1%	1.5%
Other	1.5%	0.0%	0.2%	N/A	0.0%	0.0%

Source: Fehr & Peers, 2019.

TABLE C-8: PRIMARY MODE OF TRAVEL COMPARISON

Mode	CSUMB 2017 Existing Mode Share ³	2011-2015 American Community Survey (ACS) ⁴		2012 California Household Travel Survey (CHTS) ⁴	
		Monterey County	Santa Cruz County	Monterey County	Santa Cruz County
Drive Alone ¹	53.8%	70.7%	70.5%	77.4%	75.2%
Shared Ride ²	8.7%	11.9%	9.4%	16.0%	13.5%
Transit	9.6%	2.1%	2.9%	2.2%	2.2%
Walk	24.2%	3.1%	3.9%	1.2%	5.0%
Bicycle	3.1%	0.8%	3.8%	3.2%	4.1%
Other	0.6%	11.4%	9.5%	0.0%	0.0%

Notes:

1. Drive alone includes motorcycles
2. Shared ride includes carpooling, vanpooling, drop-off, Transportation Network Companies like Uber and Lyft, and taxis.
3. Weighted average morning inbound person mode share of CSUMB students, faculty, and staff. Mode share includes Main Campus, East Campus and Off-Campus residents from the *CSUMB Person Trip Travel Survey* data.
4. Home-based work trips only.

Source: Fehr & Peers, 2019.

TABLE C-9: PRIMARY MODE OF TRAVEL TO MAIN CAMPUS FOR CSUMB POPULATION

Housing Location	Student			Faculty and Staff			Main Campus Mode Split	Main Campus Mode Split without Main Campus Residents
	Main Campus	East Campus	Off-Campus	Main Campus	East Campus	Off-Campus		
Campus Population	2,600	1,380	2,654	N/A	463	561	7,658 (100%)	5,058 (100%)
Drive Alone	322	725	2,200	N/A	395	479	4,121 (53.8%)	3,798 (75.1%)
Shared Ride	156	149	281	N/A	20	58	664 (8.7%)	508 (10.0%)
Transit	120	453	127	N/A	20	16	736 (9.6%)	616 (12.2%)
Walk	1,830	12	11	N/A	0	0	1,853 (24.2%)	23 (0.5%)
Bicycle	133	41	29	N/A	28	8	240 (3.1%)	107 (2.1%)
Other	39	0	5	N/A	0	0	44 (0.5%)	6 (0.1%)

Note:

1. Person trips by mode by campus population is calculated by multiplying the mode split shown in Table C-7 by the campus population. The person trips are rounded to the nearest whole number.
2. Main Campus Mode Split is the sum of all student and faculty/staff columns divided by the main campus population.

Source: Fehr & Peers, 2019.

Attachment D:
**Promontory Driveway Counts and Vehicle
Trip Rates**

TABLE D-1: PROMONTORY DRIVEWAY COUNT AND VEHICLE TRIP RATES

Location (Population Type)	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Vehicle Trips								
Driveway Count ²	A + E	1,714	56	17	39	113	53	60
Promontory Housing Internal Trips (Students) ³	E	142	12	11	1	8	1	7
Promontory Housing Trips (Students) ⁴	A	1,571	24	10	14	54	26	29
Vehicle Trip Rates⁵								
Driveway Count	A + E	2.2672	0.0741	0.0225	0.0516	0.01494	0.0701	0.0793
Promontory Housing Internal Trips (Students)	E	0.1885	0.0153	0.0148	0.0005	0.0110	0.0019	0.0091
Promontory Housing Trips (Students)	A	2.0787	0.0588	0.0077	0.0511	0.1384	0.0682	0.0702

Notes:

1. Trip pairs shown on Figure 1.
2. Promontory housing driveway count from the annual *CSUMB 2016-2017 Traffic Generation* report.
3. Promontory housing internal trips estimated using the vehicle trip rates summarized in Attachment C (of this memo) Table C-6 titled CSUMB Person Travel Survey – Vehicle Trip Generation Rates to/from Main Campus. Rates from Main Campus line under the Students subheading.
4. Promontory Housing Trips are the remaining vehicle trips when the Promontory Housing Internal Trips (Students) are subtracted from the driveway count.
5. For presentation purposes, person trip generation rates are rounded up to the nearest hundred thousandth. Rates derived by dividing the vehicle counts by 756 Full-Time Equivalent Students (FTES).

Source: Fehr & Peers, 2019.

Attachment E:

Trip Type Descriptions and Existing and Project Conditions Trip Generation Rates

ATTACHMENT E-1: CSUMB TRIP TYPE INFORMATION

Row Number	Population Type	Housing Location or Origin	Existing Population	Project Population	Trip Type	Description
Main Campus Internal Trips						
1	Promontory Housing Students	Promontory Housing	756	756	E	These are trips made by students living in The Promontory Housing, driving to Main Campus. These trips may include Promontory housed students driving to class, the gym, or other on-campus uses.
2	Main Campus Students and Campus Supporting Trips	Main Campus (non-Promontory)	7,658	14,476	D	These are trips made by students living on Main Campus, driving to another part of Main Campus (non-Promontory Housing). These trips may include students driving to class, the gym, or other on-campus uses. Plus, trips made by campus support staff including campus security, maintenance, shuttle buses, etc. These trips circulate within the Main Campus.
Main Campus External Trips						
4	Promontory Housing Students	Promontory Housing	756	756	A	These trips are made by students living in Promontory Housing but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
5	East Campus Students	East Campus	1,380	0	C	These trips are made by students living on East Campus but traveling to/from but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
6	East Campus Faculty/Staff	East Campus	463	1,154	C	These trips are made by faculty/staff living on East Campus but traveling to/from but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
7	Off-Campus Students	Off-Campus	2,654	5,080	A	These trips are made by students coming from their off-campus residences to Main Campus for class and other campus related activities.
8	Off-Campus Faculty/Staff	Off-Campus	463	1,154	A	These trips are made by students coming from their off-campus residences to Main Campus for class and other campus related activities.
9	Main Campus Students, Campus Supporting Trips and Visitors	Off-Campus	7,658	14,476	A	These trips are made by students living on Main Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc. Plus campus supporting trips coming from off-campus, and visitors.
East Campus Internal Trips						
15	East Campus Students	East Campus	1,380	0	C	These trips are made by students living on East Campus but traveling to/from Main Campus. These trips may include students driving to class, the gym, or other on-campus uses.
16	East Campus Faculty/Staff	East Campus	463	1,154	C	These trips are made by faculty/staff living on East Campus but traveling to/from Main Campus. These trips may include students driving to class, the gym, or other on-campus uses.
East Campus External Trips						
18	East Campus Students	East Campus	1,380	0	B	These trips are made by students living on East Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
19	East Campus Faculty/Staff	East Campus	463	1,154	B	These trips are made by faculty/staff living on East Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
20	East Campus Community Housing Partners	East Campus	280	66	B	These trips are made by community partners living on East Campus but traveling to off-campus for purposes such as work, personnel events, visiting friends and family, etc.

Source: Fehr & Peers, 2018.

TABLE E-2: EXISTING CONDITIONS VEHICLE TRIP RATES

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	0.188	0.016	0.015	0.001	0.010	0.001	0.009
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	0.087	0.035	0.019	0.016	0.018	0.008	0.010
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>7,658</i>	<i>D + E</i>	<i>0.106</i>	<i>0.037</i>	<i>0.021</i>	<i>0.016</i>	<i>0.019</i>	<i>0.008</i>	<i>0.011</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	2.079	0.058	0.008	0.050	0.139	0.069	0.070
5	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.086	0.018	0.080	0.023	0.057
6	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.313	0.063	0.424	0.132	0.292
7	Students	Off-Campus Housing	FTE	2,654	A	1.285	0.111	0.106	0.005	0.106	0.038	0.068
8	Faculty/Staff	Off-Campus Housing	FTE	561	A	1.602	0.419	0.305	0.114	0.442	0.182	0.260
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	7,658	A	0.542	0.045	0.023	0.022	0.048	0.023	0.025
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>7,658</i>	<i>A + C</i>	<i>1.593</i>	<i>0.161</i>	<i>0.117</i>	<i>0.044</i>	<i>0.172</i>	<i>0.069</i>	<i>0.103</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	7,658	A+C+D+E	1.699	0.199	0.138	0.061	0.191	0.077	0.114
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.018	0.086	0.080	0.057	0.023
16	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.063	0.313	0.423	0.292	0.132
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>1.178</i>	<i>0.172</i>	<i>0.029</i>	<i>0.143</i>	<i>0.167</i>	<i>0.116</i>	<i>0.051</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	1,380	B	2.846	0.100	0.017	0.083	0.148	0.073	0.075
19	Faculty/Staff	East Campus Housing	FTE	463	B	5.274	0.465	0.078	0.387	0.335	0.229	0.106
20	Community Housing Partners	East Campus Housing	FTE	280	B	5.275	0.464	0.075	0.389	0.336	0.232	0.104
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>2,123</i>	<i>B</i>	<i>3.696</i>	<i>0.227</i>	<i>0.038</i>	<i>0.189</i>	<i>0.213</i>	<i>0.127</i>	<i>0.086</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	East Campus Housing TDM Reduction [G]		FTE	1843	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,843	B+C	4.718	0.376	0.063	0.313	0.358	0.228	0.130
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	2,654	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	561	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	Off-Campus Housing TDM Reduction [I]		FTE	3,215	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	0.188	0.016	0.015	0.001	0.010	0.001	0.009
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	0.087	0.035	0.019	0.016	0.018	0.008	0.010
31	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.086	0.018	0.080	0.023	0.057
32	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.313	0.063	0.424	0.132	0.292
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>7,658</i>	<i>C + D + E</i>	<i>0.389</i>	<i>0.078</i>	<i>0.055</i>	<i>0.023</i>	<i>0.060</i>	<i>0.021</i>	<i>0.039</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.018	0.086	0.080	0.057	0.023
35	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.063	0.313	0.424	0.292	0.132
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>1.178</i>	<i>0.172</i>	<i>0.029</i>	<i>0.143</i>	<i>0.166</i>	<i>0.116</i>	<i>0.050</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	1,843	C	2.796	0.498	0.258	0.240	0.413	0.201	0.212
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	7,938	A+B	2.252	0.177	0.090	0.087	0.183	0.088	0.095

Notes:

FTE = Full time equivalent.

1. Vehicle trip generation rates represent vehicles per FTE. For presentation purposes, these rates are rounded to the nearest thousandth.

2. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

TABLE E-3: PROJECT CONDITIONS VEHICLE TRIP GENERATION RATES

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	0.053	0.004	0.004	0.000	0.003	0.000	0.003
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	0.067	0.034	0.018	0.016	0.017	0.008	0.009
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>14,476</i>	<i>D + E</i>	0.070	0.034	0.018	0.016	0.018	0.009	0.009
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	2.079	0.058	0.008	0.050	0.139	0.069	0.070
5	Students	East Campus Housing	FTE	0	C							
6	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.313	0.063	0.423	0.132	0.291
7	Students	Off-Campus Housing	FTE	5,080	A	1.285	0.111	0.106	0.005	0.106	0.038	0.068
8	Faculty/Staff	Off-Campus Housing	FTE	622	A	1.601	0.420	0.305	0.115	0.442	0.182	0.260
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	14,476	A	1.026	0.059	0.025	0.034	0.081	0.039	0.042
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>14,476</i>	<i>A + C</i>	1.784	0.149	0.100	0.049	0.178	0.074	0.104
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	0	C							
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	Main Campus Trip Generation [A + B - C = D]		FTE	14,476	A+C+D+E	1.853	0.183	0.119	0.064	0.196	0.083	0.113
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	0	C							
16	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.063	0.313	0.423	0.291	0.132
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	1.618	0.376	0.063	0.313	0.423	0.291	0.132
East Campus External Trips												
18	Students	East Campus Housing	FTE	0	B							
19	Faculty/Staff	East Campus Housing	FTE	1,154	B	5.272	0.465	0.078	0.387	0.333	0.227	0.106
20	Community Housing Partners	East Campus Housing	FTE	66	B	5.273	0.470	0.076	0.394	0.333	0.227	0.106
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>1,220</i>	<i>B</i>	5.274	0.466	0.078	0.388	0.334	0.228	0.106
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	0	C							
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	0	0	0	0	0	0	0
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,154	B+C	6.802	0.821	0.138	0.683	0.733	0.503	0.230
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	5,080	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	622	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	Off-Campus Housing TDM Reduction [I]		FTE	5,702	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	0.053	0.004	0.004	0.000	0.003	0.000	0.003
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	0.067	0.034	0.018	0.016	0.017	0.008	0.009
31	Students	East Campus Housing	FTE	0	C							
32	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.313	0.063	0.423	0.132	0.291
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>14,476</i>	<i>C + D + E</i>	0.199	0.064	0.043	0.021	0.051	0.018	0.033
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	0	C							
35	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.063	0.313	0.423	0.291	0.132
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	1.618	0.376	0.063	0.313	0.423	0.291	0.132
37	Internal Trip Adjustment Total [J + F = L]		FTE	15,630	C	0.304	0.087	0.045	0.042	0.079	0.039	0.040
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	14,542	A+B	2.089	0.157	0.082	0.075	0.172	0.083	0.089

Notes:

FTE = Full time equivalent.

1. Vehicle trip generation rates represent vehicles per FTE. For presentation purposes, these rates are rounded to the nearest thousandth.

2. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

Attachment F:
**Existing and Project Conditions Vehicle Trip
Generation for CSUMB by Population Type
and Housing Location**

ATTACHMENT F-1: EXISTING CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB BY POPULATION TYPE AND HOUSING LOCATION

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	142	12	11	1	8	1	7
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	669	272	148	124	140	63	77
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>7,658</i>	<i>D + E</i>	<i>811</i>	<i>284</i>	<i>159</i>	<i>125</i>	<i>148</i>	<i>64</i>	<i>84</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	1,572	44	6	38	105	52	53
5	Students	East Campus Housing	FTE	1,380	C	1,422	143	118	25	111	32	79
6	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	145	29	196	61	135
7	Students	Off-Campus Housing	FTE	2,654	A	3,411	294	281	13	280	100	180
8	Faculty/Staff	Off-Campus Housing	FTE	561	A	899	235	171	64	248	102	146
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitor Trips	FTE	7,658	A	4,147	346	175	171	372	178	194
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>7,658</i>	<i>A + C</i>	<i>12,200</i>	<i>1,236</i>	<i>896</i>	<i>340</i>	<i>1,312</i>	<i>525</i>	<i>787</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0	0	0	0	0	0	0
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0	0	0	0	0	0	0
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	7,658	A+C+D+E	13,011	1,520	1,055	465	1,460	589	871
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	1,380	C	1,422	143	25	118	111	79	32
16	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	29	145	196	135	61
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>2,171</i>	<i>317</i>	<i>54</i>	<i>263</i>	<i>307</i>	<i>214</i>	<i>93</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	1,380	B	3,928	137	23	114	204	100	104
19	Faculty/Staff	East Campus Housing	FTE	463	B	2,441	215	36	179	154	105	49
20	Community Housing Partners	East Campus Housing	FTE	280	B	1,477	130	21	109	94	65	29
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>2,123</i>	<i>B</i>	<i>7,846</i>	<i>482</i>	<i>80</i>	<i>402</i>	<i>452</i>	<i>270</i>	<i>182</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0	0	0	0	0	0	0
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
25	East Campus Cordon Trips [F + E - G = H]		FTE	2,123	B+C	10,017	799	134	665	759	484	275
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	2,654	A	0	0	0	0	0	0	0
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	561	A	0	0	0	0	0	0	0
28	Off-Campus Housing TDM Reduction [I]		FTE	3,215	A	0	0	0	0	0	0	0
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	142	12	11	1	8	1	7
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	669	272	148	124	140	63	77
31	Students	East Campus Housing	FTE	1,380	C	1,422	143	118	25	111	32	79
32	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	145	29	196	61	135
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>7,658</i>	<i>C + D + E</i>	<i>2,982</i>	<i>601</i>	<i>422</i>	<i>179</i>	<i>455</i>	<i>157</i>	<i>298</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	1,380	C	1,422	143	25	118	111	79	32
35	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	29	145	196	135	61
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>2,171</i>	<i>317</i>	<i>54</i>	<i>263</i>	<i>307</i>	<i>214</i>	<i>93</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	1,843	C	5,153	918	476	442	762	371	391
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	7,938	A+B	17,875	1,401	713	688	1,457	702	755

Notes:

FTE = Full time equivalent.

1. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

ATTACHMENT F-2: PROJECT CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB BY POPULATION TYPE AND HOUSING LOCATION

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	40	3	3	0	2	0	2
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	970	495	261	234	253	120	133
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>14,476</i>	<i>D + E</i>	<i>1,010</i>	<i>498</i>	<i>264</i>	<i>234</i>	<i>255</i>	<i>120</i>	<i>135</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	1,572	44	6	38	105	52	53
5	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
6	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	361	73	488	152	336
7	Students	Off-Campus Housing	FTE	5,080	A	6,528	563	538	25	538	193	345
8	Faculty/Staff	Off-Campus Housing	FTE	622	A	996	261	190	71	275	113	162
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	14,476	A	14,857	854	359	495	1,171	568	603
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>14,476</i>	<i>A + C</i>	<i>25,820</i>	<i>2,156</i>	<i>1,454</i>	<i>702</i>	<i>2,577</i>	<i>1,078</i>	<i>1,499</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	0	C	0	0	0	0	0	0	0
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	14,476	A+C+D+E	26,830	2,654	1,718	936	2,832	1,198	1,634
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
16	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	73	361	488	336	152
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>1,867</i>	<i>434</i>	<i>73</i>	<i>361</i>	<i>488</i>	<i>336</i>	<i>152</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	0	B	0	0	0	0	0	0	0
19	Faculty/Staff	East Campus Housing	FTE	1,154	B	6,084	537	90	447	384	262	122
20	Community Housing Partners	East Campus Housing	FTE	66	B	348	31	5	26	22	15	7
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>1,220</i>	<i>B</i>	<i>6,432</i>	<i>568</i>	<i>95</i>	<i>473</i>	<i>406</i>	<i>277</i>	<i>129</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	0	C	0	0	0	0	0	0	0
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,220	B+C	8,299	1,002	168	834	894	613	281
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	5,080	A	0	0	0	0	0	0	0
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	622	A	0	0	0	0	0	0	0
28	Off-Campus Housing TDM Reduction [I]		FTE	5,702	A	0	0	0	0	0	0	0
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	40	3	3	0	2	0	2
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	970	495	261	234	253	120	133
31	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
32	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	361	73	488	152	336
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>14,476</i>	<i>C + D + E</i>	<i>2,877</i>	<i>932</i>	<i>625</i>	<i>307</i>	<i>743</i>	<i>272</i>	<i>471</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
35	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	73	361	488	336	152
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>1,867</i>	<i>434</i>	<i>73</i>	<i>361</i>	<i>488</i>	<i>336</i>	<i>152</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	15,630	C	4,744	1,366	698	668	1231	608	623
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	14,542	A+B	30,385	2,290	1,188	1,102	2,495	1,203	1,292

Notes:

FTE = Full time equivalent.

1. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

**TABLE C-4: CSUMB PERSON TRAVEL SURVEY – OUTBOUND DIRECTION FOR VEHICLE TRIP
OBSERVATIONS FOR MAIN CAMPUS**

Trip Pair					Faculty and Staff			Sub-total [B] C+A	Total [A+B] D+E +C+A
	Main Campus	East Campus	Off-Campus	Sub-total [A] D+E +C+A	Main Campus	East Campus	Off-Campus		
	D+E	C	A		N/A	C	A		
Response Rate Summary									
Survey Responses	711	332	1,122	2,165	N/A	115	136	251	2,416
Current Population	2,600	1,380	2,654	6,634	N/A	463	561	1,024	7,658
Response Rate	27%	24%	42%	33%	N/A	25%	24%	25%	32%
Observations by Time-of-Day									
12:00pm - 2:59 pm	10	26	148	184	0	2	2	4	188
3:00 pm - 3:59 pm	6	16	60	82	0	2	3	5	87
4:00 pm - 4:59 pm	7	24	77	108	0	12	23	35	143
5:00 pm - 5:59 pm	6	16	65	87	0	55	52	107	194
6:00 pm - 6:59 pm	7	22	87	116	0	12	19	31	147
7:00 pm - 7:59 pm	9	14	68	91	0	6	4	10	101
8:00 pm - 11:59 pm	13	36	157	206	0	2	5	7	213
12:00 am - 5:59 am	3	6	17	26	0	0	0	0	26
6:00 am - 9:59 am	1	3	15	19	0	0	0	0	19
10:00 am - 11:59 am	4	10	32	46	0	0	1	1	47
Observation Summary by Time Period									
Daily Observations	66	173	726	965	0	91	109	200	1,165
AM Peak Hour ¹	0	1	5	6	0	0	0	0	6
PM Peak Hour ²	7	19	76	102	0	34	36	70	172
Vehicle Trip Rates by Time Period									
Daily Observations	0.09	0.52	0.65	0.45	NA	0.79	0.80	0.80	0.48
AM Peak Hour	0.00	0.00	0.00	0.00	NA	0.00	0.00	0.00	0.00
PM Peak Hour	0.01	0.06	0.07	0.05	NA	0.29	0.26	0.27	0.07

Notes:

1. AM Peak Hour represents 7:00 am – 7:59 am. AM Peak Hour observations are factored using a peak period to peak hour factor from the morning observations. Since the survey only has hourly data for the peak direction (inbound), we used the peak hour (7:00 – 7:59 am) trip value (257) divided by the peak period (6:00 – 10:00 am) trip value (721) which results in a peak period to peak hour factor of 257/721 = 0.36. See Table C-3 for values.

2. PM Peak Hour observations are an average of responses for 5:00 – 5:59 pm and 6:00 – 6:59 pm.

Source: Fehr & Peers, 2019.

TABLE C-5: CSUMB PERSON TRAVEL SURVEY - PERSON TRIP GENERATION RATES TO/FROM MAIN CAMPUS¹

Housing Location	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Students								
Main Campus ³	D+E	1.19	0.10	0.09	0.01	0.08	0.01	0.07
East Campus	C	1.70	0.13	0.13	0.00	0.14	0.04	0.10
Off-Campus	A	1.45	0.12	0.12	0.00	0.12	0.04	0.08
Faculty and Staff								
Main Campus				N/A ⁴				
East Campus	C	1.82	0.36	0.36	0.00	0.31	0.00	0.31
Off-Campus	A	1.74	0.34	0.34	0.00	0.28	0.00	0.28

Notes:

1. For presentation purposes, person trip generation rates are rounded up to the nearest hundredth.
2. Trip pairs shown on Figure 1.
3. Main campus student trips are internal to the Main Campus Cordon.
4. Faculty and staff are not housed on the Main Campus.

Source: Fehr & Peers, 2019.

TABLE C-6: CSUMB PERSON TRAVEL SURVEY - VEHICLE TRIP GENERATION RATES TO/FROM MAIN CAMPUS¹

Housing Location	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Students								
Main Campus ³	D+E	0.19	0.02	0.02	0.00	0.01	0.00	0.01
East Campus	C	1.03	0.09	0.09	0.00	0.08	0.02	0.06
Off-Campus	A	1.29	0.11	0.11	0.00	0.11	0.04	0.07
Faculty and Staff								
Main Campus				N/A ⁴				
East Campus	C	1.62	0.31	0.31	0.00	0.29	0.00	0.29
Off-Campus	A	1.60	0.31	0.31	0.00	0.26	0.00	0.26

Notes:

1. For presentation purposes the vehicle trip rates are rounded to the nearest hundredth.
2. Trip pairs shown on Figure 1.
3. Main campus student trips are internal to the Main Campus Cordon.
4. Faculty and staff are not housed on the Main Campus.

Source: Fehr & Peers, 2019.

TABLE C-7: CSUMB PERSON TRAVEL SURVEY - PRIMARY MODE OF TRAVEL TO MAIN CAMPUS OBSERVATIONS

Housing Location	Main Campus	Student		Main Campus	Faculty and Staff	
		East Campus	Off-Campus		East Campus	Off-Campus
<i>Survey Responses</i>	711	332	1,122	N/A	115	136
<i>Current Population</i>	2,600	1,380	2,654	N/A	463	561
Drive Alone	12.5%	52.5%	82.9%	N/A	85.3%	85.3%
Shared Ride	6.0%	10.8%	10.6%	N/A	4.3%	10.3%
Transit	4.6%	32.8%	4.8%	N/A	4.3%	2.9%
Walk	70.3%	0.9%	0.4%	N/A	0.0%	0.0%
Bicycle	5.1%	3.0%	1.1%	N/A	6.1%	1.5%
Other	1.5%	0.0%	0.2%	N/A	0.0%	0.0%

Source: Fehr & Peers, 2019.

TABLE C-8: PRIMARY MODE OF TRAVEL COMPARISON

Mode	CSUMB 2017 Existing Mode Share ³	2011-2015 American Community Survey (ACS) ⁴		2012 California Household Travel Survey (CHTS) ⁴	
		Monterey County	Santa Cruz County	Monterey County	Santa Cruz County
Drive Alone ¹	53.8%	70.7%	70.5%	77.4%	75.2%
Shared Ride ²	8.7%	11.9%	9.4%	16.0%	13.5%
Transit	9.6%	2.1%	2.9%	2.2%	2.2%
Walk	24.2%	3.1%	3.9%	1.2%	5.0%
Bicycle	3.1%	0.8%	3.8%	3.2%	4.1%
Other	0.6%	11.4%	9.5%	0.0%	0.0%

Notes:

1. Drive alone includes motorcycles
2. Shared ride includes carpooling, vanpooling, drop-off, Transportation Network Companies like Uber and Lyft, and taxis.
3. Weighted average morning inbound person mode share of CSUMB students, faculty, and staff. Mode share includes Main Campus, East Campus and Off-Campus residents from the *CSUMB Person Trip Travel Survey* data.
4. Home-based work trips only.

Source: Fehr & Peers, 2019.

TABLE C-9: PRIMARY MODE OF TRAVEL TO MAIN CAMPUS FOR CSUMB POPULATION

Housing Location	Student			Faculty and Staff			Main Campus Mode Split	Main Campus Mode Split without Main Campus Residents
	Main Campus	East Campus	Off-Campus	Main Campus	East Campus	Off-Campus		
Campus Population	2,600	1,380	2,654	N/A	463	561	7,658 (100%)	5,058 (100%)
Drive Alone	322	725	2,200	N/A	395	479	4,121 (53.8%)	3,798 (75.1%)
Shared Ride	156	149	281	N/A	20	58	664 (8.7%)	508 (10.0%)
Transit	120	453	127	N/A	20	16	736 (9.6%)	616 (12.2%)
Walk	1,830	12	11	N/A	0	0	1,853 (24.2%)	23 (0.5%)
Bicycle	133	41	29	N/A	28	8	240 (3.1%)	107 (2.1%)
Other	39	0	5	N/A	0	0	44 (0.5%)	6 (0.1%)

Note:

1. Person trips by mode by campus population is calculated by multiplying the mode split shown in Table C-7 by the campus population. The person trips are rounded to the nearest whole number.
2. Main Campus Mode Split is the sum of all student and faculty/staff columns divided by the main campus population.

Source: Fehr & Peers, 2019.

Attachment D:
Promontory Driveway Counts and Vehicle
Trip Rates

TABLE D-1: PROMONTORY DRIVEWAY COUNT AND VEHICLE TRIP RATES

Location (Population Type)	Trip Pair ²	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Vehicle Trips								
Driveway Count ²	A + E	1,714	56	17	39	113	53	60
Promontory Housing Internal Trips (Students) ³	E	142	12	11	1	8	1	7
Promontory Housing Trips (Students) ⁴	A	1,571	24	10	14	54	26	29
Vehicle Trip Rates⁵								
Driveway Count	A + E	2.2672	0.0741	0.0225	0.0516	0.01494	0.0701	0.0793
Promontory Housing Internal Trips (Students)	E	0.1885	0.0153	0.0148	0.0005	0.0110	0.0019	0.0091
Promontory Housing Trips (Students)	A	2.0787	0.0588	0.0077	0.0511	0.1384	0.0682	0.0702

Notes:

1. Trip pairs shown on Figure 1.
2. Promontory housing driveway count from the annual *CSUMB 2016-2017 Traffic Generation* report.
3. Promontory housing internal trips estimated using the vehicle trip rates summarized in Attachment C (of this memo) Table C-6 titled CSUMB Person Travel Survey – Vehicle Trip Generation Rates to/from Main Campus. Rates from Main Campus line under the Students subheading.
4. Promontory Housing Trips are the remaining vehicle trips when the Promontory Housing Internal Trips (Students) are subtracted from the driveway count.
5. For presentation purposes, person trip generation rates are rounded up to the nearest hundred thousandth. Rates derived by dividing the vehicle counts by 756 Full-Time Equivalent Students (FTES).

Source: Fehr & Peers, 2019.

Attachment E:

Trip Type Descriptions and Existing and Project Conditions Trip Generation Rates

ATTACHMENT E-1: CSUMB TRIP TYPE INFORMATION

Row Number	Population Type	Housing Location or Origin	Existing Population	Project Population	Trip Type	Description
Main Campus Internal Trips						
1	Promontory Housing Students	Promontory Housing	756	756	E	These are trips made by students living in The Promontory Housing, driving to Main Campus. These trips may include Promontory housed students driving to class, the gym, or other on-campus uses.
2	Main Campus Students and Campus Supporting Trips	Main Campus (non-Promontory)	7,658	14,476	D	These are trips made by students living on Main Campus, driving to another part of Main Campus (non-Promontory Housing). These trips may include students driving to class, the gym, or other on-campus uses. Plus, trips made by campus support staff including campus security, maintenance, shuttle buses, etc. These trips circulate within the Main Campus.
Main Campus External Trips						
4	Promontory Housing Students	Promontory Housing	756	756	A	These trips are made by students living in Promontory Housing but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
5	East Campus Students	East Campus	1,380	0	C	These trips are made by students living on East Campus but traveling to/from but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
6	East Campus Faculty/Staff	East Campus	463	1,154	C	These trips are made by faculty/staff living on East Campus but traveling to/from but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
7	Off-Campus Students	Off-Campus	2,654	5,080	A	These trips are made by students coming from their off-campus residences to Main Campus for class and other campus related activities.
8	Off-Campus Faculty/Staff	Off-Campus	463	1,154	A	These trips are made by students coming from their off-campus residences to Main Campus for class and other campus related activities.
9	Main Campus Students, Campus Supporting Trips and Visitors	Off-Campus	7,658	14,476	A	These trips are made by students living on Main Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc. Plus campus supporting trips coming from off-campus, and visitors.
East Campus Internal Trips						
15	East Campus Students	East Campus	1,380	0	C	These trips are made by students living on East Campus but traveling to/from Main Campus. These trips may include students driving to class, the gym, or other on-campus uses.
16	East Campus Faculty/Staff	East Campus	463	1,154	C	These trips are made by faculty/staff living on East Campus but traveling to/from Main Campus. These trips may include students driving to class, the gym, or other on-campus uses.
East Campus External Trips						
18	East Campus Students	East Campus	1,380	0	B	These trips are made by students living on East Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
19	East Campus Faculty/Staff	East Campus	463	1,154	B	These trips are made by faculty/staff living on East Campus but traveling to off-campus for purposes such as off-campus dining, recreational events, visiting off-campus friends and family, etc.
20	East Campus Community Housing Partners	East Campus	280	66	B	These trips are made by community partners living on East Campus but traveling to off-campus for purposes such as work, personnel events, visiting friends and family, etc.

Source: Fehr & Peers, 2018.

TABLE E-2: EXISTING CONDITIONS VEHICLE TRIP RATES

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	0.188	0.016	0.015	0.001	0.010	0.001	0.009
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	0.087	0.035	0.019	0.016	0.018	0.008	0.010
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>7,658</i>	<i>D + E</i>	<i>0.106</i>	<i>0.037</i>	<i>0.021</i>	<i>0.016</i>	<i>0.019</i>	<i>0.008</i>	<i>0.011</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	2.079	0.058	0.008	0.050	0.139	0.069	0.070
5	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.086	0.018	0.080	0.023	0.057
6	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.313	0.063	0.424	0.132	0.292
7	Students	Off-Campus Housing	FTE	2,654	A	1.285	0.111	0.106	0.005	0.106	0.038	0.068
8	Faculty/Staff	Off-Campus Housing	FTE	561	A	1.602	0.419	0.305	0.114	0.442	0.182	0.260
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	7,658	A	0.542	0.045	0.023	0.022	0.048	0.023	0.025
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>7,658</i>	<i>A + C</i>	<i>1.593</i>	<i>0.161</i>	<i>0.117</i>	<i>0.044</i>	<i>0.172</i>	<i>0.069</i>	<i>0.103</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	7,658	A+C+D+E	1.699	0.199	0.138	0.061	0.191	0.077	0.114
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.018	0.086	0.080	0.057	0.023
16	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.063	0.313	0.423	0.292	0.132
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>1.178</i>	<i>0.172</i>	<i>0.029</i>	<i>0.143</i>	<i>0.167</i>	<i>0.116</i>	<i>0.051</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	1,380	B	2.846	0.100	0.017	0.083	0.148	0.073	0.075
19	Faculty/Staff	East Campus Housing	FTE	463	B	5.274	0.465	0.078	0.387	0.335	0.229	0.106
20	Community Housing Partners	East Campus Housing	FTE	280	B	5.275	0.464	0.075	0.389	0.336	0.232	0.104
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>2,123</i>	<i>B</i>	<i>3.696</i>	<i>0.227</i>	<i>0.038</i>	<i>0.189</i>	<i>0.213</i>	<i>0.127</i>	<i>0.086</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,843	B+C	4.718	0.376	0.063	0.313	0.358	0.228	0.130
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	2,654	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	561	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	Off-Campus Housing TDM Reduction [I]		FTE	3,215	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	0.188	0.016	0.015	0.001	0.010	0.001	0.009
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	0.087	0.035	0.019	0.016	0.018	0.008	0.010
31	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.086	0.018	0.080	0.023	0.057
32	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.313	0.063	0.424	0.132	0.292
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>7,658</i>	<i>C + D + E</i>	<i>0.389</i>	<i>0.078</i>	<i>0.055</i>	<i>0.023</i>	<i>0.060</i>	<i>0.021</i>	<i>0.039</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	1,380	C	1.030	0.104	0.018	0.086	0.080	0.057	0.023
35	Faculty/Staff	East Campus Housing	FTE	463	C	1.618	0.376	0.063	0.313	0.424	0.292	0.132
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>1.178</i>	<i>0.172</i>	<i>0.029</i>	<i>0.143</i>	<i>0.166</i>	<i>0.116</i>	<i>0.050</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	1,843	C	2.796	0.498	0.258	0.240	0.413	0.201	0.212
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	7,938	A+B	2.252	0.177	0.090	0.087	0.183	0.088	0.095

Notes:

FTE = Full time equivalent.

1. Vehicle trip generation rates represent vehicles per FTE. For presentation purposes, these rates are rounded to the nearest thousandth.

2. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

TABLE E-3: PROJECT CONDITIONS VEHICLE TRIP GENERATION RATES

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	0.053	0.004	0.004	0.000	0.003	0.000	0.003
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	0.067	0.034	0.018	0.016	0.017	0.008	0.009
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>14,476</i>	<i>D + E</i>	0.070	0.034	0.018	0.016	0.018	0.009	0.009
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	2.079	0.058	0.008	0.050	0.139	0.069	0.070
5	Students	East Campus Housing	FTE	0	C							
6	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.313	0.063	0.423	0.132	0.291
7	Students	Off-Campus Housing	FTE	5,080	A	1.285	0.111	0.106	0.005	0.106	0.038	0.068
8	Faculty/Staff	Off-Campus Housing	FTE	622	A	1.601	0.420	0.305	0.115	0.442	0.182	0.260
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	14,476	A	1.026	0.059	0.025	0.034	0.081	0.039	0.042
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>14,476</i>	<i>A + C</i>	1.784	0.149	0.100	0.049	0.178	0.074	0.104
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	0	C							
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	Main Campus Trip Generation [A + B - C = D]		FTE	14,476	A+C+D+E	1.853	0.183	0.119	0.064	0.196	0.083	0.113
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	0	C							
16	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.063	0.313	0.423	0.291	0.132
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	1.618	0.376	0.063	0.313	0.423	0.291	0.132
East Campus External Trips												
18	Students	East Campus Housing	FTE	0	B							
19	Faculty/Staff	East Campus Housing	FTE	1,154	B	5.272	0.465	0.078	0.387	0.333	0.227	0.106
20	Community Housing Partners	East Campus Housing	FTE	66	B	5.273	0.470	0.076	0.394	0.333	0.227	0.106
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>1,220</i>	<i>B</i>	5.274	0.466	0.078	0.388	0.334	0.228	0.106
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	0	C							
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	0	0	0	0	0	0	0
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,154	B+C	6.802	0.821	0.138	0.683	0.733	0.503	0.230
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	5,080	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	622	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	Off-Campus Housing TDM Reduction [I]		FTE	5,702	A	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	0.053	0.004	0.004	0.000	0.003	0.000	0.003
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	0.067	0.034	0.018	0.016	0.017	0.008	0.009
31	Students	East Campus Housing	FTE	0	C							
32	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.313	0.063	0.423	0.132	0.291
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>14,476</i>	<i>C + D + E</i>	0.199	0.064	0.043	0.021	0.051	0.018	0.033
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	0	C							
35	Faculty/Staff	East Campus Housing	FTE	1,154	C	1.618	0.376	0.063	0.313	0.423	0.291	0.132
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	1.618	0.376	0.063	0.313	0.423	0.291	0.132
37	Internal Trip Adjustment Total [J + F = L]		FTE	15,630	C	0.304	0.087	0.045	0.042	0.079	0.039	0.040
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	14,542	A+B	2.089	0.157	0.082	0.075	0.172	0.083	0.089

Notes:

FTE = Full time equivalent.

1. Vehicle trip generation rates represent vehicles per FTE. For presentation purposes, these rates are rounded to the nearest thousandth.

2. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

Attachment F:
**Existing and Project Conditions Vehicle Trip
Generation for CSUMB by Population Type
and Housing Location**

ATTACHMENT F-1: EXISTING CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB BY POPULATION TYPE AND HOUSING LOCATION

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	142	12	11	1	8	1	7
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	669	272	148	124	140	63	77
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>7,658</i>	<i>D + E</i>	<i>811</i>	<i>284</i>	<i>159</i>	<i>125</i>	<i>148</i>	<i>64</i>	<i>84</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	1,572	44	6	38	105	52	53
5	Students	East Campus Housing	FTE	1,380	C	1,422	143	118	25	111	32	79
6	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	145	29	196	61	135
7	Students	Off-Campus Housing	FTE	2,654	A	3,411	294	281	13	280	100	180
8	Faculty/Staff	Off-Campus Housing	FTE	561	A	899	235	171	64	248	102	146
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitor Trips	FTE	7,658	A	4,147	346	175	171	372	178	194
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>7,658</i>	<i>A + C</i>	<i>12,200</i>	<i>1,236</i>	<i>896</i>	<i>340</i>	<i>1,312</i>	<i>525</i>	<i>787</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0	0	0	0	0	0	0
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0	0	0	0	0	0	0
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	7,658	A+C+D+E	13,011	1,520	1,055	465	1,460	589	871
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	1,380	C	1,422	143	25	118	111	79	32
16	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	29	145	196	135	61
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>2,171</i>	<i>317</i>	<i>54</i>	<i>263</i>	<i>307</i>	<i>214</i>	<i>93</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	1,380	B	3,928	137	23	114	204	100	104
19	Faculty/Staff	East Campus Housing	FTE	463	B	2,441	215	36	179	154	105	49
20	Community Housing Partners	East Campus Housing	FTE	280	B	1,477	130	21	109	94	65	29
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>2,123</i>	<i>B</i>	<i>7,846</i>	<i>482</i>	<i>80</i>	<i>402</i>	<i>452</i>	<i>270</i>	<i>182</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	1,380	C	0	0	0	0	0	0	0
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	463	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
25	East Campus Cordon Trips [F + E - G = H]		FTE	2,123	B+C	10,017	799	134	665	759	484	275
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	2,654	A	0	0	0	0	0	0	0
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	561	A	0	0	0	0	0	0	0
28	Off-Campus Housing TDM Reduction [I]		FTE	3,215	A	0	0	0	0	0	0	0
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	142	12	11	1	8	1	7
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	7,658	D	669	272	148	124	140	63	77
31	Students	East Campus Housing	FTE	1,380	C	1,422	143	118	25	111	32	79
32	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	145	29	196	61	135
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>7,658</i>	<i>C + D + E</i>	<i>2,982</i>	<i>601</i>	<i>422</i>	<i>179</i>	<i>455</i>	<i>157</i>	<i>298</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	1,380	C	1,422	143	25	118	111	79	32
35	Faculty/Staff	East Campus Housing	FTE	463	C	749	174	29	145	196	135	61
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,843</i>	<i>C</i>	<i>2,171</i>	<i>317</i>	<i>54</i>	<i>263</i>	<i>307</i>	<i>214</i>	<i>93</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	1,843	C	5,153	918	476	442	762	371	391
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	7,938	A+B	17,875	1,401	713	688	1,457	702	755

Notes:

FTE = Full time equivalent.

1. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

ATTACHMENT F-2: PROJECT CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB BY POPULATION TYPE AND HOUSING LOCATION

Row Number	Population Type	Housing Location	Unit	Size	Trip Type ¹	Daily	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
Main Campus												
Main Campus Internal Trips												
1	Students	Promontory Housing	FTE	756	E	40	3	3	0	2	0	2
2	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	970	495	261	234	253	120	133
3	<i>Internal Trips [A]</i>		<i>FTE</i>	<i>14,476</i>	<i>D + E</i>	<i>1,010</i>	<i>498</i>	<i>264</i>	<i>234</i>	<i>255</i>	<i>120</i>	<i>135</i>
Main Campus External Trips												
4	Students	Promontory Housing	FTE	756	A	1,572	44	6	38	105	52	53
5	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
6	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	361	73	488	152	336
7	Students	Off-Campus Housing	FTE	5,080	A	6,528	563	538	25	538	193	345
8	Faculty/Staff	Off-Campus Housing	FTE	622	A	996	261	190	71	275	113	162
9	CSUMB Campus Population	Main Campus Students, Campus Supporting Trips, and Visitors	FTE	14,476	A	14,857	854	359	495	1,171	568	603
10	<i>Main Campus Cordon Trips [B]</i>		<i>FTE</i>	<i>14,476</i>	<i>A + C</i>	<i>25,820</i>	<i>2,156</i>	<i>1,454</i>	<i>702</i>	<i>2,577</i>	<i>1,078</i>	<i>1,499</i>
East Campus Housing TDM Reductions												
11	Student East Campus Housing TDM Reduction for Students		FTE	0	C	0	0	0	0	0	0	0
12	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
13	<i>East Campus Housing TDM Reduction [C]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
14	Main Campus Trip Generation [A + B - C = D]		FTE	14,476	A+C+D+E	26,830	2,654	1,718	936	2,832	1,198	1,634
East Campus												
East Campus Internal Trips												
15	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
16	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	73	361	488	336	152
17	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>1,867</i>	<i>434</i>	<i>73</i>	<i>361</i>	<i>488</i>	<i>336</i>	<i>152</i>
East Campus External Trips												
18	Students	East Campus Housing	FTE	0	B	0	0	0	0	0	0	0
19	Faculty/Staff	East Campus Housing	FTE	1,154	B	6,084	537	90	447	384	262	122
20	Community Housing Partners	East Campus Housing	FTE	66	B	348	31	5	26	22	15	7
21	<i>External Trips [E]</i>		<i>FTE</i>	<i>1,220</i>	<i>B</i>	<i>6,432</i>	<i>568</i>	<i>95</i>	<i>473</i>	<i>406</i>	<i>277</i>	<i>129</i>
East Campus Housing TDM Reductions												
22	Student East Campus Housing TDM Reduction for Students		FTE	0	C	0	0	0	0	0	0	0
23	Student East Campus Housing TDM Reduction for Faculty/Staff		FTE	1,154	C	0	0	0	0	0	0	0
24	<i>East Campus Housing TDM Reduction [G]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
25	East Campus Cordon Trips [F + E - G = H]		FTE	1,220	B+C	8,299	1,002	168	834	894	613	281
Off Campus												
Off-Campus Housing TDM Reductions												
26	Off-Campus Housing TDM Reduction for Students		FTE	5,080	A	0	0	0	0	0	0	0
27	Off-Campus Housing TDM Reduction for Faculty/Staff		FTE	622	A	0	0	0	0	0	0	0
28	Off-Campus Housing TDM Reduction [I]		FTE	5,702	A	0	0	0	0	0	0	0
CSUMB Campus Internal Trip Adjustment												
Main Campus Internal Trips Adjustment												
29	Students	Promontory Housing	FTE	756	E	40	3	3	0	2	0	2
30	CSUMB Campus Population	Main Campus Students and Campus Supporting Trips	FTE	14,476	D	970	495	261	234	253	120	133
31	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
32	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	361	73	488	152	336
33	<i>Internal Trips Adjustment [J]</i>		<i>FTE</i>	<i>14,476</i>	<i>C + D + E</i>	<i>2,877</i>	<i>932</i>	<i>625</i>	<i>307</i>	<i>743</i>	<i>272</i>	<i>471</i>
East Campus Internal Trips Adjustment												
34	Students	East Campus Housing	FTE	0	C	0	0	0	0	0	0	0
35	Faculty/Staff	East Campus Housing	FTE	1,154	C	1,867	434	73	361	488	336	152
36	<i>Internal Trips with Main Campus [F]</i>		<i>FTE</i>	<i>1,154</i>	<i>C</i>	<i>1,867</i>	<i>434</i>	<i>73</i>	<i>361</i>	<i>488</i>	<i>336</i>	<i>152</i>
37	Internal Trip Adjustment Total [J + F = L]		FTE	15,630	C	4,744	1,366	698	668	1231	608	623
CSUMB Campus External Trips Total												
38	External Campus Trip Total [D + H - I - L = M]		FTE	14,542	A+B	30,385	2,290	1,188	1,102	2,495	1,203	1,292

Notes:

FTE = Full time equivalent.

1. Trip type shown on Figure 1.

Source: Fehr & Peers, 2019.

**APPENDIX B: CALIFORNIA STATE UNIVERSITY, MONTEREY BAY
MASTER PLAN EIR – TRANSPORTATION STUDY AREA LOCATIONS**





MEMORANDUM

Date: June 10, 2019

To: Anya Spear and Matt McCluney, California State University Monterey Bay
Steve Lohr and Dawn Theodora, California State University Office of the Chancellor
Ann Sansevero, Dudek

From: Daniel Rubins and Matt Haynes, Fehr & Peers

**Subject: California State University Monterey Bay 2019 Master Plan EIR –
Transportation Study Area Locations**

SJ17-1728

This memorandum describes how the final study area for the proposed California State University Monterey Bay (CSUMB) Master Plan EIR transportation analysis was determined. Specifically, it describes how the Project traffic volume estimates were used to identify those intersections and freeway segments at which the Project would result in a deficient operation. The memorandum first defines the likely outer edges of the study area. Second, it selects the major intersections along the local access routes to the campus that may be experience deficient operations with the proposed Project based on estimated Project trips and related road distribution and assignment. Local access routes include the on-campus vehicle street system, parking location changes, and the amount of traffic that would be added to the transportation network as a result of implementation of the proposed Project. The memo concludes with a list of the study intersections and freeway segments.

PROJECT DESCRIPTION

The Project is the CSUMB Master Plan. Project elements that affect the transportation system include the proposed increase in enrollment, the on-campus housing for students, faculty, and staff, and a Main Campus street and parking system that facilitates and prioritizes walking, bicycling, and transit use over vehicle travel. Upon buildout, the Project would accommodate an increase in campus enrollment from the existing 6,634 full time equivalent students (FTES)¹ and 1,024 full time

¹ Full-time equivalent (FTE) is the unit of measurement used to convert class load to student enrollment. At CSUMB, one FTE is equal to 15 units. Thus, one FTE is equal to one student enrolled in 15 units or three students each enrolled in 5 units. A related unit of measurement is "headcount." In the case of one student taking 15 units, the headcount is 1; in the case of three students collectively taking 15 units, the headcount is 3.



equivalent faculty/staff (FTEF),² to 12,700 FTES and 1,776 FTEF. Under Project Conditions, it is projected that the Project would house at least 60 percent of enrolled students and 65 percent of faculty and staff on campus (PDF-LU-5 and PDF-LU-6, as described in Chapter 3 of the proposed CSUMB Master Plan Draft EIR). As explained in the *Draft California State University Monterey Bay Proposed Master Plan Housing Memorandum* (see **Attachment A** of the *California State University Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum), the Project Conditions on-campus student housing rate is similar to the existing on-campus student rates, and the Project Conditions on-campus faculty and staff housing rate is expected to increase based on various policies, programs and procedures to be implemented over the coming years.

Table 1 summarizes the number and percentage of students, faculty, and staff presently residing on- and off-campus (Existing Conditions), and the number forecasted to reside on- and off-campus under Project Conditions when FTES enrollment and FTEF employment total reaches 14,476.

The total on-campus housed population (i.e., the number of students, faculty, and staff residing in either Main Campus or East Campus housing) is forecasted to increase from the existing 58 percent (4,443 of 7,658) to 61 percent (8,774 of 14,476). As space permits, community housing partners³ will also reside in the East Campus housing. While community housing partners live on-campus, they are not associated with on-campus housing for students, faculty and staff, and therefore are not included in the student, faculty, and staff population total but are included in the entire campus population total in **Table 1**.

In terms of actual on-campus housing facilities, the Project would provide housing to accommodate an increase in campus population from the existing approximately 6,634 FTES to 12,700 FTES, and an increase in employees (i.e., faculty and staff) from approximately 1,024 FTEF to 1,776 FTEF.⁴

² According to CSUMB Institutional Assessment and Research, 1 FTE = full time faculty or staff headcount + part time faculty or staff headcount divided by 3. The faculty and staff category also includes affiliates, which are companies that have been contracted by the Corporation to provide services that the auxiliary has been asked to provide by the university (e.g. dining, bookstore, etc.), and the affiliate's employee works full-time on campus in that capacity. They are also referred to as contractors. The Auxiliary includes staff of the Corporation, Student Union and Foundation.

³ Community housing partners are made up of affiliates (a subcategory of CSUMB staff), educational partners and military partners, and public sector employees working in the Monterey area.

⁴ Existing student, faculty and staff quantities based on 2016 baseline figures provided by CSUMB staff.



TABLE 1: CSUMB POPULATION TYPE BY HOUSING LOCATION

Housing Location	Existing Conditions (FTES or FTEF) ¹	Project Conditions (FTES or FTEF) ¹	Change (Project – Existing) ²
Student Population			
Main Campus	2,600 (39.2%)	7,620 (60.0%)	+5,200
East Campus ⁴	1,380 (20.8%)	0 (0%)	-1,380
Off-Campus	2,654 (40.0%)	5,080 (40.0%)	+2,426
<i>Subtotal [A]</i>	<i>6,634</i> <i>(100%)</i>	<i>12,700</i> <i>(100%)</i>	<i>+6,066</i>
Faculty/Staff Population			
East Campus ³	463 (45.2%)	1,154 (65.0%)	+691
Off-Campus	561 (54.8%)	622 (35.0%)	+61
<i>Subtotal [B]</i>	<i>1,024</i> <i>(100%)</i>	<i>1,776</i> <i>(100%)</i>	<i>+752</i>
Student, Faculty, and Staff Population (Campus Population)			
Main Campus and East Campus (Students, Faculty and Staff)	4,443 (58.0%)	8,774 (60.6%)	+4,331
Off-Campus (Students, Faculty and Staff)	3,215 (42.0%)	5,702 (39.4%)	+2,487
Total [A + B = C]	7,658 (100%)	14,476 (100%)	+6,818
Campus Population with Community Housing Partners			
East Campus (Community Housing Partners) [D]	280	66	-214
Total [C+D = E]	7,938	14,542	+6,604

Notes:

1. FTES = Full time equivalent students; FTEF = Full time equivalent faculty/staff.
2. Change (Project - Existing) = Project Conditions column – Existing Conditions column.
3. The transportation trip generation analysis uses a campus population that, meets but does not exceed the 60 percent student housing goal and the 65 faculty and staff housing goal under Project Conditions.
4. Under Existing Conditions 1,380 students, 463 faculty/staff, and 280 community housing partners live in the East Campus housing. Under Project Conditions 1,154 faculty/staff and 66 community housing partners live in the East Campus housing unless housing is needed by for campus employees.

Source: Fehr & Peers, 2019.



PROJECT TRAFFIC VOLUMES

The amount of automobile traffic that would be generated by the proposed Project, and the distribution of that traffic on the area roadways, was estimated using a three-step process:

1. **Trip Generation** – The *number* of vehicles that would enter/exit the Project site with the increased campus population was estimated. (See the *California State University Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum for a detailed description of the trip generation analysis).
2. **Trip Distribution** – The *direction* that vehicles would use to approach and depart the Project site was projected using the AMBAG travel model.
3. **Trip Assignment** – The number of vehicles that would be generated by the Project was then *assigned* to specific roadway segments using the AMBAG travel model and forecasting methods.

Each of these steps in the process is further described in the following sections.

VEHICLE TRIP GENERATION ESTIMATES

Below is a condensed discussion of the trip generation presented in the *California State University Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum. The trip generation approach and technical methods are unique because of the size of the CSUMB campus, the unique travel behavior of each portion of the CSUMB population, and varied housing locations of the CSUMB population. Rather than calculating the net increase in project vehicle trips due to the net increase in land use like most projects; the trip generation is prepared for the entire campus under Existing Conditions and Project Conditions to capture the effects of adding on-campus housing and shifting of student housing from East Campus to Main Campus. Specifically, the net new project traffic is the difference in the Project Conditions and Existing Conditions CSUMB campus trip generation. As shown in the analysis, housing an average of 60 percent of the future campus population (students, faculty and staff) on-campus increases the:

- Likelihood of trips staying within the campus (internal trips); and
- Likelihood of trips shifting to other modes (walking, bicycling, micro-mobility⁵, and transit) for both on and off-campus travel.

Total vehicle trip generation for the CSUMB campus under both Existing Conditions and Project Conditions are presented in **Tables 2** and **3**. As shown, the total trip generation estimates are

⁵ Micro-mobility is an emerging mode of travel that is characterized by new electric lightweight utility vehicles such as e-scooters, and e-bikes.



provided for the Main Campus and East Campus separately, as well as total numbers for the entire campus.

TABLE 2: EXISTING CONDITIONS VEHICLE TRIP GENERATION FOR CSUMB CAMPUS

Location Type	Trip Type ¹	Daily	Morning Peak Hour			Evening Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips	E	142	12	11	1	8	1	7
Main Campus Internal Trips ²	D	669	272	148	124	140	63	77
Main Campus External Trips	A	10,029	919	633	286	1,005	432	573
Main Campus Trips with East Campus	C	2,171	317	263	54	307	93	214
Main Campus Total [A]	A+C+D+E	13,011	1,520	1,055	465	1,460	589	871
East Campus								
East Campus Trips with Main Campus	C	2,171	317	54	263	307	214	93
East Campus External Trips	B	7,846	482	80	402	452	270	182
East Campus Total [B]	B+C	10,017	799	134	665	759	484	275
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-142	-12	-11	-1	-8	-1	-7
Main Campus Internal Trips ²	D	-669	-272	-148	-124	-140	-63	-77
Main Campus Trips with East Campus	C	-2,171	-317	-263	-54	-307	-93	-214
East Campus Trips with Main Campus	C	-2,171	-317	-54	-263	-307	-214	-93
Trip Adjustment [C]	C+D+E	-5,153	-918	-476	-442	-762	-371	-391
External Campus Trip Total [A+B]³	A+B	17,875	1,401	713	688	1,457	702	755

Notes:

1. Trip type shown on Figure 1.
2. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
3. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.
 Source: Fehr & Peers, 2019.

As shown in **Table 2**, under Existing Conditions the Campus external vehicle trip generation is approximately 17,875⁶ daily vehicle trips, 1,401 morning peak-hour trips (713 inbound and 688 outbound) and 1,457 evening peak-hour trips (702 inbound and 755 outbound).

As shown in **Table 3**, under Project Conditions the campus external vehicle trip generation would be approximately 30,385 daily vehicle trips, 2,290 morning peak-hour trips (1,188 inbound and 1,102 outbound) and 2,495 evening peak-hour trips (1,203 inbound and 1,292 outbound).

⁶ This excludes vehicle through trips not associated with the CSUMB campus.



TABLE 3: CSUMB CAMPUS VEHICLE TRIP GENERATION FOR PROJECT CONDITIONS

Trip Type	Trip Type ¹	Daily	Morning Peak Hour			Evening Peak Hours		
			Total	In	Out	Total	In	Out
Main Campus								
Promontory Housing Internal Trips	E	40	3	3	0	2	0	2
Main Campus Internal Trips ²	D	970	495	261	234	253	120	133
Main Campus External Trips	A	23,953	1,722	1,093	629	2,089	926	1,163
Main Campus Trips with East Campus	C	1,867	434	361	73	488	152	336
Main Campus Total [A]	A+C+D+E	26,830	2,654	1,718	936	2,832	1,198	1,634
East Campus								
East Campus Trips with Main Campus	C	1,867	434	73	361	488	336	152
East Campus External Trips	B	6,432	568	95	473	406	277	129
East Campus Total [B]	B+C	8,299	1,002	168	834	894	613	281
Internal Trip Adjustment								
Promontory Housing Internal Trips	E	-40	-3	-3	-0	-2	-0	-2
Main Campus Internal Trips ²	D	-970	-495	-261	-234	-253	-120	-133
Main Campus Trips with East Campus	C	-1,867	-434	-361	-73	-488	-152	-336
East Campus Trips with Main Campus	C	-1,867	-434	-73	-361	-488	-336	-152
Trip Adjustment [C]	C+D+E	-4,744	-1,366	-698	-668	-1,231	-608	-623
External Campus Trip Total [A+B]²	A+B	30,385	2,290	1,188	1,102	2,495	1,203	1,292

Notes:

1. Trip type shown on Figure 1.
2. Main Campus Internal Trips = Main Campus Students and Campus Supporting Trips.
3. The campus trip generation is the sum of all Main Campus and East Campus external vehicle trips generated by students, faculty, staff, and visitors.

Source: Fehr & Peers, 2019.

As shown in **Table 4**, the Project (i.e., Project Conditions) would generate 12,510 additional external daily trips, 889 additional external morning peak hour trips and 1,039 additional external evening peak hour trips.

By housing a large portion of students, faculty, and staff on-campus, and consolidating parking to the periphery. CSUMB would convert many potential off-campus-based trips to on-campus generated trips, thereby reducing both the number of external campus trips to and from campus. Relatedly, by increasing the number of on-campus students, the number of CSUMB external trips made by on-campus students for purposes such as recreational activities, off-campus dining, visiting family and friends, etc. would increase in absolute terms over existing levels.

By comparing **Tables 2** and **3** we can see the net change in vehicle trips due to the Main Campus population growth, the additional on-campus student housing, and faculty and staff moving into residential units currently occupied by students and community housing partners in the East Campus housing. Thus, the net increase in trip generation between Existing Conditions and Project



Conditions is the project increment that will be studied in the transportation analysis. **Table 4** presents the net increase in external campus trips between Existing and Project Conditions.

TABLE 4: CSUMB CAMPUS VEHICLE TRIP GENERATION RESULTS

Scenario	Daily	Morning Peak Hour			Evening Peak Hours		
		Total	In	Out	Total	In	Out
Existing Conditions [A]	17,875	1,401	713	688	1,457	702	755
Project Conditions [B]	30,385	2,290	1,188	1,102	2,495	1,205	1,292
<i>Additional Campus Trips [B-A]</i>	12,510	889	475	414	1,039	501	537

Source: Fehr & Peers, 2019.

VEHICLE TRIP DISTRIBUTION ESTIMATES

Campus vehicle trips are generated by students, faculty, staff, community housing partners, campus support (trips made by security staff, maintenance staff, etc.), and visitors traveling to/from the CSUMB campus. The AMBAG travel model was used to distribute the vehicle trips from the CSUMB campus to nearby communities for each analysis scenario (Existing Conditions, Existing with Project Conditions, Cumulative Conditions, and Cumulative with Project Conditions). The distribution of project traffic considered: 1) regional land use destinations outside of the Campus, and 2) ease and convenience of access to nearby freeways and regional streets.

The distribution of vehicle trips going to/coming from nearby communities of Castroville (and north), Marina, Salinas, Seaside, and Monterey to the CSUMB Campus is presented in **Table 5**. The distribution is summarized for the inbound and outbound during the morning peak hour and the evening peak hour under Existing with Project Conditions and Cumulative with Project Conditions. The distribution of CSUMB campus traffic is similar during the morning and evening peak hours under Existing with Project Conditions and Cumulative with Project Conditions. Vehicle trips to/from the north account for 25 to 29 percent of vehicle trips, with the majority traveling to/from Castroville and north. The communities south of the CSUMB campus account for 36% to 39% of vehicle trips. Finally, communities east of the CSUMB campus (Salinas) account for 34 to 37 percent of the vehicle trips.



TABLE 5: DISTRIBUTION OF CSUMB EXTERNAL VEHICLE TRIPS TO NEARBY COMMUNITIES (AMBAG MODEL)

Resident Location	Existing with Project Conditions		Cumulative with Project Conditions	
	Morning Inbound Peak Hour	Evening Outbound Peak Hours	Morning Inbound Peak Hour	Evening Outbound Peak Hours
North				
Castroville and North	18%	17%	20%	17%
Marina	9%	8%	9%	10%
North Total	27%	25%	29%	27%
East				
Salinas	37%	37%	34%	34%
East Total	37%	37%	34%	34%
South				
Seaside	13%	15%	14%	16%
Monterey and West	23%	23%	23%	23%
South Total	36%	38%	37%	39%

Source: Fehr & Peers, 2019.

Comparison of Project Trip Distribution

The following sources were reviewed to determine the accuracy of the Project trip distribution patterns derived from the AMBAG travel model:

- CSUMB Student Resident Zip Code Data (specific to students only) – The CSUMB student zip code data was provided by CSUMB staff and includes on-campus and off-campus student resident location by zip code.
- CSUMB Person Trip Travel Survey Zip Code Data (includes students, as well as faculty and staff) – The *CSUMB Person Trip Travel Survey* was conducted in Fall 2017 and included questions to assist in understanding travel choices to/from the Main Campus, including mode of travel and where (zip code) the respondent currently resides. This data set includes on-campus and off-campus student, faculty, and staff resident location by zip code provided by survey respondents.

Fehr & Peers reviewed the CSUMB Student Resident Zip Code data, which, as noted above, is limited to student resident locations. However, this data set represents only a sample of the student resident locations because some students provide only their parents resident location and not the student's resident location while attending CSUMB; in other words, the survey responses with resident locations listed outside of the proximity of the CSUMB campus were not considered as part of the trip distribution analysis.



As shown in **Table 6**, the distribution of CSUMB student residence locations is similar for both data sets and at least half of the campus population lives on campus. That is, even though the CSUMB student resident zip code data considered as part of the analysis are limited to the student portion of the campus population, both data sets have a similar distribution for resident locations as to students. Furthermore, each data set shows that the majority of the campus population lives on-campus. To compare to the distribution in **Table 5**, the CSUMB zip code and person survey zip code data derived distributions were prepared for off-campus residents only (see **Table 7**).

TABLE 6: DISTRIBUTION OF CSUMB CAMPUS POPULATION TO NEARBY COMMUNITIES

Resident Location	Student Only (from CSUMB Zip Code data)	Student Only (from Person Trip Travel Survey)	CSUMB Faculty/Staff (from Person Trip Travel Survey)	CSUMB Student & Faculty/Staff (from Person Trip Travel Survey)
North				
Castroville and North	13%	10%	10%	10%
Marina	8%	9%	6%	9%
North Total	21%	19%	16%	19%
East				
Salinas	14%	14%	13%	14%
East Total	14%	14%	13%	14%
South				
Seaside	8%	8%	5%	8%
Monterey and West	8%	6%	17%	7%
South Total	16%	14%	22%	15%
On-Campus				
On-Campus (Main or East)	49%	53%	49%	52%
On-Campus Total	49%	53%	49%	52%

Source: Fehr & Peers, 2019.

The trip distribution data from the AMBAG travel model was compared to the data collected from the CSUMB Student Resident Zip Code Data and the *CSUMB Person Trip Travel Survey* data representing student, faculty, and staff resident locations. As a first step, the distribution of on-campus and off-campus students, faculty and staff were reviewed for consistency of distribution pattern between data sets. Based on the *CSUMB Person Trip Travel Survey* data, the distribution of vehicle trips going to/coming from different areas of Monterey, Santa Cruz, and Santa Clara counties to the CSUMB campus is presented in **Table 7**.



TABLE 7: DISTRIBUTION OF CSUMB OFF-CAMPUS POPULATION TO NEARBY COMMUNITIES

Resident Location	Student Only (from CSUMB Zip Code data)	Student Only (from Person Trip Travel Survey)	CSUMB Faculty/Staff (from Person Trip Travel Survey)	CSUMB Student & Faculty/Staff (from Person Trip Travel Survey)
North				
Castroville and North	26%	21%	19%	21%
Marina	16%	19%	13%	18%
North Total	42%	40%	32%	39%
East				
Salinas	28%	30%	25%	30%
East Total	28%	30%	25%	30%
South				
Seaside	15%	17%	9%	16%
Monterey and West	15%	13%	34%	15%
South Total	30%	30%	43%	31%

Source: Fehr & Peers, 2019.

The distribution of CSUMB external vehicle trips to nearby communities in **Table 5** (from the AMBAG travel mode) is similar (within 10 percentage points) to the distributions of CSUMB Students and Faculty/Staff (from the *CSUMB Person Trip Travel Survey* data) shown in **Table 7**. Thus, the project trip distribution percentages derived from the AMBAG travel model are appropriate for use with this analysis.

VEHICLE TRIP ASSIGNMENT ESTIMATES

Once the trip generation and distribution were determined, the AMBAG travel model was used to assign the project trips from the CSUMB campus to the transportation network during the morning and evening peak hour under Existing with Project Conditions and Cumulative with Project Conditions.

SELECTING THE STUDY AREA

The California State University *Transportation Impact Study (TIS) Manual* (November 2012) provides the following guidance for defining the study area (pages 11 and 12):

- *The study area should extend to a sufficient distance from the project site to identify all potentially significant impacts, as supported by substantial evidence.*



- *If the project is of statewide, areawide, or regional significance as defined in Section 21092.5 of the 2017 CEQA Guidelines, then the study area should consider major local arterials and public transit within a maximum of 5 miles of the project site, and freeways, highways and rail transit service within a maximum of 10 miles of the project site.*
- *Additional facilities may be studied based on circumstances unique to the site. CSU should confirm whether TIS preparers may consult with the host City or County early regarding any additional study locations based on local or site-specific issues.*

Using the above guidance, the intersection study area boundary for the proposed Project would extend up to 10 miles from the CSUMB campus and encompass the following locations, with the corresponding geographic location noted in parentheses:

- Highway 1 between Reservation Road and Del Monte Boulevard (County: Castroville and North)
- California Avenue between Third Avenue and Patton Parkway (Marina)
- Del Monte Boulevard between Reindollar Avenue and Cypress Avenue (Marina)
- Blanco Road between Reservation Road and Cooper Road (County: South of Salinas)
- Davis Road between Reservation Road and Foster Road (County: South of Salinas)
- Highway 68 between Reservation Road and Spreckels Avenue (County: South of Salinas)
- Fremont Boulevard south of Highway 1 (Seaside)
- California Avenue south of Highway 1 (Seaside)
- Canyon Del Rey Boulevard south of Highway 1 (Seaside)
- General Jim Moore Boulevard between Coe Avenue and San Pablo Avenue (Seaside)
- Highway 1 between Canyon Del Rey Boulevard and Del Monte Boulevard (County: Monterey and West)

To confirm that the study area boundary is an appropriate distance to diffuse Project traffic such that project traffic would not cause a potential significant impact to the roadway or freeway system beyond the proposed study area, we reviewed the day-to-day variation of roadway and freeway counts within the identified area. This was done by comparing the directional (inbound or outbound) peak hour vehicle trips at the boundary locations listed above to the day-to-day variation of the roadway counts. Using this method, if Project traffic is greater than the day-to-day variation, then the study area boundary may need to be extended beyond the proposed study area boundary described above. Project traffic that is less than the day-to-day variation of a roadway, means that the project traffic is disbursed enough to have little influence on the roadway operation and thus would be unlikely to cause a potentially significant impact. Stated differently, project traffic less than the average day-to-day variation would not be discernable by an observer on the side of the road.



Near the CSUMB campus, the local street system has an average day-to-day variation⁷ of approximately 13 percent during the morning peak hour and 12 percent during the evening peak hour (see **Attachment B** for the day-to-day variation calculated from six roadway segments over two to five days). The freeway system has a day-to-day variation of approximately 2 percent in the morning peak hour and 5 percent in the evening peak hour (see **Attachment B**). Therefore, for this analysis, if the Project traffic would contribute more than 10 percent of the peak hour roadway capacity or more than 2 percent of the peak hour freeway capacity, then the study area would need to be expanded to include those roadways/freeways. Often study intersections are selected based on a 10 trip per lane rule or similar rule of thumb. Expressing the percentage of roadway capacity in vehicle trips per lane units, study intersections are proposed to be analyzed if the Project traffic contributes more than 40 to 50 peak hour project vehicle trips per turn lane to an intersection⁸ and freeway segments are selected with more than 2 percent of the peak hour freeway capacity (for example, 2 percent of capacity of a 2-lane freeway would be 44 peak hour vehicle trips).

Attachment A shows the evaluation of the study boundary for the eleven locations listed above. From left to right the table defines the nearby community, roadways, roadway classification, two-way total roadway capacity, and peak direction roadway assignment distribution from the AMBAG travel model. The evaluation is done by comparing the evening outbound peak hour vehicle trips⁹ (see column A in **Attachment A**) to the evening outbound peak hour direction roadway segment threshold (see column B in **Attachment A**) to determine if the study area needs to be expanded beyond that area identified above (see column C in **Attachment A**). The comparison confirms that the study area does not need to be expanded to ensure that all potentially significant Project impacts are identified.

With the study area boundary defined, the major study area intersections and freeway segments were selected based on the CSUMB Project vehicle trips added to the transportation network at locations that meet one or more of the criteria presented in **Table 8**. Criteria 1 and 2 are based on the evaluation of the day-to-day roadway variation described above, and Criteria 3 and 4 are based on the anticipated changes in the transportation street network.

⁷ Vehicle variation is estimated by comparing day-to-day counts to each other. The difference between the maximum and minimum vehicle volume is defined as the vehicle variation.

⁸ As an example, General Jim Moore Boulevard between Coe Avenue and San Pablo Avenue has a total roadway link vehicle capacity of 3,740 vehicles per peak hour per direction. This street segment has two northbound and two southbound lanes. Major intersections along this street will be selected if the project traffic adds more than 187 vehicles (10 percent * 2 lanes * 935 vehicles per hour per lane) in either the northbound or southbound direction. The approach geometry along General Jim Moore Boulevard is a left turn lane, two through lanes and a right turn lane. Dividing the 187 vehicles by 4 turn lanes would result in approximately 47 vehicles per turn lane.

⁹ The assigned project trips at each boundary location is based on the distribution of project trips summarized in **Table 3** and refined based on the "select zone" assignment analysis using the AMBAG travel model to determine the relative attractiveness of each route. The segment thresholds in terms of vehicle trips were determined by multiplying the roadway/freeway segment capacity by the appropriate day-to-day vehicle volume variation threshold.



TABLE 8: STUDY AREA CRITERIA

Criteria	Intersections along Streets and Corridors that Meet Criteria
<p>Criterion 1: Major intersections (typically arterial to arterial intersections) along local streets and regional corridors segments that provide access to/from the CSUMB Campus within the study area boundary.</p>	<p>The major study intersections along the following local streets and regional corridors within the study area boundary meet Criterion 1:</p> <ul style="list-style-type: none"> • Imjin Parkway between Highway 1 and Reservation Road • Reservation Road between Imjin Parkway and State Route 68 • Inter-Garrison Road between Reservation Road and 8th Avenue • Lightfighter Drive between Highway 1 and General Jim Moore • Second Avenue between Reindollar Avenue (future) and Imjin Parkway • General Jim Moore between Lightfighter Drive and Eucalyptus Road
<p>Criterion 2: Project traffic would contribute more than 2 percent of peak hour capacity on freeway segments that provide access to/from the CSUMB Campus.</p>	<p>Highway 1 segments between State Route 68 and Reservation Road met Criterion 2.</p>
<p>Criterion 3: Local street intersections on or near the Main Campus that may experience changed vehicle patterns due to the closure of Inter-Garrison Road, the one-way re-configuration of 7th Avenue between Colonel Durham Street and Butler Street, or the re-location of Main Campus parking lots to satellite parking lots.¹</p>	<p>The following are nearby and on-campus intersections serving the last mile of access and/or on-campus circulation that meet Criterion 3:</p> <ul style="list-style-type: none"> • Second Avenue between Imjin Parkway and Lightfighter Drive • General Jim More between Eighth Street and Lightfighter Drive • Eighth Avenue between Inter-Garrison Road and Gigling Road • Eight Street between Second Avenue and Inter-Garrison Road • Inter-Garrison Road between Second Avenue and Eighth Avenue • Divarty Street between Second Avenue and Sixth Avenue • Colonel Durham Street between General Jim Moore Boulevard and Eighth Avenue • Gigling Road between General Jim Moore Boulevard and Eighth Avenue
<p>Criterion 4: Local street intersections on or near the Main Campus that may experience changed vehicle patterns due to the Eastside Parkway extension.¹</p>	<p>The following local street intersections along the following streets meet Criterion 4:</p> <ul style="list-style-type: none"> • Inter-Garrison Road between Second Avenue and Schoonover Drive • Lightfighter Drive between Highway 1 and General Jim Moore Boulevard • Colonel Durham Street between General Jim Moore Boulevard and Eight Avenue • Gigling Road between General Jim Moore Boulevard and Eighth Avenue • Second Avenue between Inter-Garrison Road and Lightfighter Drive • General Jim Moore between Inter-Garrison Road and Eucalyptus Road • Eighth Avenue between Inter-Garrison Road and Gigling Road • Eastside Parkway extension from Inter-Garrison Road to Eucalyptus Road

Notes:

1. The re-distribution of existing traffic due to changes to on-campus vehicle street system and parking locations, and Eastside Parkway extension have the potential to shift traffic. Criteria 3 and 4 were used to identify locations where traffic shifts may cause impacts to the transportation system.



Study Area Intersections

The resulting list of study area intersections creates a study area generally bounded by Reservation Road to the north, Davis Road to the east, Coe Avenue to the south, and Highway 1 to the west.

The list of study intersections is provided in **Table 9** and illustrated in **Figure 1**.

The intersections requested by reviewing agencies (Caltrans, Monterey County, Fort Ord Reuse Authority, City of Seaside, and City of Marina) and included in the final study area intersection list are highlighted in **Table 9** with an asterisk (*). The only agency requested intersection not included in the final study area intersection list is Normandy Road and Malmedy Road because this route is slower and less direct than traveling via General Jim Moore Boulevard and Gigling Road to/from the CSUMB campus and this intersection does not meet the intersection selection criteria described earlier. In other words, the slower and less direct route is unlikely to experience project traffic.



TABLE 9: STUDY AREA INTERSECTIONS

1	Del Monte Boulevard and Reindollar Avenue	27	Reservation Road and Watkins Gate Road
2	Second Avenue Extension and Patton Parkway	28	Davis Road and Reservation Road
3	SR 1 Southbound Ramps and Imjin Parkway	29	Second Avenue and Divarty Street
4	SR 1 Northbound Ramps and Imjin Parkway	30	General Jim Moore Boulevard and Divarty Street
5	Second Avenue and Imjin Parkway	31	First Avenue and Lightfighter Drive
6	Third Avenue and Imjin Parkway	32	Second Avenue and Lightfighter Drive
7	Fourth Avenue and Imjin Parkway	33	General Jim Moore Boulevard and Lightfighter Drive
8	California Avenue and Imjin Parkway	34	Malmedy Road and Colonel Durham Street
9	California Avenue and Patton Parkway	35	Parker Flatts Cut Off Road and Colonel Durham Street
10	Imjin Road and Imjin Parkway	36	Sixth Avenue and Colonel Durham Street
11	Abrams Drive and Imjin Parkway	37	Seventh Avenue and Colonel Durham Street
12	Reservation Road and Imjin Parkway	38	Eighth Avenue and Colonel Durham Street
13	Blanco Road and Reservation Road	39	General Jim Moore Boulevard and Gigling Road
14	Inter-Garrison Road Connection and Reservation Road	40	Malmedy Road and Gigling Road
15	Second Avenue and Ninth Street	41	Parker Flatts Cut Off Road and Gigling Road
16	Second Avenue and Eighth Street	42	Sixth Avenue and Gigling Road
17	Fourth Avenue and Eighth Street	43	Seventh Avenue and Gigling Road
18	Imjin Road and Eighth Street	44	Eight Avenue and Gigling Road
19	Second Avenue and Inter-Garrison Road	45	Eastside Parkway and Gigling Road
20	General Jim Moore Boulevard and Inter-Garrison Road	46	General Jim Moore Boulevard and Normandy Road
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	47	General Jim Moore Boulevard and Coe Avenue
22	Eighth Avenue and Inter-Garrison Road	48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road
23	Abrams Drive and Inter-Garrison Road	49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp
24	Schoonover Road and Inter-Garrison Road	50	Reservation Road and State Route 68 Westbound Ramps
25	Inter-Garrison Road Connection and Inter-Garrison Road	51	Reservation Road and State Route 68 Eastbound Ramps
26	East Garrison Road and Reservation Road		



STUDY AREA FREEWAY SEGMENTS

A similar approach was used for the determination of study area freeway segments. In reviewing available counts near the CSUMB campus, the freeway system has a day-to-day variation of two percent during the morning peak hour and five percent during the evening peak hour in the peak direction (see **Attachment B**). Freeway segments along Highway 1 to which the Project would add more than two percent traffic would be studied. The final list of study area freeway segments is presented below.

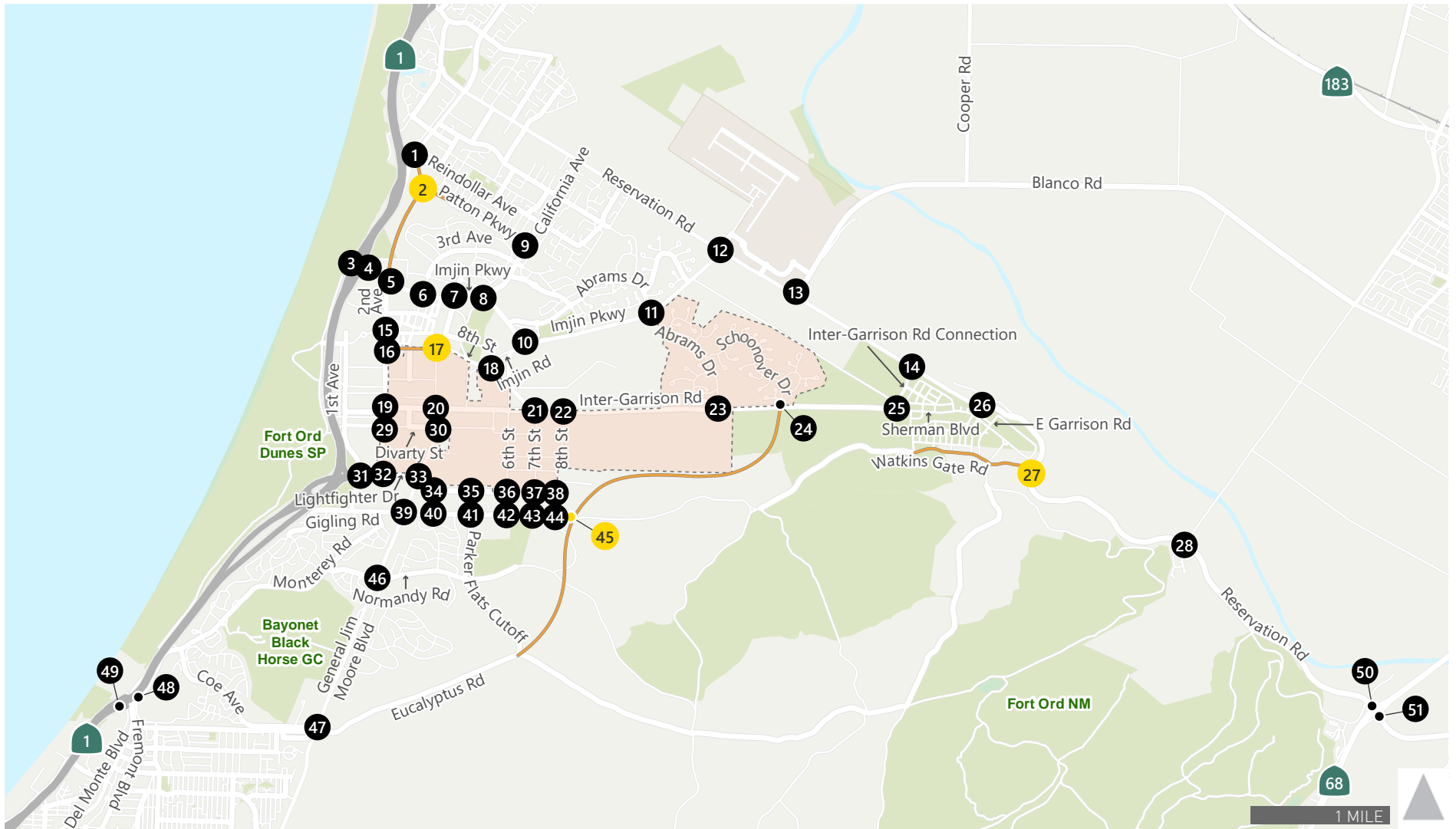
1. Highway 1 between Reservation Road and Del Monte Boulevard (2 segments)
2. Highway 1 between Del Monte Boulevard and Imjin Parkway (2 segments)
3. Highway 1 between Imjin Parkway and Lightfighter Drive (2 segments)
4. Highway 1 between Lightfighter Drive and Fremont Boulevard-Del Monte Boulevard (2 segments)
5. Highway 1 between Fremont Boulevard-Del Monte Boulevard and Canyon Del Rey Boulevard (2 segments)

In addition, the following freeway ramps at the two nearest interchanges closest to the CSUMB campus are studied.

1. Highway 1 and Imjin Parkway Interchange Ramps (4 ramps)
2. Highway 1 and Lightfighter Drive Interchange Ramps (4 ramps)

ATTACHMENTS

- Figure 1: Project Location and Study Area Intersections
Attachment A: Evaluation of Study Area Boundary
Attachment B: Roadway Day-to-Day Variation



- California State University Monterey Bay Campus
- # Study Intersection
- # Future Intersection
- New/Extended Roadway



Figure 1
Project Location and Study Intersections

ATTACHMENT A: Evaluation of Study Boundary

Nearby Community	Roadways	Roadway Classification	Roadway Capacity (vehicles, both directions) ¹	Peak Direction Roadway Assignment Distribution ²	A: Evening Outbound Peak Hour Vehicle Trips ³	B: Evening Outbound Peak Hour Direction Roadway Segment Threshold ⁴	Distance from CSUMB Campus ⁵	C: Study Further (Yes/No) ⁶
North								
Castroville and Northward	CA-1 between Reservation Road and Del Monte Boulevard	2-Lane Freeway	4,010	17%	81	80	6 miles	No ⁷
Marina	California Avenue between 3rd Avenue and Patton Parkway	2-Lane Arterial	1,870	4%	21	94	2.5 miles	No
	Del Monte Boulevard between Reindollar Avenue and Cypress Avenue	4-Lane Arterial, Divided	3,740	4%	18	188	4 miles	No
East								
Salinas	Blanco Road between Reservation Road and Cooper Road	Minor 2-Lane Highway	1,740	11%	54	87	5 miles	No
	Davis Road between Reservation Road and Foster Road	Minor 2-Lane Highway	3,480	25%	116	174	8 miles	No
	Highway 68 between Reservation Road and Spreckels Avenue	4-Lane, Multilane Highway	1,825	0%	1	182	10 miles	No
South								
Seaside	Fremont Boulevard just south of CA-1	4-Lane Arterial, Divided	3,740	4%	19	188	4 miles	No
	California Avenue just south of CA-1	2-Lane Arterial	1,870	0%	2	94	4 miles	No
	Canyon Del Rey Boulevard just south of CA-1	4-Lane Arterial, Divided	3,740	3%	13	188	5 miles	No
	General Jim Moore Boulevard between Coe Avenue and San Pablo Avenue	4-Lane Arterial, Divided	3,740	8%	37	188	3 miles	No
Monterey and Westward	CA-1 between Canyon Del Rey Boulevard and Del Monte Boulevard	2-Lane Freeway	4,010	23%	108	80	5 miles	No ⁸
Totals				100%	470			

Notes:

- Roadway capacity for CA US-1 and Highway 68 segments represent peak direction capacity only.
- Peak Direction Roadway Assignment Distribution obtained from the AMBAG Travel Model.
- Evening Outbound Peak Hour Direction Project Trips of the project boundary (470 vehicles).
- Non-freeway roadway segment threshold calculated by multiplying the roadways' peak direction capacity by the capacity threshold (ten percent) as described in the memorandum. Freeway segment threshold calculated by multiplying the freeways' peak direction capacity by the capacity threshold (two percent) as described in the memorandum.
- Distance measured along roadway.
- If column A value is less than column B value, then column C equals No. Otherwise, Column C equals Yes unless noted by a footnote.
- The vehicle demand for the evening outbound peak hour direction of the next freeway segment (CA-1 between Del Monte Boulevard and Nashau Road) is 76 vehicles which is less than the Evening Outbound Peak Hour Direction Roadway Segment Threshold. Therefore the last freeway segment to be studied north of the CSUMB campus is between Reservation Road and Del Monte Boulevard.
- The vehicle demand for the evening outbound peak hour direction of the next freeway segment (CA-1 between Del Monte Boulevard and Casa Verde Way) is 67 vehicles which is less than the Evening Outbound Peak Hour Direction Roadway Segment Threshold. Therefore the last freeway segment to be studied south of the CSUMB campus is between Canyon Del Rey Boulevard and Del Monte Boulevard.

Source: Fehr & Peers, 2019.

ATTACHMENT B: ROADWAY DAY-TO-DAY VARIATION

AM Peak Hour: Peak Direction Highway Volumes¹

AM Peak Hour Minimum	AM Peak Hour Maximum	AM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
24,014	24,563	24,289	549	2%

AM Peak Hour: Two-Way Local Roads and Streets Volumes²

AM Peak Hour Minimum	AM Peak Hour Maximum	AM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
27,093	30,756	28,911	3,663	13%

AM Peak Hour: Two-Way Local Roads and Streets Around 5-mile Distance from CSUMB³

AM Peak Hour Minimum	AM Peak Hour Maximum	AM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
4,317	4,768	4,543	451	10%

PM Peak Hour: Peak Direction Highway Volumes¹

PM Peak Hour Minimum	PM Peak Hour Maximum	PM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
26,263	27,579	26,921	1,316	5%

PM Peak Hour: Two-Way Local Roads and Streets Volumes²

PM Peak Hour Minimum	PM Peak Hour Maximum	PM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
25,098	28,334	26,702	3,236	12%

PM Peak Hour: Two-Way Local Roads and Streets Around 5-mile Distance from CSUMB³

PM Peak Hour Minimum	PM Peak Hour Maximum	PM Peak Hour Average	Difference in Peak Hour Max and Min	Percent Variation
4,455	5,274	4,821	819	17%

Notes:

1. Peak direction is towards CSUMB Campus in the morning and away from CSUMB Campus in the evening. The day-to-day variation is based on Highway 1 freeway segments between SR 68 and Reservation Road.

2. Total variation based on 34 roadway segments with the project study area generally bounded by Reservation Road to the north, Davis Road to the east, Coe Avenue to the south, and Highway 1 to the west.

3. Total variation based on 6 roadway segments including Del Monte Boulevard between Beach Road and Reservation Road, General Jim Moore between Coe Avenue and San Pablo Avenue, Reservation Road between Robin Drive and Del Monte Boulevard, Reservation Road between Salinas Avenue and Imjin Parkway, Reservation Road between Inter-Garrison Road and East Garrison Road, and Coe Avenue between Buttercup Boulevard and Malmedy Road.

Source: Fehr & Peers, May 2018.



APPENDIX C: EXISTING PARKING INVENTORY



Table C1: CSUMB Park Inventory

Latitude	Longitude	IDAX ID	Lot Number	Total Spaces
36.65086354	-121.8088451	1	106	106
36.65052353	-121.8076757	2	Otter Soccer Parking	64
36.650091	-121.8063748	3	107	152
36.65139344	-121.8077997	4	100	24
36.6511562	-121.8060918	5	902	16
36.65234941	-121.8041915	6	903	92
36.65383418	-121.8068013	7	91	29
36.65456472	-121.8063399	8	84	12
36.65449156	-121.8087526	9	90	50
36.65533721	-121.807217	10	86	174
36.65508438	-121.8053944	11	82 West	87
36.65541253	-121.8035169	12	82 East	44
36.65513387	-121.8033265	13	80	67
36.6557751	-121.8021972	14	300	224
36.65719633	-121.7996505	15	301	385
36.65829693	-121.7959504	16	Promontory	382
36.65566536	-121.7945194	17	71	707
36.65497572	-121.7957311	18	72	45
36.65515109	-121.7917112	19	490	72
36.65377716	-121.7892864	20	7th Ave - Temp	0
36.65167049	-121.7887312	21	59	862
36.64899728	-121.7878689	22	37	86
36.64824624	-121.7876362	23	35	11
36.64925497	-121.7926633	24	42	96
36.64795734	-121.7942532	25	30	45
36.64944219	-121.7942445	26	29	122
36.65140151	-121.7941439	27	28	168
36.65295946	-121.7939327	28	13	82
36.65429037	-121.7961314	29	12 - Temp	0
36.65439527	-121.7975208	30	16	46
36.65431511	-121.800148	31	18	188
36.65409563	-121.8016487	32	97	72
36.65306221	-121.7995895	33	208	32
36.65192711	-121.7998332	34	23	0
36.65239864	-121.7998114	35	508	96
36.65311816	-121.7986775	36	1	31
36.6530337	-121.7970722	37	205	19
36.65300304	-121.8015448	38	98	3
36.65421721	-121.793181	39	201	6
36.65343627	-121.7955527	40	202	24

Key

-  existing parking for future lot 4
-  residential parking

Total	4721
--------------	-------------

Source: CSUMB data received May 2018

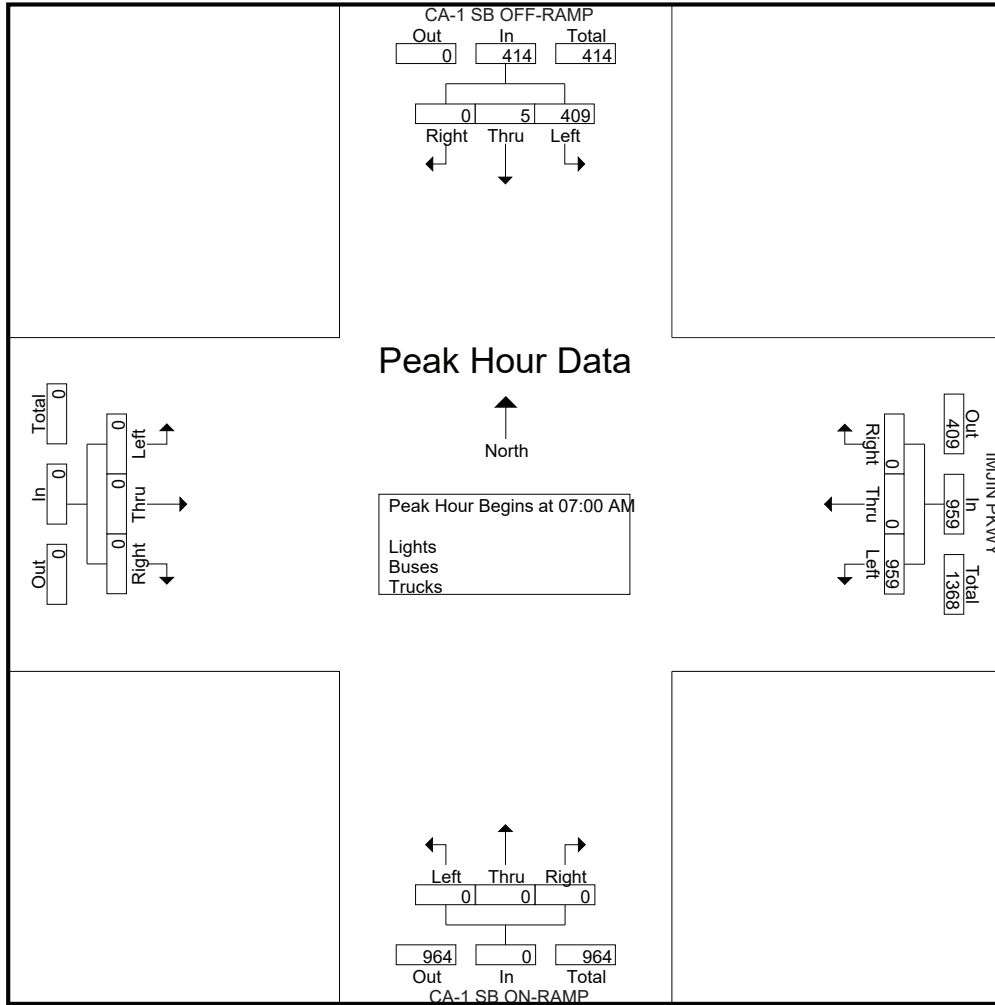
APPENDIX D: EXISTING TRAFFIC COUNTS



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 5/3/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

Start Time	CA-1 SB OFF-RAMP Southbound					IMJIN PKWY Westbound					CA-1 SB ON-RAMP Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

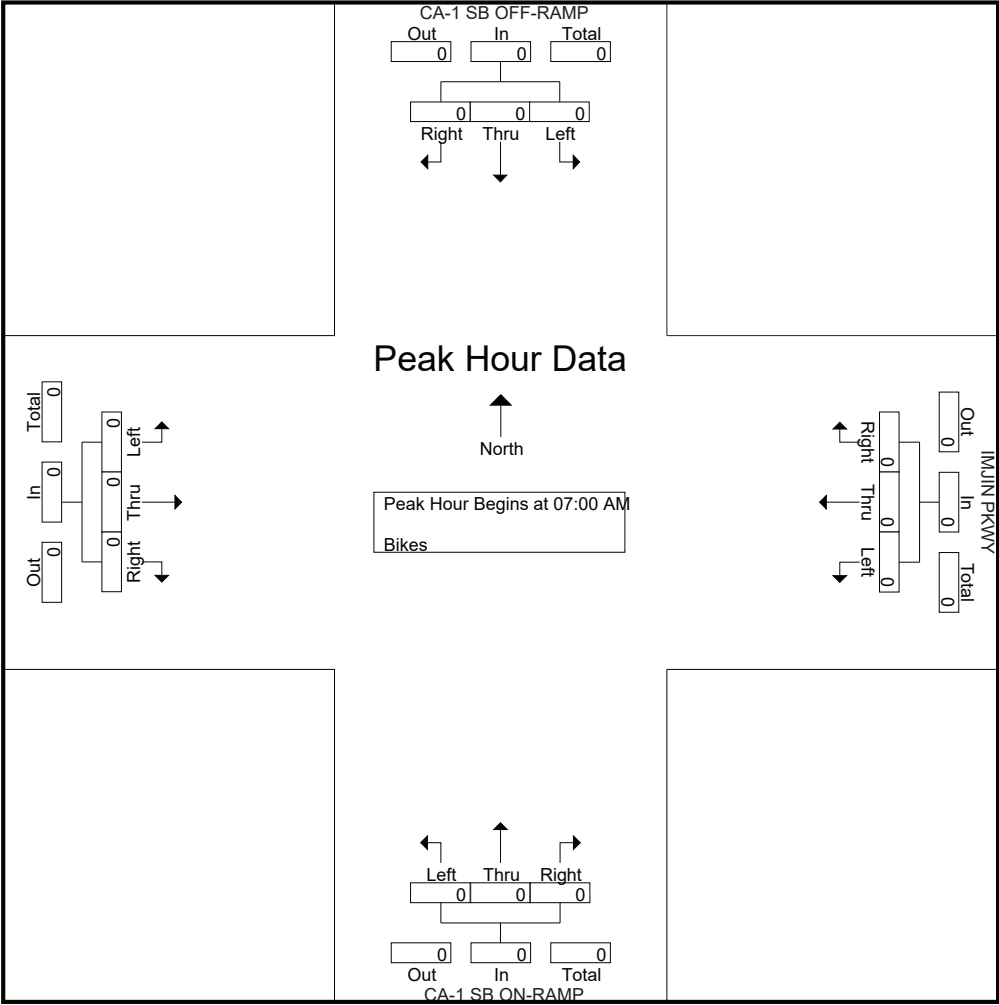
Start Time	CA-1 SB OFF-RAMP Southbound				IMJIN PKWY Westbound				CA-1 SB ON-RAMP Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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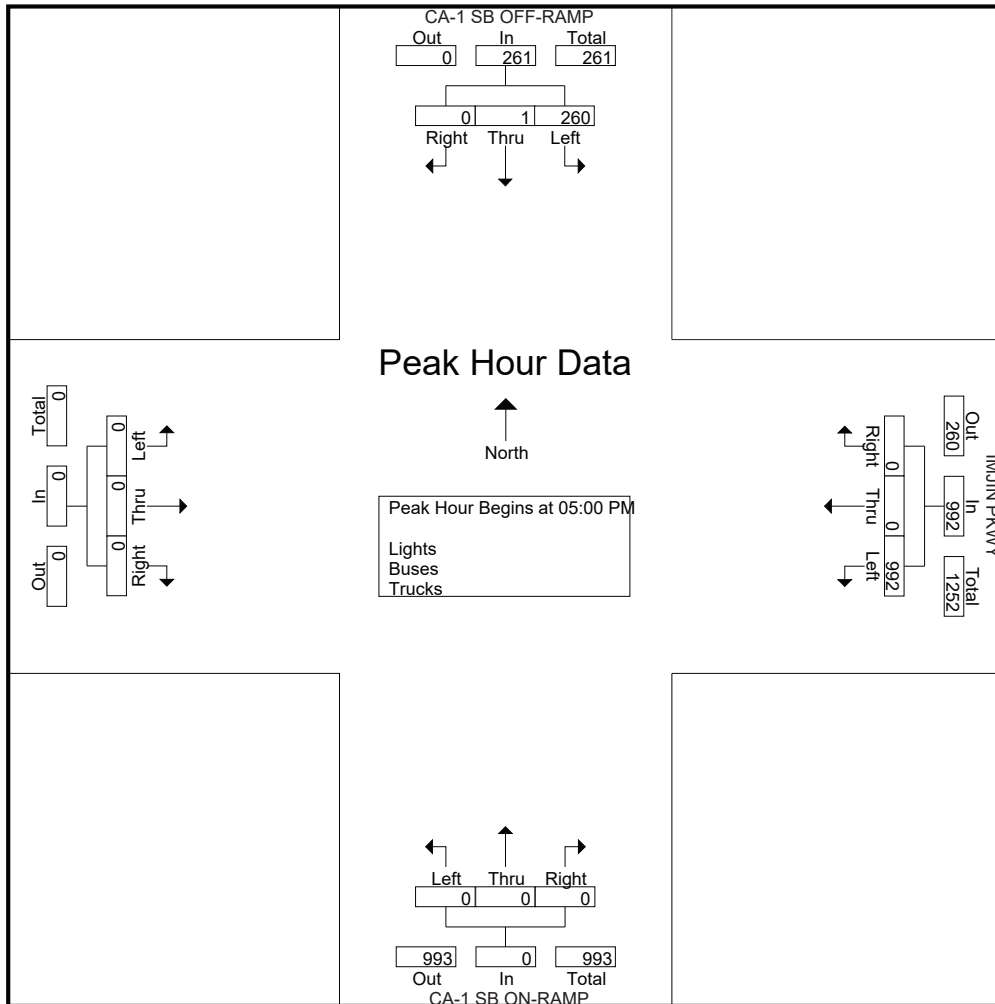
File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 5/3/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 1PM FINAL
 Site Code : 00000001
 Start Date : 5/3/2017
 Page No : 2



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 tdsbay@cs.com

File Name : 1PM FINAL
 Site Code : 00000001
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

Start Time	CA-1 SB OFF-RAMP Southbound					IMJIN PKWY Westbound					CA-1 SB ON-RAMP Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

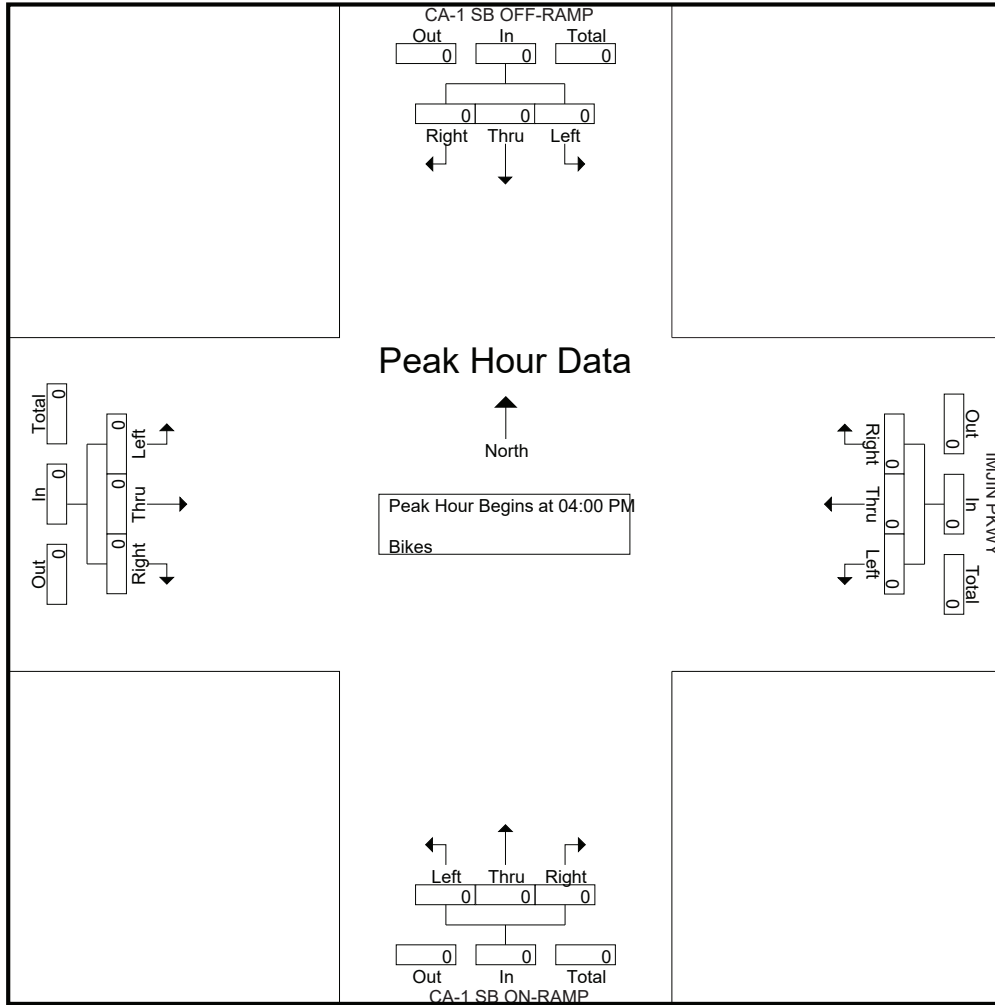
Start Time	CA-1 SB OFF-RAMP Southbound				IMJIN PKWY Westbound				CA-1 SB ON-RAMP Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 1PM FINAL
Site Code : 00000001
Start Date : 5/3/2017
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

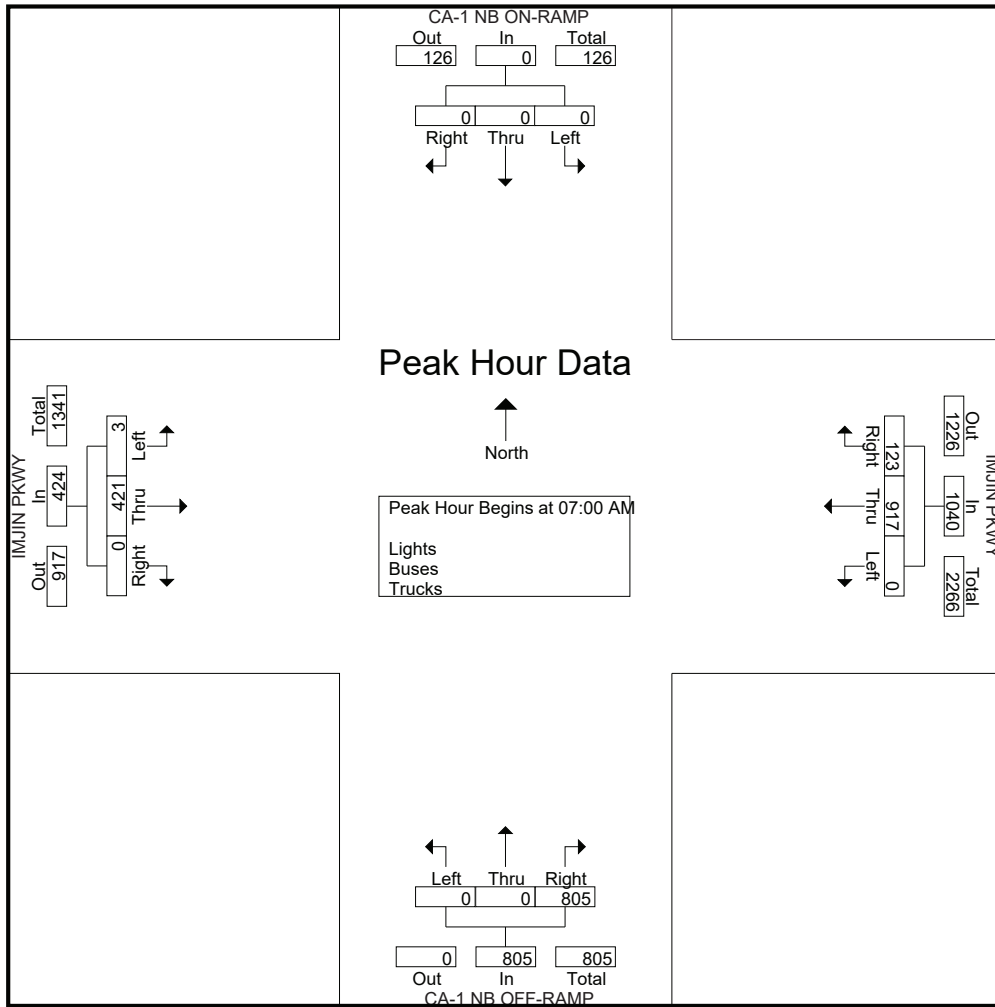
Start Time	CA-1 NB ON-RAMP Southbound					IMJIN PKWY Westbound					CA-1 NB OFF-RAMP Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	28	301	0	0	329	149	0	0	0	149	0	67	1	0	68	546
07:15 AM	0	0	0	0	0	27	253	0	0	280	201	0	0	0	201	0	81	1	0	82	563
07:30 AM	0	0	0	1	1	28	191	0	0	219	244	0	0	0	244	0	113	0	0	113	577
07:45 AM	0	0	0	2	2	40	172	0	0	212	211	0	0	0	211	0	160	1	0	161	586
Total	0	0	0	3	3	123	917	0	0	1040	805	0	0	0	805	0	421	3	0	424	2272
08:00 AM	0	0	0	0	0	38	189	0	0	227	225	1	0	0	226	0	80	1	0	81	534
08:15 AM	0	0	0	0	0	40	205	0	0	245	195	0	1	0	196	0	74	0	0	74	515
08:30 AM	0	0	0	0	0	44	239	0	0	283	139	0	0	0	139	0	42	3	0	45	467
08:45 AM	0	0	0	0	0	42	228	0	0	270	146	1	0	0	147	0	58	3	0	61	478
Total	0	0	0	0	0	164	861	0	0	1025	705	2	1	0	708	0	254	7	0	261	1994
Grand Total	0	0	0	3	3	287	1778	0	0	2065	1510	2	1	0	1513	0	675	10	0	685	4266
Apprch %	0	0	0	100		13.9	86.1	0	0		99.8	0.1	0.1	0		0	98.5	1.5	0		
Total %	0	0	0	0.1	0.1	6.7	41.7	0	0	48.4	35.4	0	0	0	35.5	0	15.8	0.2	0	16.1	
Lights	0	0	0	3	3	257	1730	0	0	1987	1475	2	1	0	1478	0	655	10	0	665	4133
% Lights	0	0	0	100	100	89.5	97.3	0	0	96.2	97.7	100	100	0	97.7	0	97	100	0	97.1	96.9
Buses	0	0	0	0	0	5	10	0	0	15	9	0	0	0	9	0	2	0	0	2	26
% Buses	0	0	0	0	0	1.7	0.6	0	0	0.7	0.6	0	0	0	0.6	0	0.3	0	0	0.3	0.6
Trucks	0	0	0	0	0	25	38	0	0	63	26	0	0	0	26	0	18	0	0	18	107
% Trucks	0	0	0	0	0	8.7	2.1	0	0	3.1	1.7	0	0	0	1.7	0	2.7	0	0	2.6	2.5

Start Time	CA-1 NB ON-RAMP Southbound				IMJIN PKWY Westbound				CA-1 NB OFF-RAMP Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	28	301	0	329	149	0	0	149	0	67	1	68	546
07:15 AM	0	0	0	0	27	253	0	280	201	0	0	201	0	81	1	82	563
07:30 AM	0	0	0	0	28	191	0	219	244	0	0	244	0	113	0	113	576
07:45 AM	0	0	0	0	40	172	0	212	211	0	0	211	0	160	1	161	584
Total Volume	0	0	0	0	123	917	0	1040	805	0	0	805	0	421	3	424	2269
% App. Total	0	0	0	0	11.8	88.2	0		100	0	0		0	99.3	0.7		
PHF	.000	.000	.000	.000	.769	.762	.000	.790	.825	.000	.000	.825	.000	.658	.750	.658	.971

Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

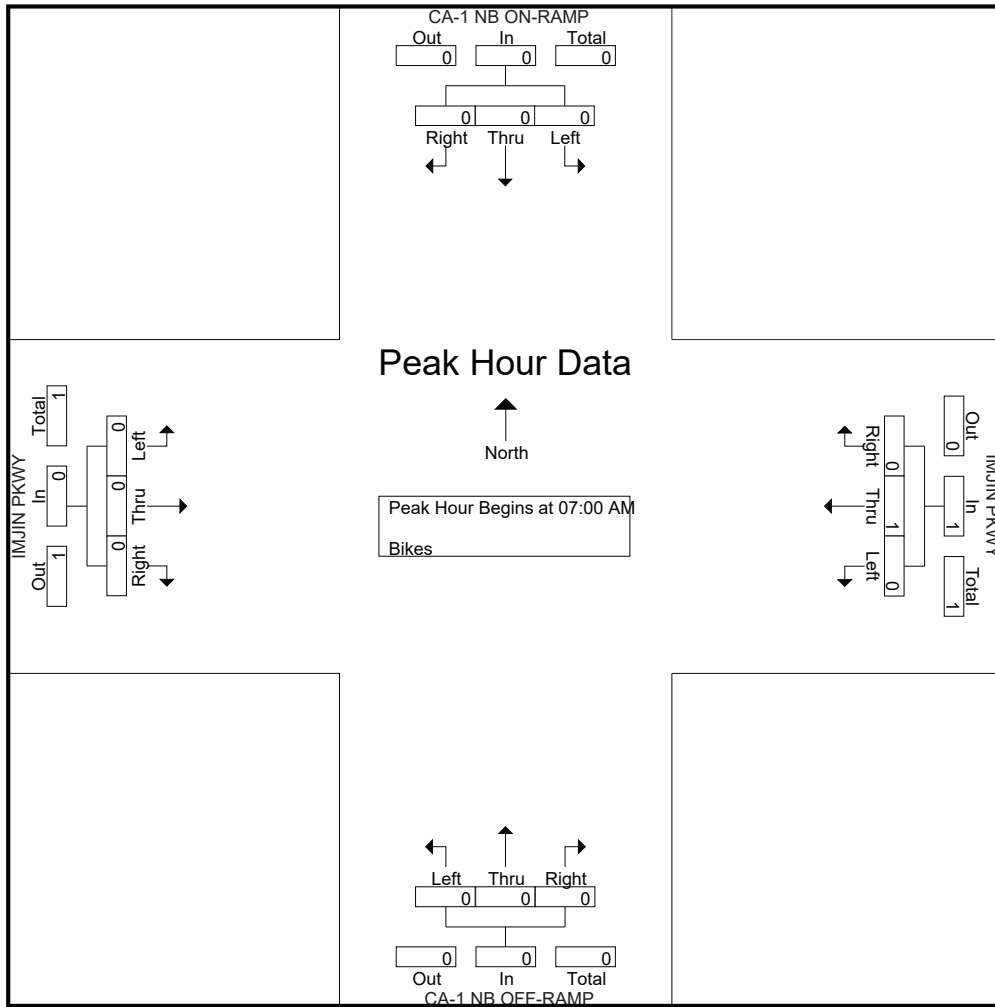
Start Time	CA-1 NB ON-RAMP Southbound					IMJIN PKWY Westbound					CA-1 NB OFF-RAMP Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	100	0	0	100	0	0	0	0		0	0	0	0		

Start Time	CA-1 NB ON-RAMP Southbound				IMJIN PKWY Westbound				CA-1 NB OFF-RAMP Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Traffic Data Service

San Jose, CA
(408) 622-4787
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File Name : 2AM FINAL
Site Code : 00000002
Start Date : 5/3/2017
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

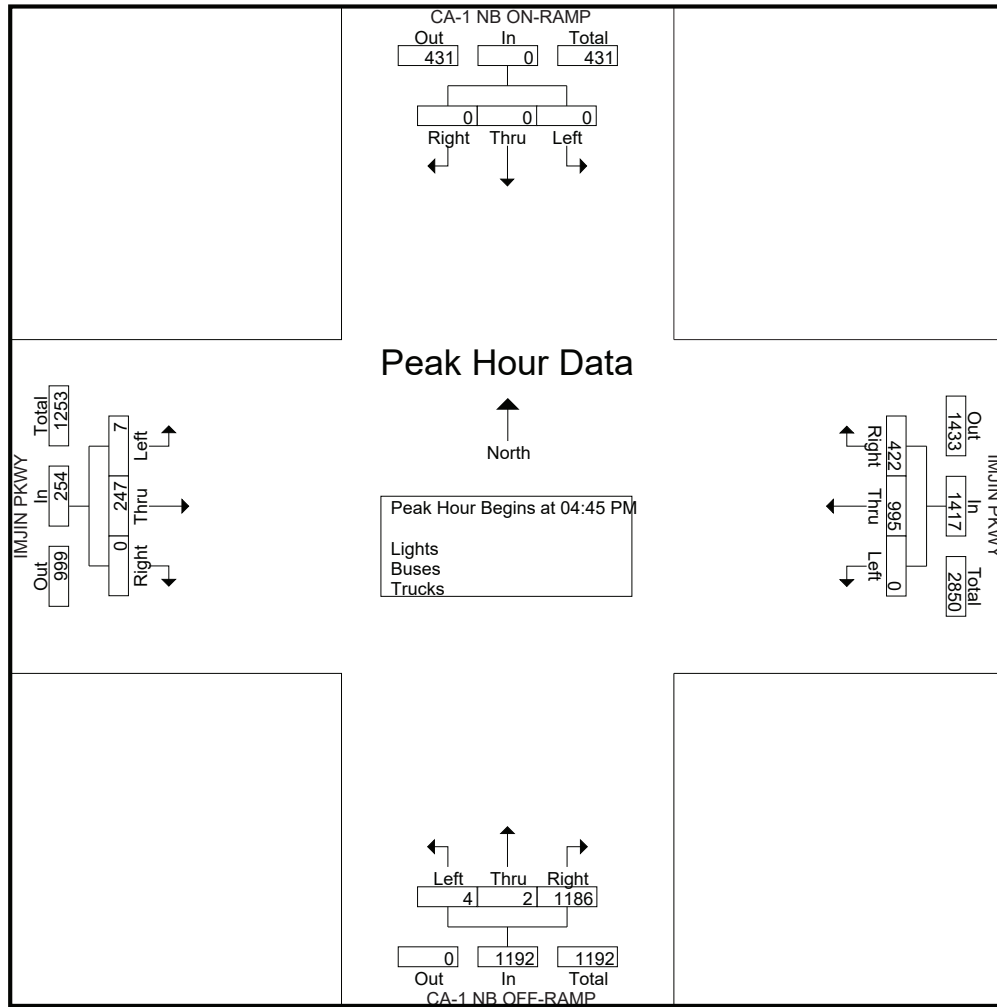
Start Time	CA-1 NB ON-RAMP Southbound					IMJIN PKWY Westbound					CA-1 NB OFF-RAMP Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	2	2	96	218	0	0	314	296	1	3	0	300	0	66	1	0	67	683
04:15 PM	0	0	0	0	0	109	237	0	0	346	297	0	1	0	298	0	56	2	0	58	702
04:30 PM	0	0	0	0	0	96	247	0	0	343	304	0	1	0	305	0	59	2	0	61	709
04:45 PM	0	0	0	0	0	96	243	0	0	339	291	1	2	0	294	0	63	3	0	66	699
Total	0	0	0	2	2	397	945	0	0	1342	1188	2	7	0	1197	0	244	8	0	252	2793
05:00 PM	0	0	0	0	0	114	245	0	0	359	291	0	1	0	292	0	56	2	0	58	709
05:15 PM	0	0	0	0	0	101	237	0	0	338	302	0	1	0	303	0	56	1	0	57	698
05:30 PM	0	0	0	1	1	111	270	0	0	381	302	1	0	0	303	0	72	1	0	73	758
05:45 PM	0	0	0	0	0	90	214	0	0	304	299	0	1	0	300	0	72	1	0	73	677
Total	0	0	0	1	1	416	966	0	0	1382	1194	1	3	0	1198	0	256	5	0	261	2842
Grand Total	0	0	0	3	3	813	1911	0	0	2724	2382	3	10	0	2395	0	500	13	0	513	5635
Apprch %	0	0	0	100		29.8	70.2	0	0		99.5	0.1	0.4	0		0	97.5	2.5	0		
Total %	0	0	0	0.1	0.1	14.4	33.9	0	0	48.3	42.3	0.1	0.2	0	42.5	0	8.9	0.2	0	9.1	
Lights	0	0	0	3	3	805	1887	0	0	2692	2354	3	10	0	2367	0	493	12	0	505	5567
% Lights	0	0	0	100	100	99	98.7	0	0	98.8	98.8	100	100	0	98.8	0	98.6	92.3	0	98.4	98.8
Buses	0	0	0	0	0	2	6	0	0	8	8	0	0	0	8	0	3	0	0	3	19
% Buses	0	0	0	0	0	0.2	0.3	0	0	0.3	0.3	0	0	0	0.3	0	0.6	0	0	0.6	0.3
Trucks	0	0	0	0	0	6	18	0	0	24	20	0	0	0	20	0	4	1	0	5	49
% Trucks	0	0	0	0	0	0.7	0.9	0	0	0.9	0.8	0	0	0	0.8	0	0.8	7.7	0	1	0.9

Start Time	CA-1 NB ON-RAMP Southbound				IMJIN PKWY Westbound				CA-1 NB OFF-RAMP Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	96	243	0	339	291	1	2	294	0	63	3	66	699
05:00 PM	0	0	0	0	114	245	0	359	291	0	1	292	0	56	2	58	709
05:15 PM	0	0	0	0	101	237	0	338	302	0	1	303	0	56	1	57	698
05:30 PM	0	0	0	0	111	270	0	381	302	1	0	303	0	72	1	73	757
Total Volume	0	0	0	0	422	995	0	1417	1186	2	4	1192	0	247	7	254	2863
% App. Total	0	0	0	0	29.8	70.2	0		99.5	0.2	0.3		0	97.2	2.8		
PHF	.000	.000	.000	.000	.925	.921	.000	.930	.982	.500	.500	.983	.000	.858	.583	.870	.946

Traffic Data Service

San Jose, CA
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File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

Start Time	CA-1 NB ON-RAMP Southbound					IMJIN PKWY Westbound					CA-1 NB OFF-RAMP Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	100	0	0	100	0	0	0	0		0	0	0	0		

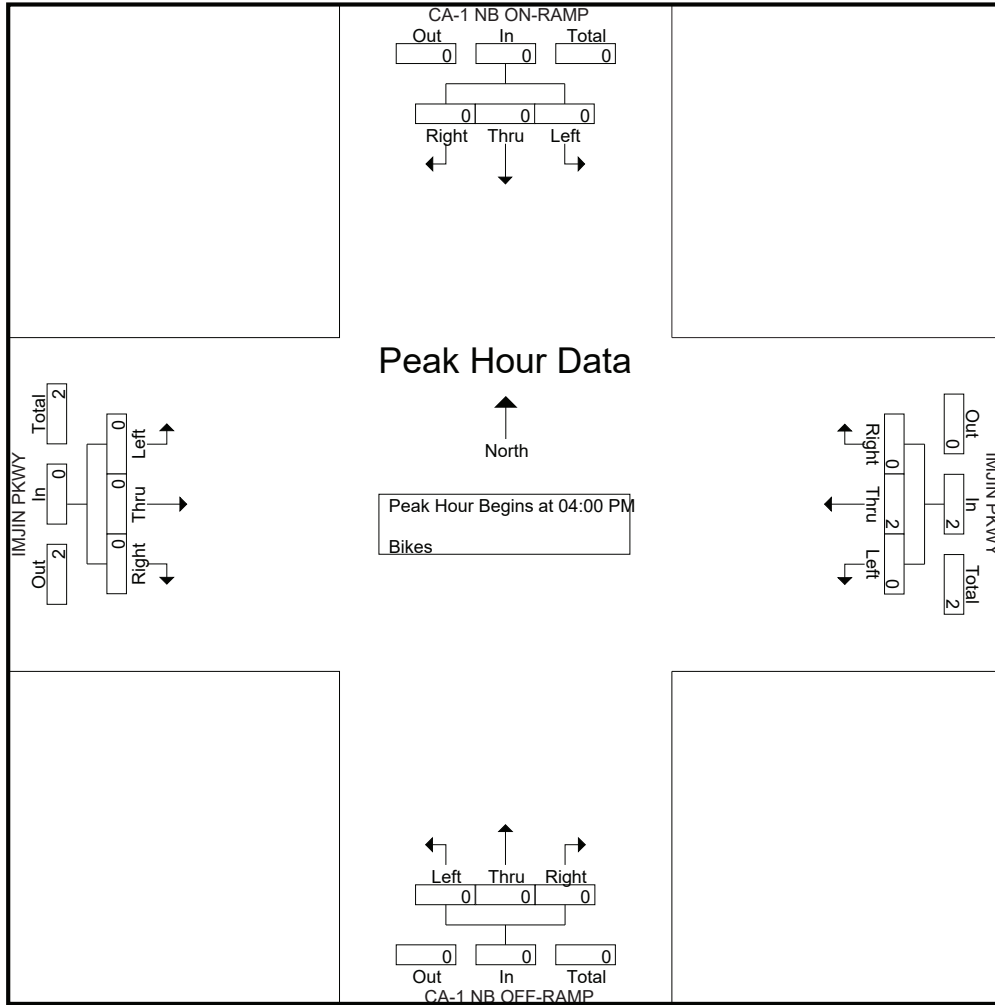
Start Time	CA-1 NB ON-RAMP Southbound				IMJIN PKWY Westbound				CA-1 NB OFF-RAMP Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 2PM FINAL
Site Code : 00000002
Start Date : 5/3/2017
Page No : 2



Traffic Data Service

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File Name : 3AM FINAL
 Site Code : 00000003
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

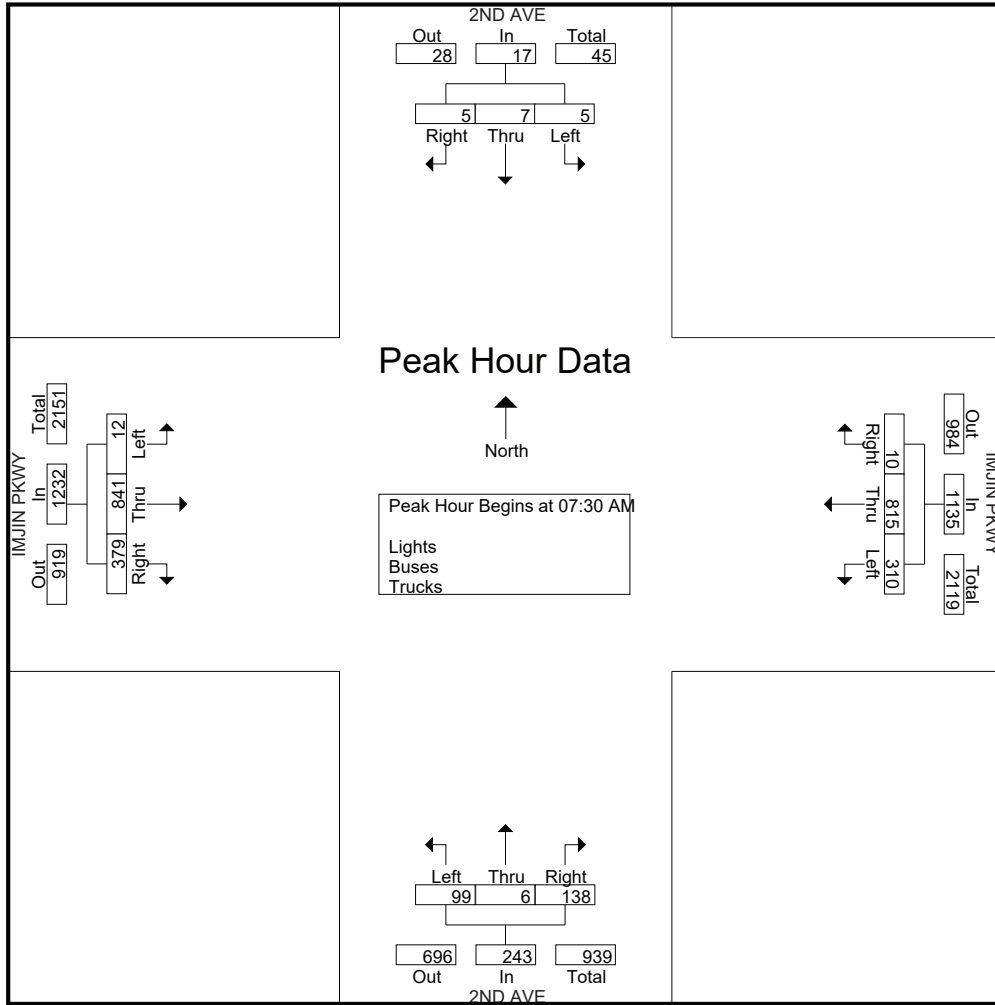
Start Time	2ND AVE Southbound					IMJIN PKWY Westbound					2ND AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	1	303	51	0	355	15	1	15	0	31	28	132	5	0	165	551
07:15 AM	2	1	0	0	3	1	251	81	1	334	14	1	18	0	33	74	173	0	1	248	618
07:30 AM	1	3	2	0	6	3	219	91	1	314	31	2	11	0	44	74	210	4	0	288	652
07:45 AM	2	1	2	0	5	2	201	84	0	287	43	2	27	0	72	82	219	2	1	304	668
Total	5	5	4	0	14	7	974	307	2	1290	103	6	71	0	180	258	734	11	2	1005	2489
08:00 AM	1	2	1	0	4	1	184	71	0	256	39	1	30	0	70	117	208	3	0	328	658
08:15 AM	1	1	0	0	2	4	211	64	0	279	25	1	31	0	57	106	204	3	0	313	651
08:30 AM	2	1	3	0	6	1	247	66	0	314	28	3	32	0	63	73	154	2	0	229	612
08:45 AM	2	0	1	2	5	0	231	54	0	285	26	0	36	0	62	56	145	6	2	209	561
Total	6	4	5	2	17	6	873	255	0	1134	118	5	129	0	252	352	711	14	2	1079	2482
Grand Total	11	9	9	2	31	13	1847	562	2	2424	221	11	200	0	432	610	1445	25	4	2084	4971
Apprch %	35.5	29	29	6.5		0.5	76.2	23.2	0.1		51.2	2.5	46.3	0		29.3	69.3	1.2	0.2		
Total %	0.2	0.2	0.2	0	0.6	0.3	37.2	11.3	0	48.8	4.4	0.2	4	0	8.7	12.3	29.1	0.5	0.1	41.9	
Lights	10	9	9	2	30	13	1793	549	2	2357	214	11	186	0	411	594	1418	25	4	2041	4839
% Lights	90.9	100	100	100	96.8	100	97.1	97.7	100	97.2	96.8	100	93	0	95.1	97.4	98.1	100	100	97.9	97.3
Buses	0	0	0	0	0	0	6	8	0	14	4	0	4	0	8	4	9	0	0	13	35
% Buses	0	0	0	0	0	0	0.3	1.4	0	0.6	1.8	0	2	0	1.9	0.7	0.6	0	0	0.6	0.7
Trucks	1	0	0	0	1	0	48	5	0	53	3	0	10	0	13	12	18	0	0	30	97
% Trucks	9.1	0	0	0	3.2	0	2.6	0.9	0	2.2	1.4	0	5	0	3	2	1.2	0	0	1.4	2

Start Time	2ND AVE Southbound				IMJIN PKWY Westbound				2ND AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	3	2	6	3	219	91	313	31	2	11	44	74	210	4	288	651
07:45 AM	2	1	2	5	2	201	84	287	43	2	27	72	82	219	2	303	667
08:00 AM	1	2	1	4	1	184	71	256	39	1	30	70	117	208	3	328	658
08:15 AM	1	1	0	2	4	211	64	279	25	1	31	57	106	204	3	313	651
Total Volume	5	7	5	17	10	815	310	1135	138	6	99	243	379	841	12	1232	2627
% App. Total	29.4	41.2	29.4		0.9	71.8	27.3		56.8	2.5	40.7		30.8	68.3	1		
PHF	.625	.583	.625	.708	.625	.930	.852	.907	.802	.750	.798	.844	.810	.960	.750	.939	.985

Traffic Data Service

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File Name : 3AM FINAL
 Site Code : 00000003
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 Page No : 2



Traffic Data Service

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File Name : 3AM FINAL
 Site Code : 00000003
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

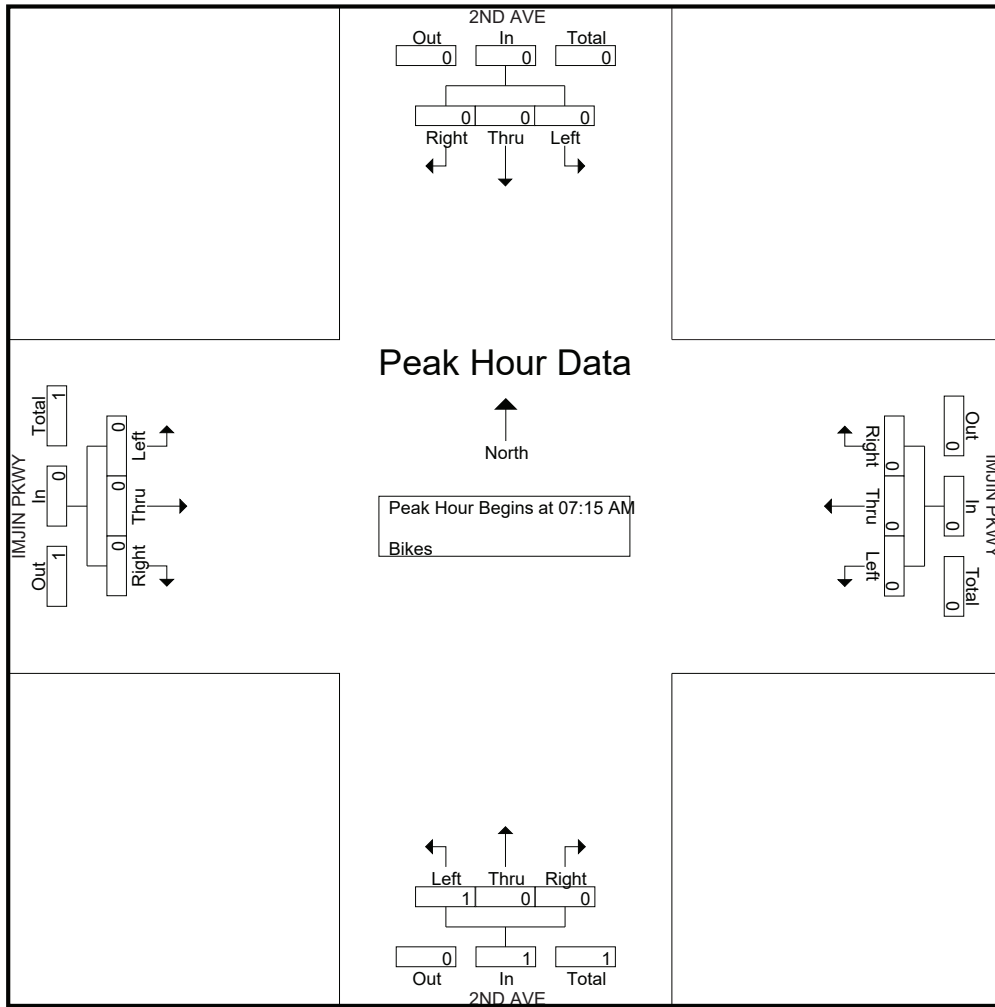
Start Time	2ND AVE Southbound					IMJIN PKWY Westbound					2ND AVE Northbound					IMJIN PKWY Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	0	0	0		0	0	100	0		0	0	0	0			
Total %	0	0	0	0		0	0	0	0		0	0	100	0	100	0	0	0	0			

Start Time	2ND AVE Southbound				IMJIN PKWY Westbound				2ND AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	

Traffic Data Service

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File Name : 3AM FINAL
Site Code : 00000003
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

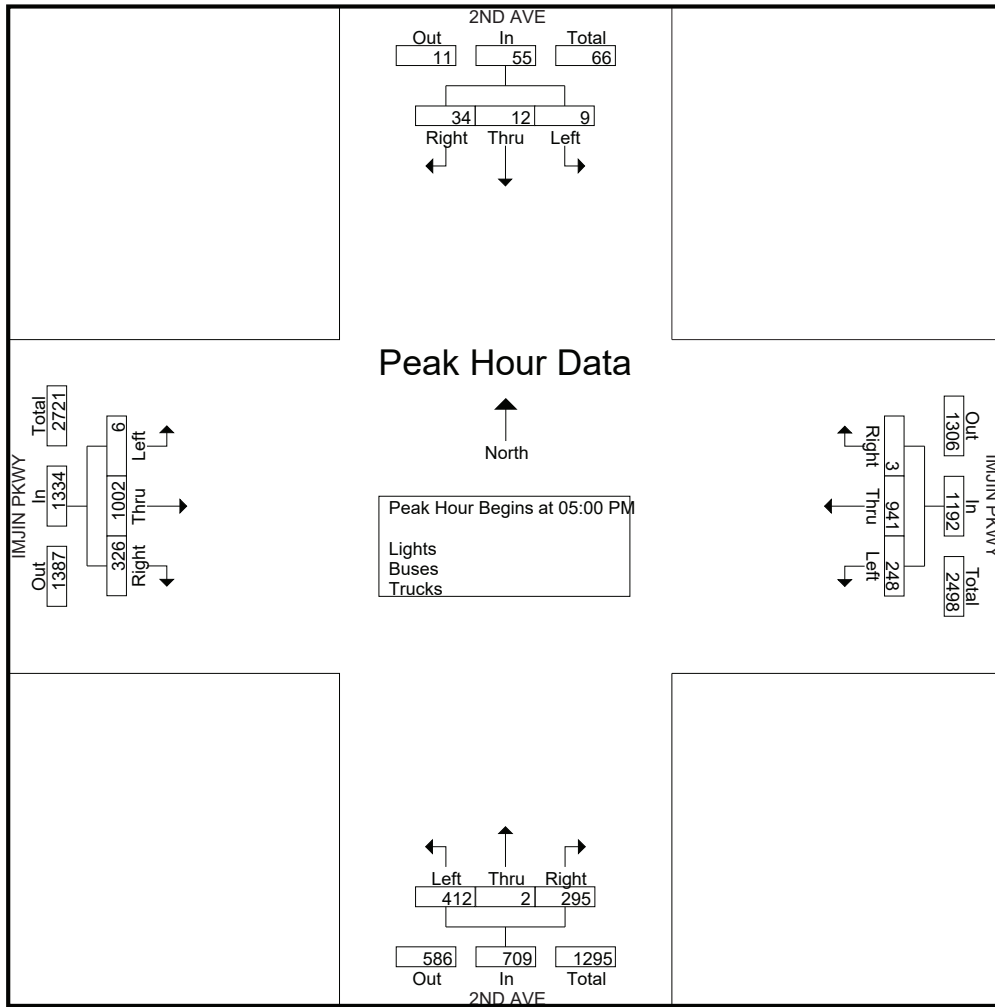
Start Time	2ND AVE Southbound					IMJIN PKWY Westbound					2ND AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	24	5	5	2	36	2	189	57	0	248	71	0	93	0	164	85	223	0	2	310	758
04:15 PM	5	1	2	0	8	0	204	47	1	252	49	1	115	0	165	86	261	2	0	349	774
04:30 PM	7	0	1	0	8	0	209	55	0	264	72	1	124	0	197	95	248	1	1	345	814
04:45 PM	7	0	2	1	10	3	224	67	0	294	81	0	79	0	160	81	252	1	2	336	800
Total	43	6	10	3	62	5	826	226	1	1058	273	2	411	0	686	347	984	4	5	1340	3146
05:00 PM	12	1	5	2	20	0	227	46	0	273	77	0	111	1	189	72	261	0	3	336	818
05:15 PM	10	3	1	2	16	0	236	70	0	306	86	2	104	0	192	85	253	3	1	342	856
05:30 PM	5	5	0	0	10	1	256	67	1	325	63	0	95	0	158	84	247	0	1	332	825
05:45 PM	7	3	3	1	14	2	222	65	0	289	69	0	102	0	171	85	241	3	2	331	805
Total	34	12	9	5	60	3	941	248	1	1193	295	2	412	1	710	326	1002	6	7	1341	3304
Grand Total	77	18	19	8	122	8	1767	474	2	2251	568	4	823	1	1396	673	1986	10	12	2681	6450
Apprch %	63.1	14.8	15.6	6.6		0.4	78.5	21.1	0.1		40.7	0.3	59	0.1		25.1	74.1	0.4	0.4		
Total %	1.2	0.3	0.3	0.1	1.9	0.1	27.4	7.3	0	34.9	8.8	0.1	12.8	0	21.6	10.4	30.8	0.2	0.2	41.6	
Lights	77	18	19	8	122	8	1742	465	2	2217	563	4	820	1	1388	668	1965	10	12	2655	6382
% Lights	100	100	100	100	100	100	98.6	98.1	100	98.5	99.1	100	99.6	100	99.4	99.3	98.9	100	100	99	98.9
Buses	0	0	0	0	0	0	12	8	0	20	3	0	2	0	5	4	1	0	0	5	30
% Buses	0	0	0	0	0	0	0.7	1.7	0	0.9	0.5	0	0.2	0	0.4	0.6	0.1	0	0	0.2	0.5
Trucks	0	0	0	0	0	0	13	1	0	14	2	0	1	0	3	1	20	0	0	21	38
% Trucks	0	0	0	0	0	0	0.7	0.2	0	0.6	0.4	0	0.1	0	0.2	0.1	1	0	0	0.8	0.6

Start Time	2ND AVE Southbound				IMJIN PKWY Westbound				2ND AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	1	5	18	0	227	46	273	77	0	111	188	72	261	0	333	812
05:15 PM	10	3	1	14	0	236	70	306	86	2	104	192	85	253	3	341	853
05:30 PM	5	5	0	10	1	256	67	324	63	0	95	158	84	247	0	331	823
05:45 PM	7	3	3	13	2	222	65	289	69	0	102	171	85	241	3	329	802
Total Volume	34	12	9	55	3	941	248	1192	295	2	412	709	326	1002	6	1334	3290
% App. Total	61.8	21.8	16.4		0.3	78.9	20.8		41.6	0.3	58.1		24.4	75.1	0.4		
PHF	.708	.600	.450	.764	.375	.919	.886	.920	.858	.250	.928	.923	.959	.960	.500	.978	.964

Traffic Data Service

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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					IMJIN PKWY Westbound					2ND AVE Northbound					IMJIN PKWY Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0			
Total %																						

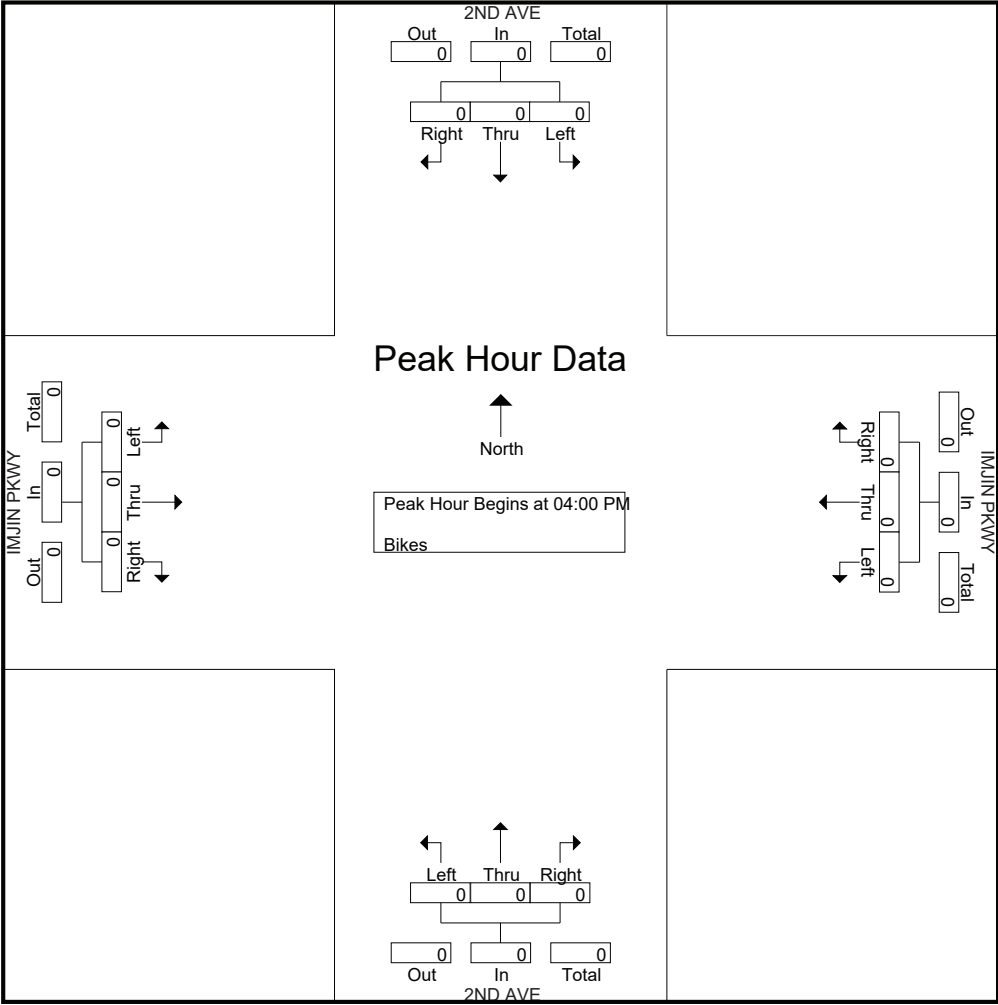
Start Time	2ND AVE Southbound				IMJIN PKWY Westbound				2ND AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 3PM FINAL
Site Code : 00000003
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 4AM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

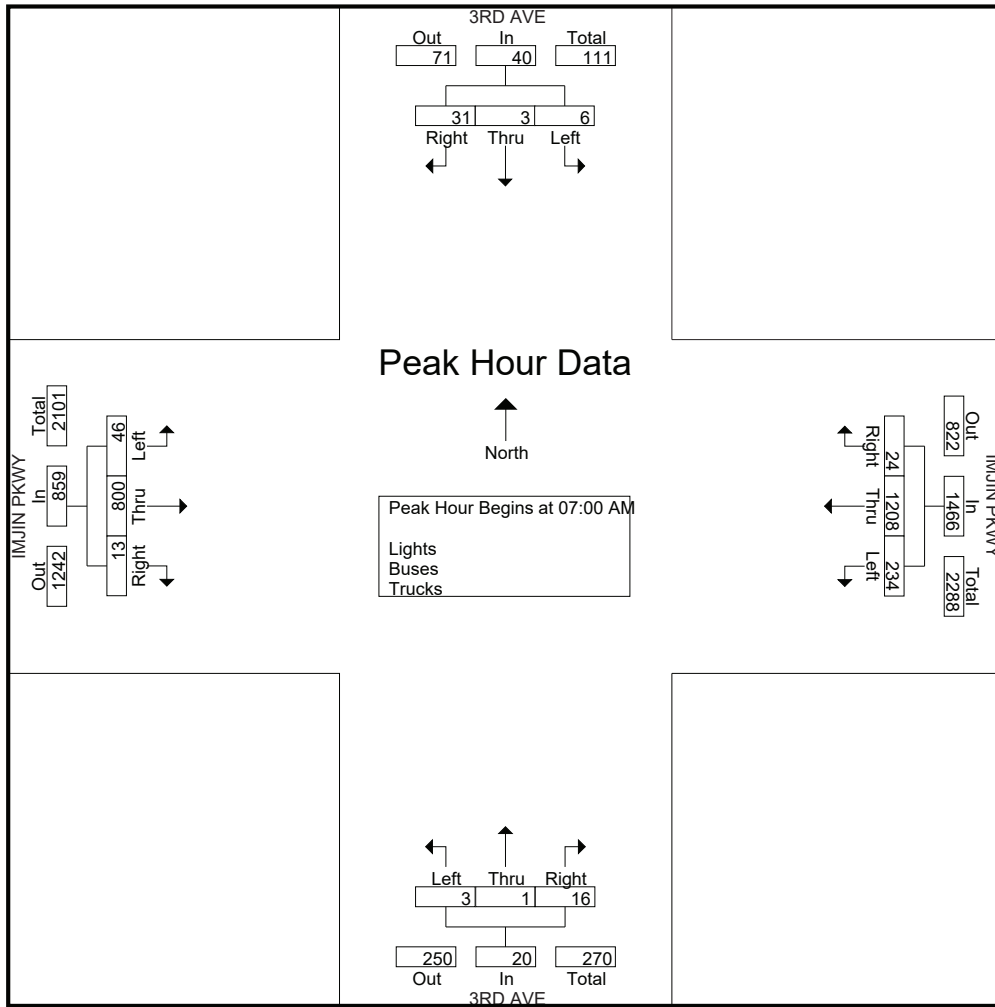
Start Time	3RD AVE Southbound					IMJIN PKWY Westbound					3RD AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	1	0	0	0	1	1	364	24	0	389	2	1	0	0	3	0	151	6	0	157	550
07:15 AM	10	1	1	0	12	4	324	69	0	397	2	0	1	0	3	2	187	7	0	196	608
07:30 AM	8	1	1	1	11	14	255	81	0	350	8	0	0	1	9	6	228	20	2	256	626
07:45 AM	12	1	4	0	17	5	265	60	0	330	4	0	2	0	6	5	234	13	0	252	605
Total	31	3	6	1	41	24	1208	234	0	1466	16	1	3	1	21	13	800	46	2	861	2389
08:00 AM	4	0	1	1	6	3	255	17	0	275	5	0	1	0	6	4	242	12	0	258	545
08:15 AM	2	0	3	0	5	3	294	13	0	310	2	0	1	0	3	0	217	15	0	232	550
08:30 AM	4	0	0	0	4	2	301	7	0	310	3	0	0	0	3	4	179	8	1	192	509
08:45 AM	0	0	0	0	0	5	264	9	0	278	2	2	1	0	5	1	160	5	0	166	449
Total	10	0	4	1	15	13	1114	46	0	1173	12	2	3	0	17	9	798	40	1	848	2053
Grand Total	41	3	10	2	56	37	2322	280	0	2639	28	3	6	1	38	22	1598	86	3	1709	4442
Apprch %	73.2	5.4	17.9	3.6		1.4	88	10.6	0		73.7	7.9	15.8	2.6		1.3	93.5	5	0.2		
Total %	0.9	0.1	0.2	0	1.3	0.8	52.3	6.3	0	59.4	0.6	0.1	0.1	0	0.9	0.5	36	1.9	0.1	38.5	
Lights	39	3	10	2	54	36	2252	279	0	2567	28	3	4	1	36	22	1563	85	3	1673	4330
% Lights	95.1	100	100	100	96.4	97.3	97	99.6	0	97.3	100	100	66.7	100	94.7	100	97.8	98.8	100	97.9	97.5
Buses	2	0	0	0	2	1	12	1	0	14	0	0	0	0	0	0	12	1	0	13	29
% Buses	4.9	0	0	0	3.6	2.7	0.5	0.4	0	0.5	0	0	0	0	0	0	0.8	1.2	0	0.8	0.7
Trucks	0	0	0	0	0	0	58	0	0	58	0	0	2	0	2	0	23	0	0	23	83
% Trucks	0	0	0	0	0	0	2.5	0	0	2.2	0	0	33.3	0	5.3	0	1.4	0	0	1.3	1.9

Start Time	3RD AVE Southbound				IMJIN PKWY Westbound				3RD AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	1	0	0	1	1	364	24	389	2	1	0	3	0	151	6	157	550
07:15 AM	10	1	1	12	4	324	69	397	2	0	1	3	2	187	7	196	608
07:30 AM	8	1	1	10	14	255	81	350	8	0	0	8	6	228	20	254	622
07:45 AM	12	1	4	17	5	265	60	330	4	0	2	6	5	234	13	252	605
Total Volume	31	3	6	40	24	1208	234	1466	16	1	3	20	13	800	46	859	2385
% App. Total	77.5	7.5	15		1.6	82.4	16		80	5	15		1.5	93.1	5.4		
PHF	.646	.750	.375	.588	.429	.830	.722	.923	.500	.250	.375	.625	.542	.855	.575	.845	.959

Traffic Data Service

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File Name : 4AM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 2



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File Name : 4AM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

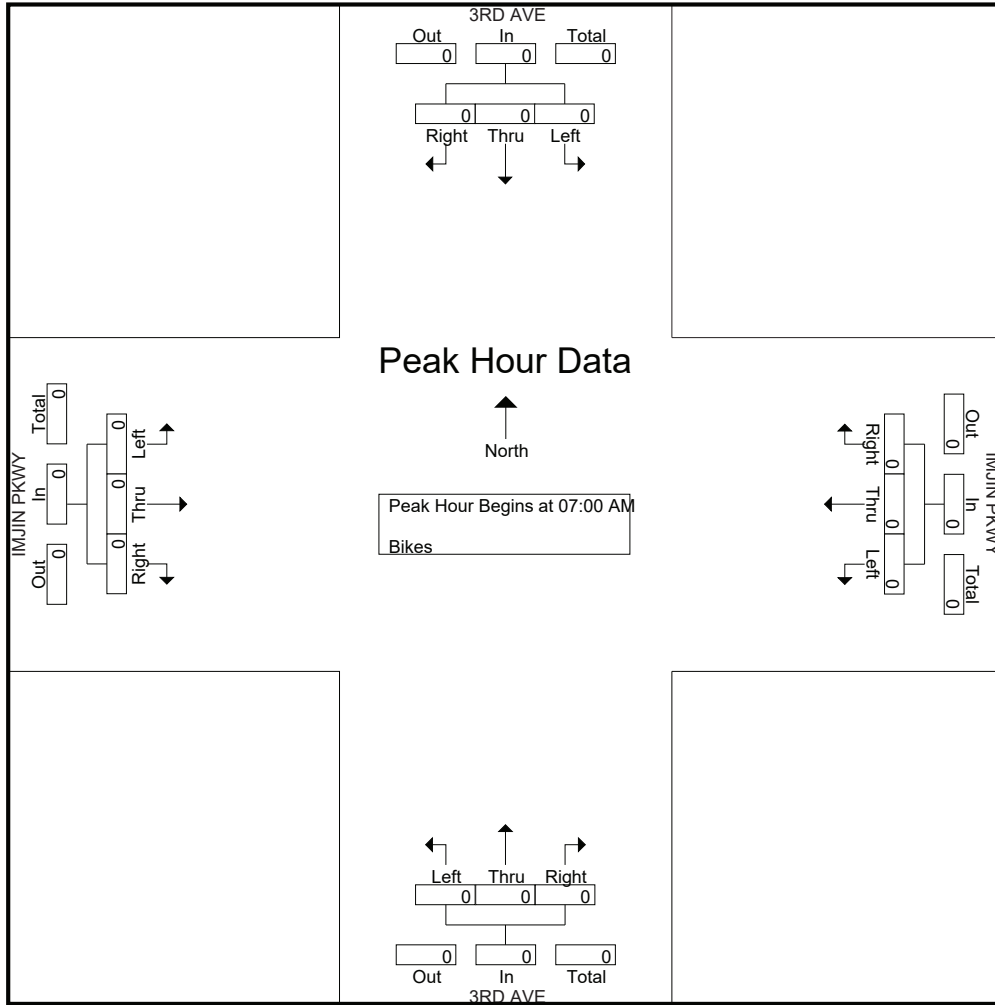
Start Time	3RD AVE Southbound					IMJIN PKWY Westbound					3RD AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Start Time	3RD AVE Southbound				IMJIN PKWY Westbound				3RD AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Traffic Data Service

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File Name : 4AM FINAL
Site Code : 00000004
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Page No : 2



Traffic Data Service

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File Name : 4PM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

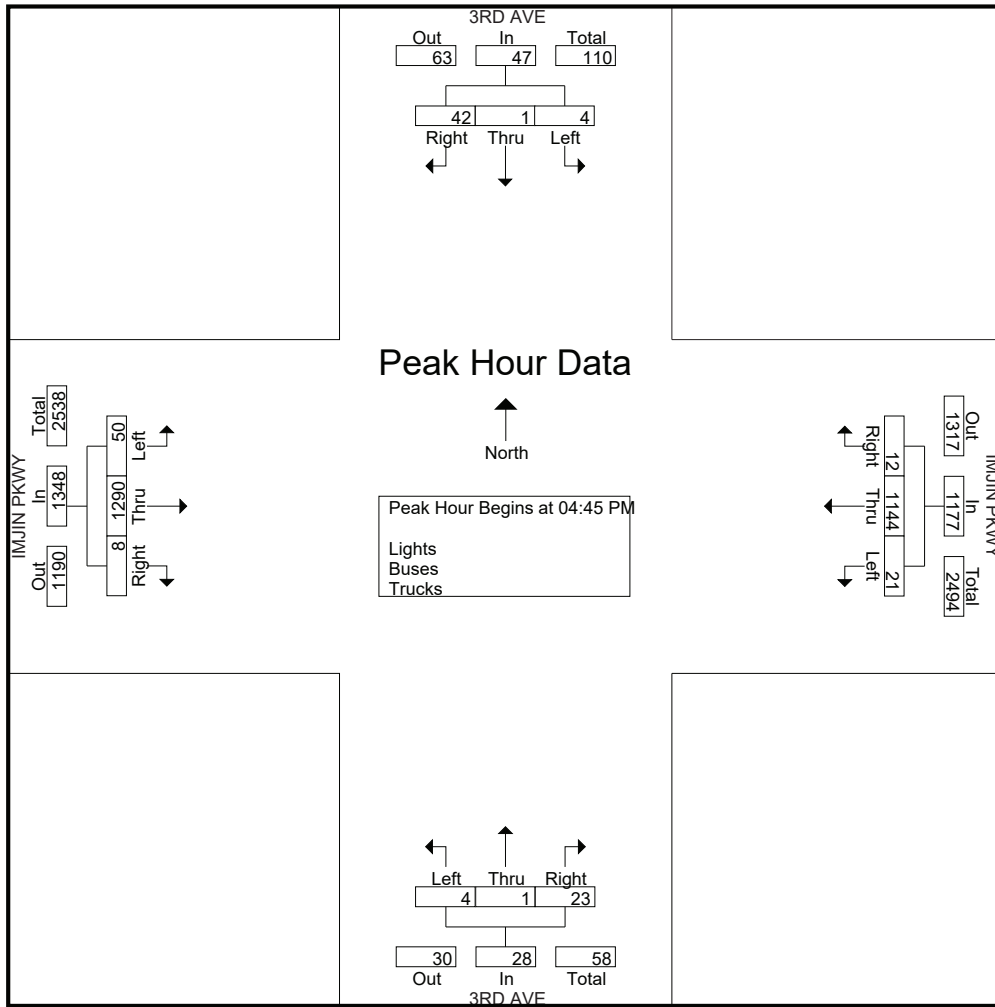
Start Time	3RD AVE Southbound					IMJIN PKWY Westbound					3RD AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	2	0	1	0	3	0	239	4	0	243	7	0	1	3	11	2	305	5	0	312	569
04:15 PM	6	0	1	0	7	0	237	1	0	238	8	0	0	0	8	0	318	7	0	325	578
04:30 PM	8	0	0	2	10	1	271	2	0	274	7	0	2	0	9	3	287	7	0	297	590
04:45 PM	13	0	2	0	15	5	263	6	0	274	5	1	1	1	8	3	319	15	0	337	634
Total	29	0	4	2	35	6	1010	13	0	1029	27	1	4	4	36	8	1229	34	0	1271	2371
05:00 PM	17	0	1	0	18	2	276	5	1	284	5	0	0	1	6	4	323	19	0	346	654
05:15 PM	6	0	0	0	6	4	303	6	0	313	7	0	2	0	9	0	331	4	0	335	663
05:30 PM	6	1	1	1	9	1	302	4	0	307	6	0	1	0	7	1	317	12	0	330	653
05:45 PM	12	1	3	0	16	5	283	3	0	291	7	0	1	0	8	0	300	9	0	309	624
Total	41	2	5	1	49	12	1164	18	1	1195	25	0	4	1	30	5	1271	44	0	1320	2594
Grand Total	70	2	9	3	84	18	2174	31	1	2224	52	1	8	5	66	13	2500	78	0	2591	4965
Apprch %	83.3	2.4	10.7	3.6		0.8	97.8	1.4	0		78.8	1.5	12.1	7.6		0.5	96.5	3	0		
Total %	1.4	0	0.2	0.1	1.7	0.4	43.8	0.6	0	44.8	1	0	0.2	0.1	1.3	0.3	50.4	1.6	0	52.2	
Lights	69	2	9	3	83	18	2137	31	1	2187	52	1	8	5	66	13	2478	78	0	2569	4905
% Lights	98.6	100	100	100	98.8	100	98.3	100	100	98.3	100	100	100	100	100	100	99.1	100	0	99.2	98.8
Buses	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	0	5	0	0	5	23
% Buses	1.4	0	0	0	1.2	0	0.8	0	0	0.8	0	0	0	0	0	0	0.2	0	0	0.2	0.5
Trucks	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	0	17	0	0	17	37
% Trucks	0	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	0	0	0.7	0	0	0.7	0.7

Start Time	3RD AVE Southbound				IMJIN PKWY Westbound				3RD AVE Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	13	0	2	15	5	263	6	274	5	1	1	7	3	319	15	337	633
05:00 PM	17	0	1	18	2	276	5	283	5	0	0	5	4	323	19	346	652
05:15 PM	6	0	0	6	4	303	6	313	7	0	2	9	0	331	4	335	663
05:30 PM	6	1	1	8	1	302	4	307	6	0	1	7	1	317	12	330	652
Total Volume	42	1	4	47	12	1144	21	1177	23	1	4	28	8	1290	50	1348	2600
% App. Total	89.4	2.1	8.5		1	97.2	1.8		82.1	3.6	14.3		0.6	95.7	3.7		
PHF	.618	.250	.500	.653	.600	.944	.875	.940	.821	.250	.500	.778	.500	.974	.658	.974	.980

Traffic Data Service

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File Name : 4PM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 4PM FINAL
 Site Code : 00000004
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	3RD AVE Southbound					IMJIN PKWY Westbound					3RD AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	4
Grand Total	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	4
Apprch %	0	0	0	0		0	0	100	0		100	0	0	0		0	100	0	0		
Total %	0	0	0	0		0	0	25	0	25	25	0	0	0	25	0	50	0	0	50	

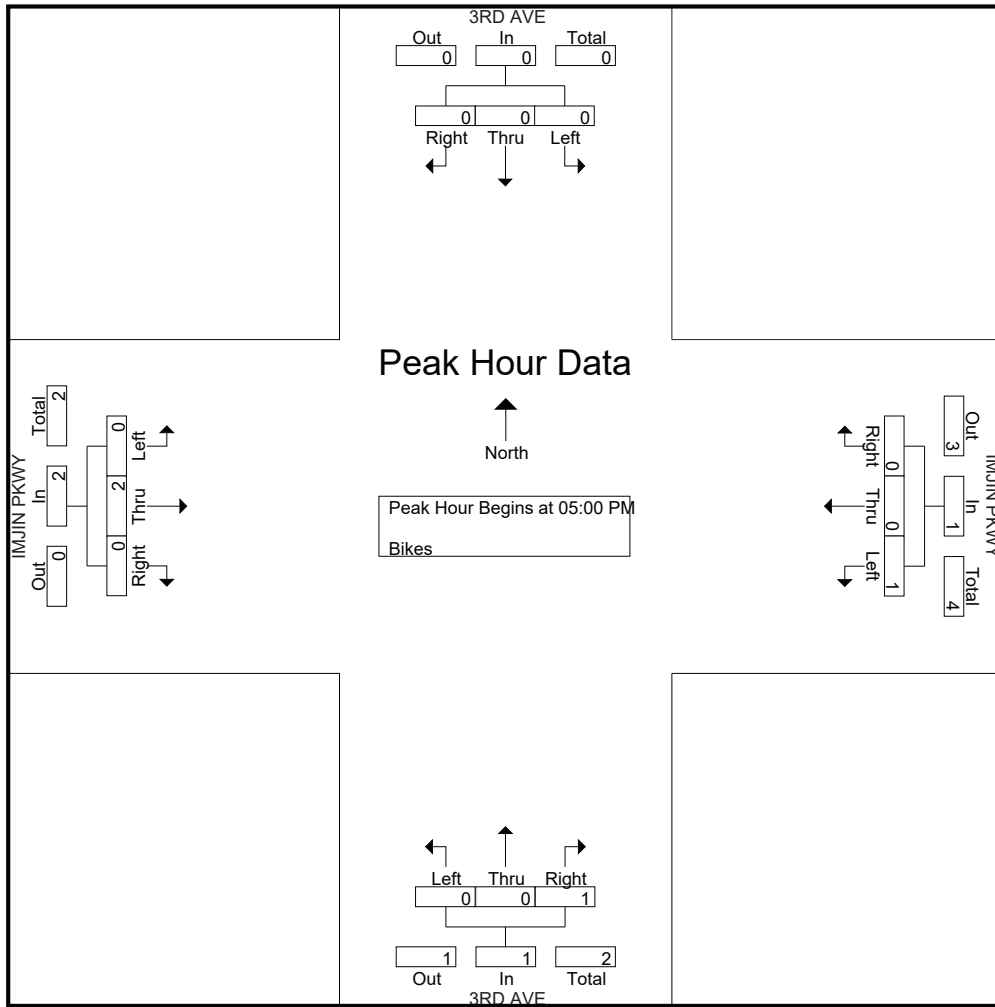
Start Time	3RD AVE Southbound					IMJIN PKWY Westbound					3RD AVE Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	2	0	0	2	4
% App. Total	0	0	0	0		0	0	100	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000		.000	.000	.250	.250		.250	.000	.000	.250		.000	.500	.000	.500		.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:00 PM

Traffic Data Service

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File Name : 4PM FINAL
Site Code : 00000004
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	1	394	2	0	397	1	0	1	0	2	5	147	0	0	152	551
07:15 AM	2	0	0	0	2	2	390	0	0	392	0	0	0	1	1	7	194	2	0	203	598
07:30 AM	0	0	3	1	4	2	330	0	0	332	0	0	1	0	1	5	268	0	0	273	610
07:45 AM	0	1	0	0	1	3	293	3	0	299	0	0	1	0	1	2	277	0	0	279	580
Total	2	1	3	1	7	8	1407	5	0	1420	1	0	3	1	5	19	886	2	0	907	2339
08:00 AM	0	0	0	0	0	7	267	0	0	274	1	0	2	0	3	3	213	0	0	216	493
08:15 AM	0	0	0	0	0	4	289	0	0	293	0	0	1	0	1	3	197	1	0	201	495
08:30 AM	0	1	0	0	1	4	295	0	0	299	0	0	0	0	0	3	153	1	0	157	457
08:45 AM	0	0	0	1	1	1	285	0	0	286	0	0	2	1	3	2	152	2	0	156	446
Total	0	1	0	1	2	16	1136	0	0	1152	1	0	5	1	7	11	715	4	0	730	1891
Grand Total	2	2	3	2	9	24	2543	5	0	2572	2	0	8	2	12	30	1601	6	0	1637	4230
Apprch %	22.2	22.2	33.3	22.2		0.9	98.9	0.2	0		16.7	0	66.7	16.7		1.8	97.8	0.4	0		
Total %	0	0	0.1	0	0.2	0.6	60.1	0.1	0	60.8	0	0	0.2	0	0.3	0.7	37.8	0.1	0	38.7	
Lights	2	2	3	2	9	24	2471	5	0	2500	2	0	4	2	8	22	1564	6	0	1592	4109
% Lights	100	100	100	100	100	100	97.2	100	0	97.2	100	0	50	100	66.7	73.3	97.7	100	0	97.3	97.1
Buses	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	12	0	0	12	28
% Buses	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	0	0.7	0	0	0.7	0.7
Trucks	0	0	0	0	0	0	56	0	0	56	0	0	4	0	4	8	25	0	0	33	93
% Trucks	0	0	0	0	0	0	2.2	0	0	2.2	0	0	50	0	33.3	26.7	1.6	0	0	2	2.2

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	1	394	2	397	1	0	1	2	5	147	0	0	152	551		
07:15 AM	2	0	0	0	2	2	390	0	0	392	0	0	0	0	0	7	194	2	0	203	597
07:30 AM	0	0	3	1	4	2	330	0	0	332	0	0	1	0	1	5	268	0	0	273	609
07:45 AM	0	1	0	0	1	3	293	3	0	299	0	0	1	0	1	2	277	0	0	279	580
Total Volume	2	1	3	1	7	8	1407	5	0	1420	1	0	3	1	5	19	886	2	0	907	2337
% App. Total	33.3	16.7	50	25	100	0.6	99.1	0.4	0	100	25	0	75	25	100	2.1	97.7	0.2	0	100	100
PHF	.250	.250	.250	.250	.500	.667	.893	.417	.894	.250	.000	.750	.500	.679	.800	.250	.813	.959			

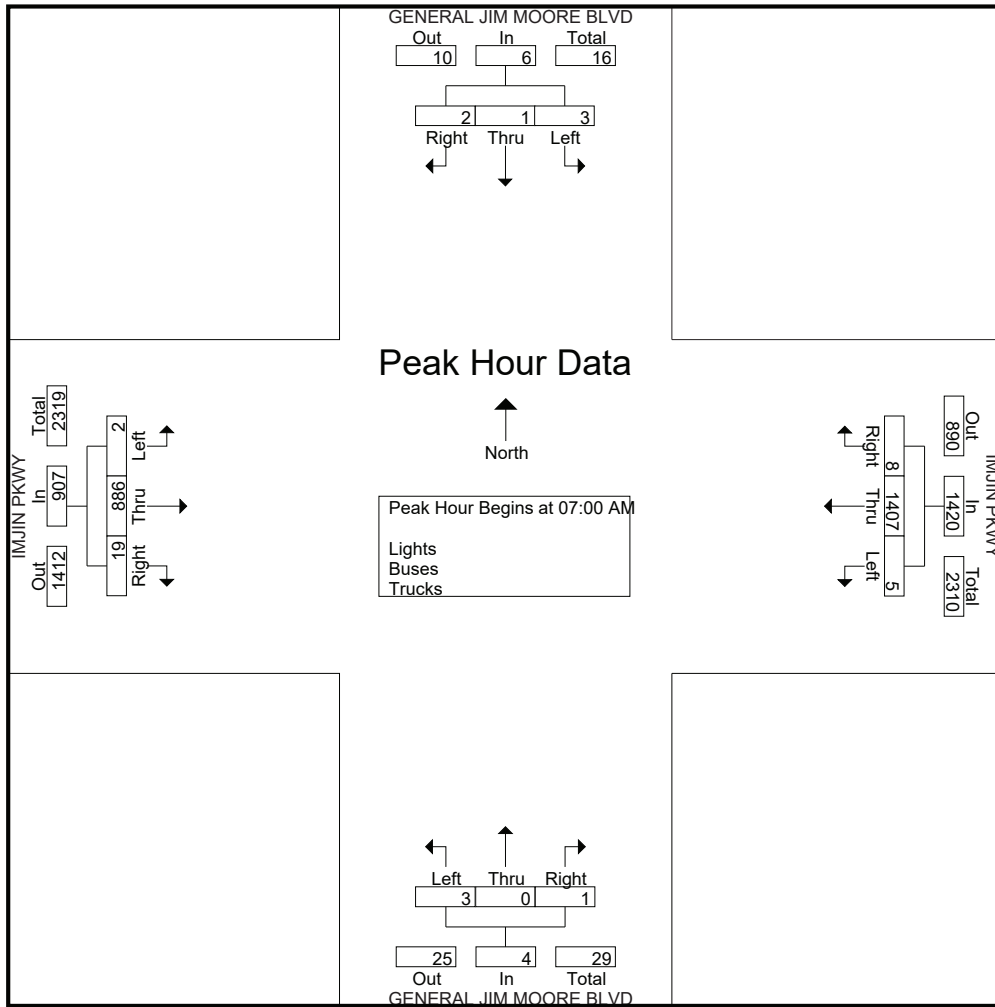
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 5/3/2017
 Page No : 2



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 tdsbay@cs.com

File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0							
Total %																										

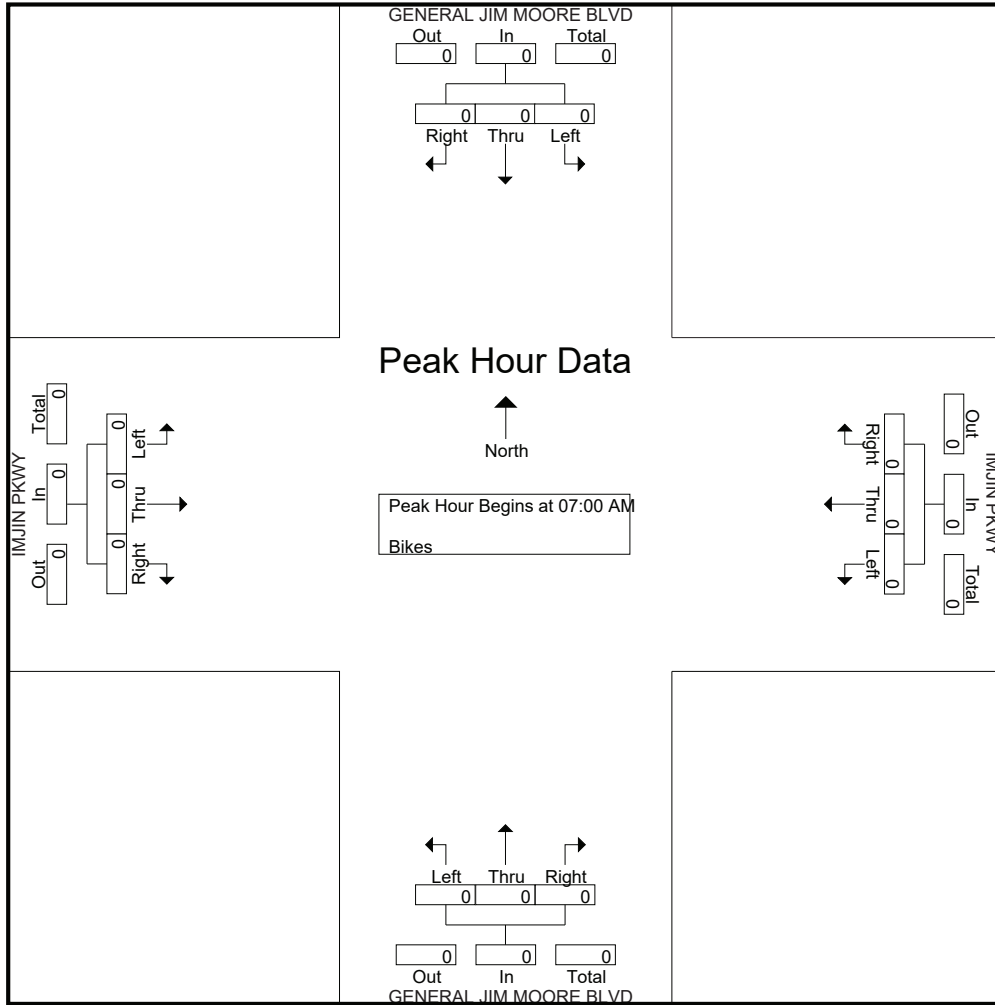
Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0							
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
(408) 622-4787
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File Name : 5AM FINAL
Site Code : 00000005
Start Date : 5/3/2017
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	0	2	0	3	5	242	0	0	247	5	0	12	0	17	1	290	1	0	292	559
04:15 PM	2	0	3	0	5	1	258	2	1	262	1	0	4	2	7	2	359	2	0	363	637
04:30 PM	0	0	0	0	0	1	271	0	0	272	0	0	4	0	4	6	336	0	0	342	618
04:45 PM	4	0	2	1	7	0	271	0	0	271	0	0	2	0	2	0	320	0	0	320	600
Total	7	0	7	1	15	7	1042	2	1	1052	6	0	22	2	30	9	1305	3	0	1317	2414
05:00 PM	0	0	5	0	5	1	299	0	0	300	2	0	6	0	8	2	352	0	0	354	667
05:15 PM	0	0	2	0	2	0	273	0	0	273	0	0	2	0	2	3	371	1	0	375	652
05:30 PM	0	0	0	0	0	0	307	0	0	307	0	0	3	2	5	1	339	0	0	340	652
05:45 PM	0	0	1	0	1	0	277	0	0	277	0	0	3	0	3	1	344	1	0	346	627
Total	0	0	8	0	8	1	1156	0	0	1157	2	0	14	2	18	7	1406	2	0	1415	2598
Grand Total	7	0	15	1	23	8	2198	2	1	2209	8	0	36	4	48	16	2711	5	0	2732	5012
Apprch %	30.4	0	65.2	4.3		0.4	99.5	0.1	0		16.7	0	75	8.3		0.6	99.2	0.2	0		
Total %	0.1	0	0.3	0	0.5	0.2	43.9	0	0	44.1	0.2	0	0.7	0.1	1	0.3	54.1	0.1	0	54.5	
Lights	4	0	15	1	20	8	2170	2	1	2181	8	0	35	4	47	12	2681	5	0	2698	4946
% Lights	57.1	0	100	100	87	100	98.7	100	100	98.7	100	0	97.2	100	97.9	75	98.9	100	0	98.8	98.7
Buses	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	7	0	0	7	17
% Buses	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0	0.3	0	0	0.3	0.3
Trucks	3	0	0	0	3	0	18	0	0	18	0	0	1	0	1	4	23	0	0	27	49
% Trucks	42.9	0	0	0	13	0	0.8	0	0	0.8	0	0	2.8	0	2.1	25	0.8	0	0	1	1

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
05:00 PM	0	0	5	0	5	1	299	0	0	300	2	0	6	0	8	2	352	0	0	354	667
05:15 PM	0	0	2	0	2	0	273	0	0	273	0	0	2	0	2	3	371	1	0	375	652
05:30 PM	0	0	0	0	0	0	307	0	0	307	0	0	3	0	3	1	339	0	0	340	650
05:45 PM	0	0	1	0	1	0	277	0	0	277	0	0	3	0	3	1	344	1	0	346	627
Total Volume	0	0	8	0	8	1	1156	0	0	1157	2	0	14	0	16	7	1406	2	0	1415	2596
% App. Total	0	0	100	0		0.1	99.9	0	0		12.5	0	87.5	0		0.5	99.4	0.1	0		
PHF	.000	.000	.400	.000	.400	.250	.941	.000	.000	.942	.250	.000	.583	.000	.500	.583	.947	.500	.000	.943	.973

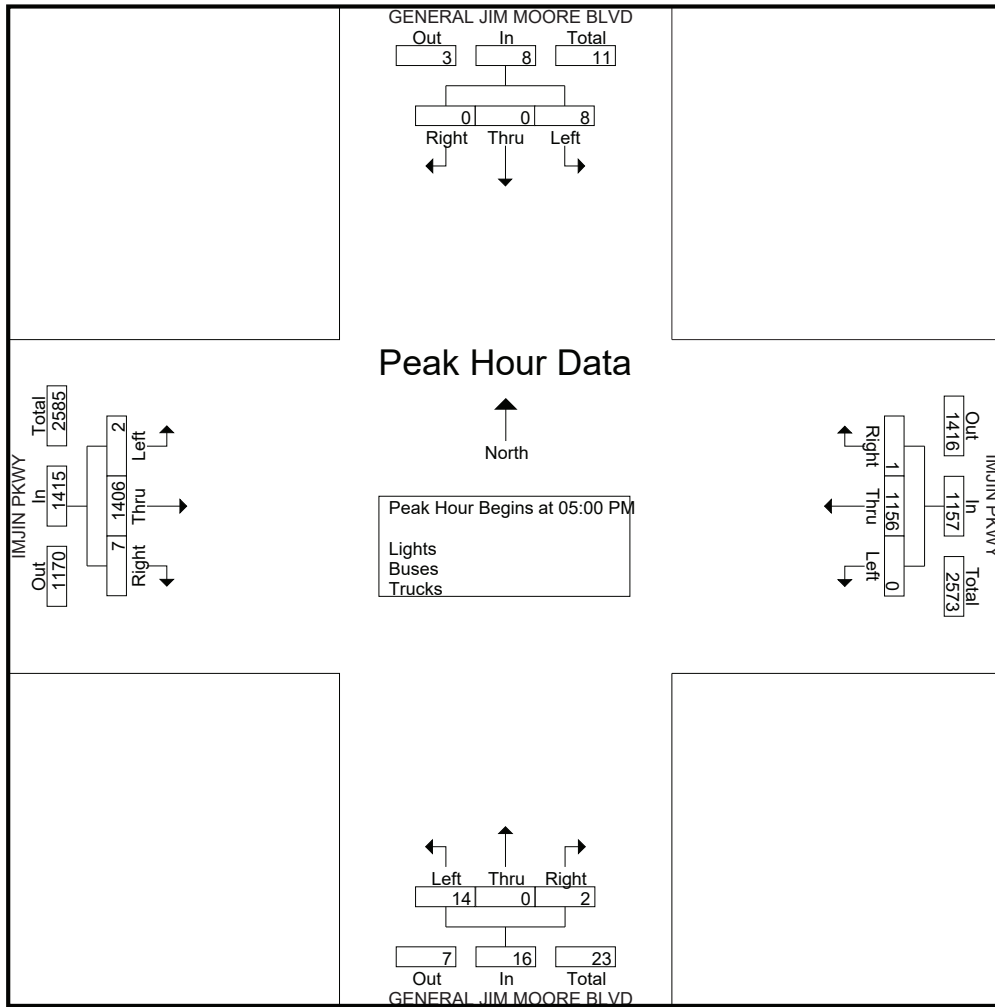
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 5PM FINAL
 Site Code : 00000005
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 Page No : 2



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File Name : 5PM FINAL
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 Start Date : 5/3/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

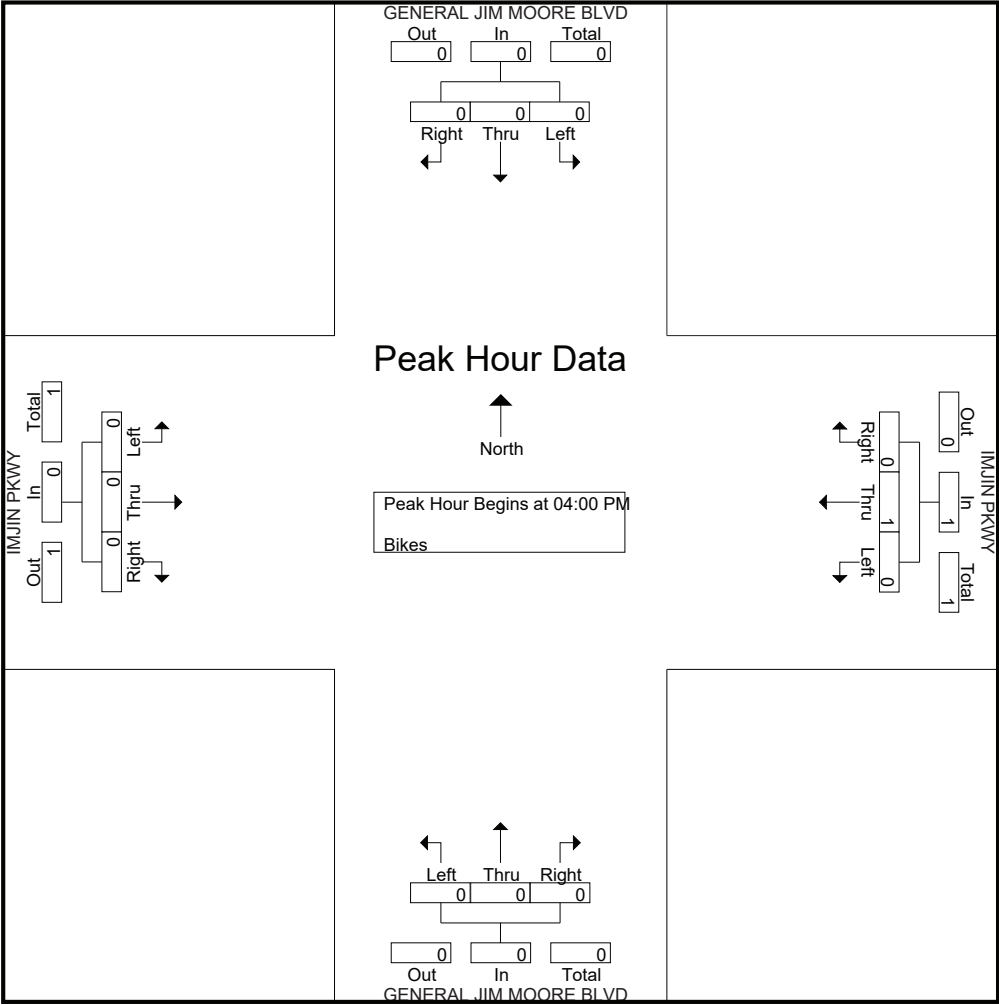
Start Time	GENERAL JIM MOORE BLVD Southbound					IMJIN PKWY Westbound					GENERAL JIM MOORE BLVD Northbound					IMJIN PKWY Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 5/3/2017
 Page No : 2



Traffic Data Service

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 tdsbay@cs.com

File Name : 6AM FINAL
 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

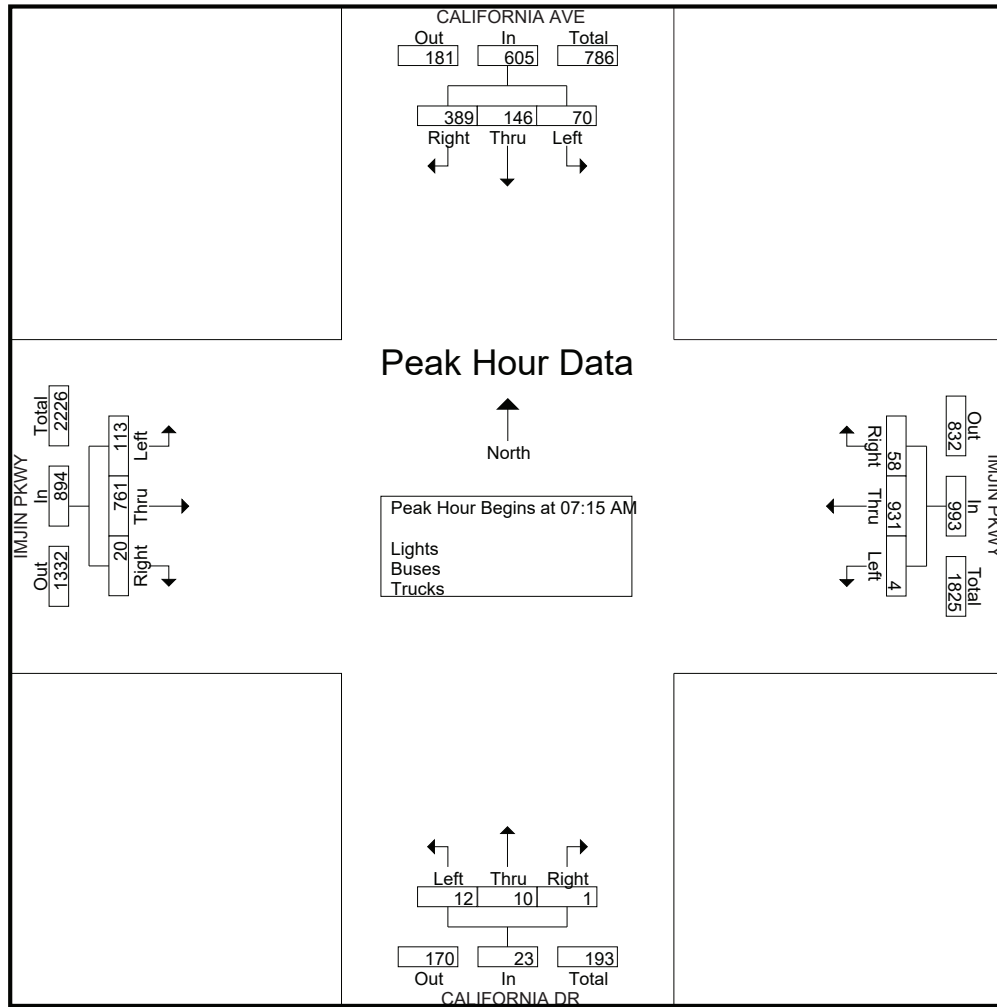
Start Time	CALIFORNIA AVE Southbound					IMJIN PKWY Westbound					CALIFORNIA DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	93	8	8	0	109	8	278	0	0	286	0	4	9	0	13	3	131	13	0	147	555
07:15 AM	107	30	10	0	147	9	284	0	0	293	0	1	4	0	5	3	146	25	1	175	620
07:30 AM	102	46	18	0	166	17	236	2	0	255	0	1	2	0	3	3	210	28	1	242	666
07:45 AM	102	42	29	0	173	21	198	1	0	220	1	5	3	0	9	8	192	39	0	239	641
Total	404	126	65	0	595	55	996	3	0	1054	1	11	18	0	30	17	679	105	2	803	2482
08:00 AM	78	28	13	0	119	11	213	1	0	225	0	3	3	0	6	6	213	21	0	240	590
08:15 AM	65	15	9	0	89	7	250	1	0	258	1	2	2	0	5	5	187	21	0	213	565
08:30 AM	62	7	12	0	81	4	252	0	0	256	0	1	5	0	6	1	161	14	1	177	520
08:45 AM	63	4	10	0	77	9	215	1	0	225	0	2	1	0	3	2	138	17	1	158	463
Total	268	54	44	0	366	31	930	3	0	964	1	8	11	0	20	14	699	73	2	788	2138
Grand Total	672	180	109	0	961	86	1926	6	0	2018	2	19	29	0	50	31	1378	178	4	1591	4620
Apprch %	69.9	18.7	11.3	0		4.3	95.4	0.3	0		4	38	58	0		1.9	86.6	11.2	0.3		
Total %	14.5	3.9	2.4	0	20.8	1.9	41.7	0.1	0	43.7	0	0.4	0.6	0	1.1	0.7	29.8	3.9	0.1	34.4	
Lights	665	177	108	0	950	82	1871	6	0	1959	2	19	20	0	41	31	1354	175	4	1564	4514
% Lights	99	98.3	99.1	0	98.9	95.3	97.1	100	0	97.1	100	100	69	0	82	100	98.3	98.3	100	98.3	97.7
Buses	4	2	0	0	6	3	12	0	0	15	0	0	1	0	1	0	10	3	0	13	35
% Buses	0.6	1.1	0	0	0.6	3.5	0.6	0	0	0.7	0	0	3.4	0	2	0	0.7	1.7	0	0.8	0.8
Trucks	3	1	1	0	5	1	43	0	0	44	0	0	8	0	8	0	14	0	0	14	71
% Trucks	0.4	0.6	0.9	0	0.5	1.2	2.2	0	0	2.2	0	0	27.6	0	16	0	1	0	0	0.9	1.5

Start Time	CALIFORNIA AVE Southbound				IMJIN PKWY Westbound				CALIFORNIA DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	107	30	10	147	9	284	0	293	0	1	4	5	3	146	25	174	619
07:30 AM	102	46	18	166	17	236	2	255	0	1	2	3	3	210	28	241	665
07:45 AM	102	42	29	173	21	198	1	220	1	5	3	9	8	192	39	239	641
08:00 AM	78	28	13	119	11	213	1	225	0	3	3	6	6	213	21	240	590
Total Volume	389	146	70	605	58	931	4	993	1	10	12	23	20	761	113	894	2515
% App. Total	64.3	24.1	11.6		5.8	93.8	0.4		4.3	43.5	52.2		2.2	85.1	12.6		
PHF	.909	.793	.603	.874	.690	.820	.500	.847	.250	.500	.750	.639	.625	.893	.724	.927	.945

Traffic Data Service

San Jose, CA
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File Name : 6AM FINAL
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 Page No : 2



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 Page No : 1

Groups Printed- Bikes

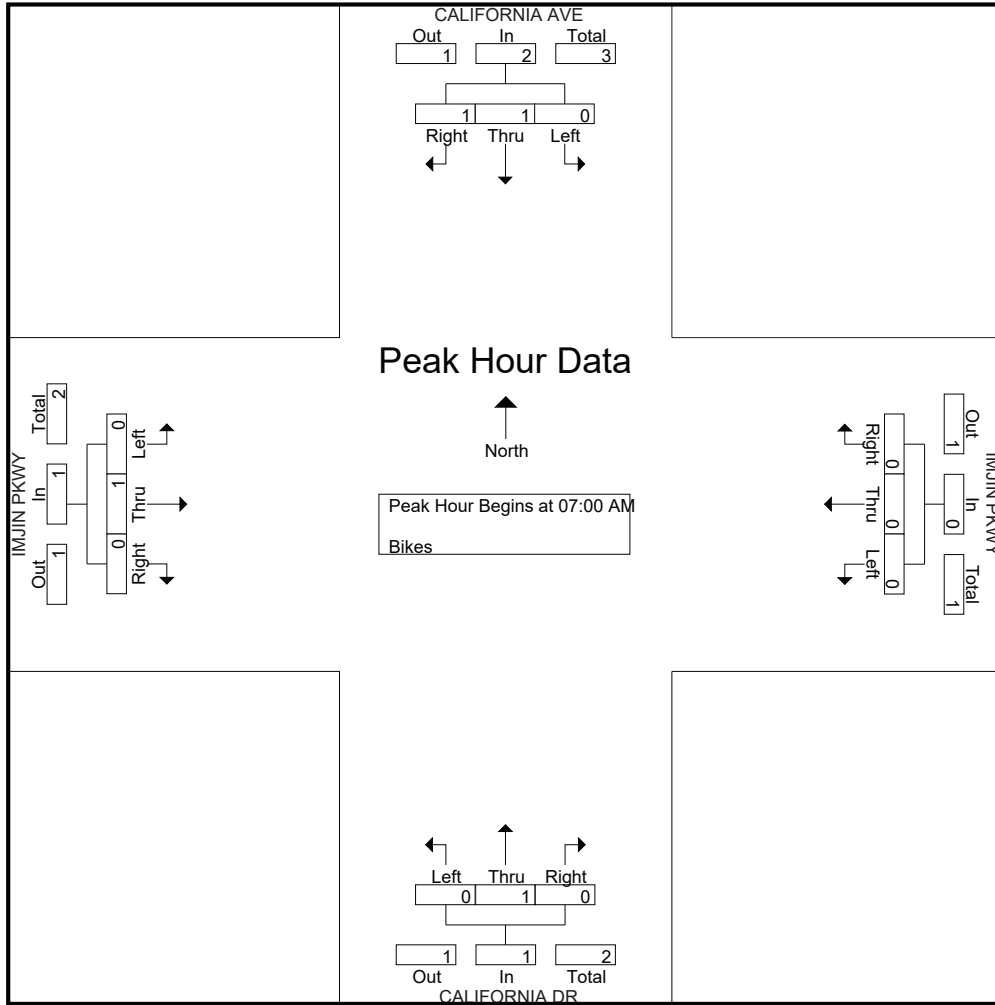
Start Time	CALIFORNIA AVE Southbound					IMJIN PKWY Westbound					CALIFORNIA DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
Grand Total	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	5	0	0	5	8
Apprch %	50	50	0	0		0	0	0	0		0	100	0	0		0	100	0	0		
Total %	12.5	12.5	0	0	25	0	0	0	0	0	0	12.5	0	0	12.5	0	62.5	0	0	62.5	

Start Time	CALIFORNIA AVE Southbound				IMJIN PKWY Westbound				CALIFORNIA DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	1	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
% App. Total	50	50	0		0	0	0		0	100	0		0	100	0		
PHF	.250	.250	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.500

Traffic Data Service

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 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

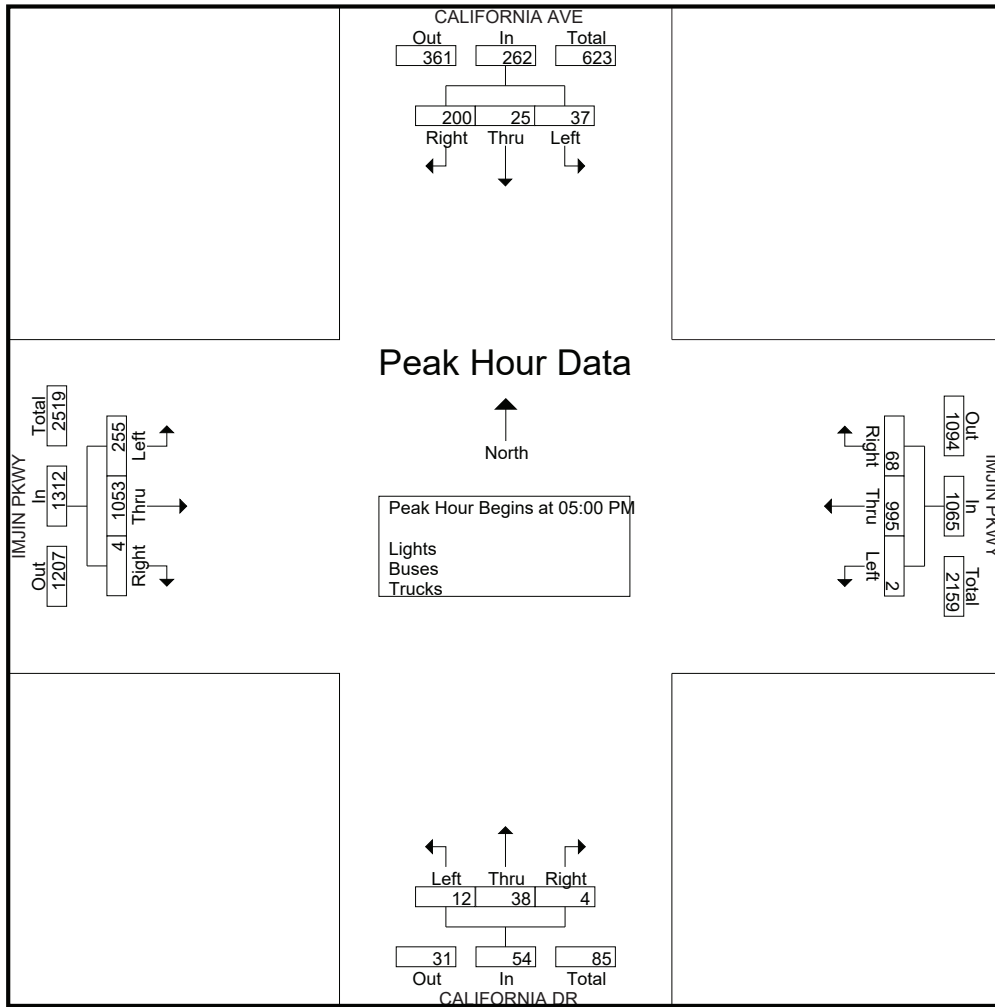
Start Time	CALIFORNIA AVE Southbound					IMJIN PKWY Westbound					CALIFORNIA DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	40	9	6	0	55	9	205	1	0	215	1	6	5	1	13	1	256	54	0	311	594
04:15 PM	34	6	9	0	49	11	210	0	0	221	1	8	1	0	10	1	274	58	2	335	615
04:30 PM	42	5	5	0	52	7	224	1	0	232	3	8	3	0	14	2	243	60	0	305	603
04:45 PM	51	3	7	1	62	16	203	1	0	220	0	7	4	0	11	1	253	58	0	312	605
Total	167	23	27	1	218	43	842	3	0	888	5	29	13	1	48	5	1026	230	2	1263	2417
05:00 PM	54	8	11	0	73	19	240	0	0	259	2	9	1	1	13	1	285	65	0	351	696
05:15 PM	42	4	5	0	51	20	268	0	0	288	1	10	5	1	17	0	267	69	1	337	693
05:30 PM	56	5	9	0	70	23	250	2	1	276	1	10	2	1	14	2	253	57	0	312	672
05:45 PM	48	8	12	0	68	6	237	0	0	243	0	9	4	0	13	1	248	64	0	313	637
Total	200	25	37	0	262	68	995	2	1	1066	4	38	12	3	57	4	1053	255	1	1313	2698
Grand Total	367	48	64	1	480	111	1837	5	1	1954	9	67	25	4	105	9	2079	485	3	2576	5115
Apprch %	76.5	10	13.3	0.2		5.7	94	0.3	0.1		8.6	63.8	23.8	3.8		0.3	80.7	18.8	0.1		
Total %	7.2	0.9	1.3	0	9.4	2.2	35.9	0.1	0	38.2	0.2	1.3	0.5	0.1	2.1	0.2	40.6	9.5	0.1	50.4	
Lights	359	47	64	1	471	110	1803	5	1	1919	9	67	25	4	105	9	2049	481	3	2542	5037
% Lights	97.8	97.9	100	100	98.1	99.1	98.1	100	100	98.2	100	100	100	100	100	100	98.6	99.2	100	98.7	98.5
Buses	4	1	0	0	5	0	16	0	0	16	0	0	0	0	0	0	3	0	0	3	24
% Buses	1.1	2.1	0	0	1	0	0.9	0	0	0.8	0	0	0	0	0	0	0.1	0	0	0.1	0.5
Trucks	4	0	0	0	4	1	18	0	0	19	0	0	0	0	0	0	27	4	0	31	54
% Trucks	1.1	0	0	0	0.8	0.9	1	0	0	1	0	0	0	0	0	0	1.3	0.8	0	1.2	1.1

Start Time	CALIFORNIA AVE Southbound				IMJIN PKWY Westbound				CALIFORNIA DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	54	8	11	73	19	240	0	259	2	9	1	12	1	285	65	351	695
05:15 PM	42	4	5	51	20	268	0	288	1	10	5	16	0	267	69	336	691
05:30 PM	56	5	9	70	23	250	2	275	1	10	2	13	2	253	57	312	670
05:45 PM	48	8	12	68	6	237	0	243	0	9	4	13	1	248	64	313	637
Total Volume	200	25	37	262	68	995	2	1065	4	38	12	54	4	1053	255	1312	2693
% App. Total	76.3	9.5	14.1		6.4	93.4	0.2		7.4	70.4	22.2		0.3	80.3	19.4		
PHF	.893	.781	.771	.897	.739	.928	.250	.924	.500	.950	.600	.844	.500	.924	.924	.934	.969

Traffic Data Service

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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 2



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San Jose, CA
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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

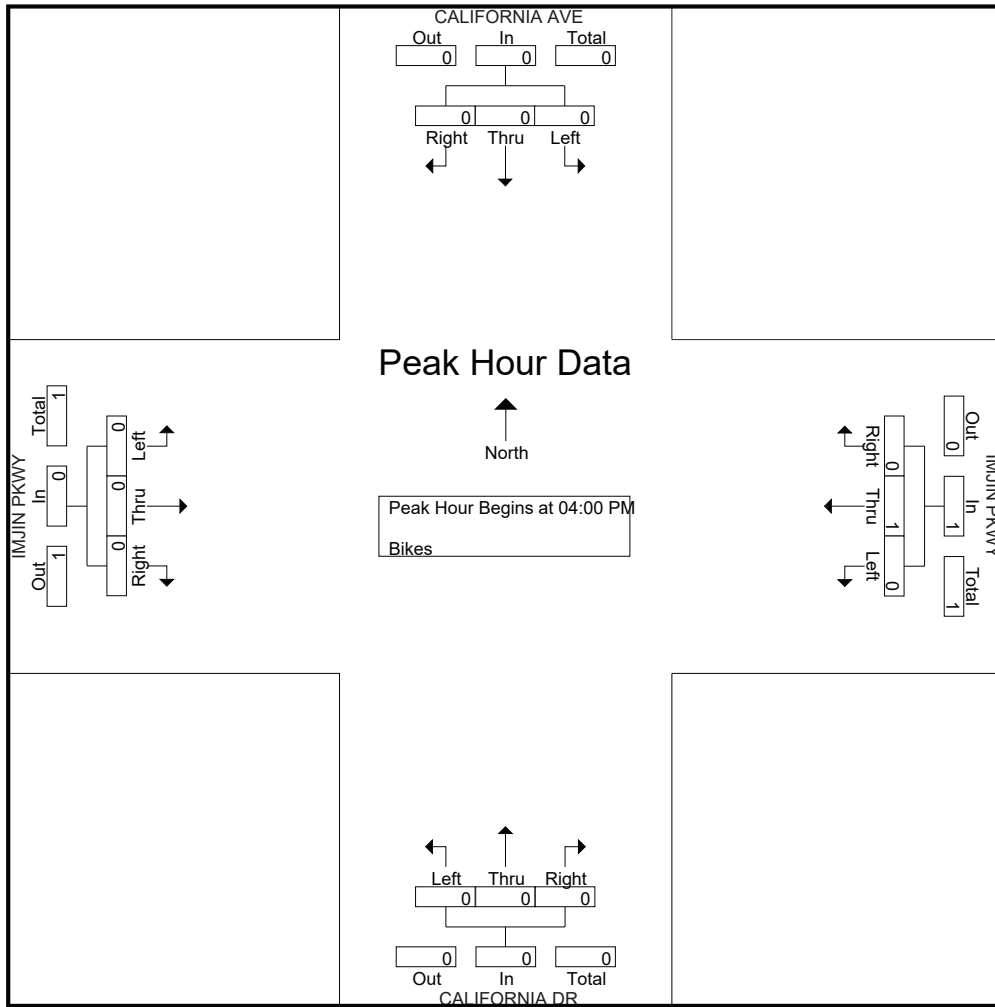
Start Time	CALIFORNIA AVE Southbound					IMJIN PKWY Westbound					CALIFORNIA DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	50	0	0	50	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	

Start Time	CALIFORNIA AVE Southbound				IMJIN PKWY Westbound				CALIFORNIA DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Traffic Data Service

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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 7AM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

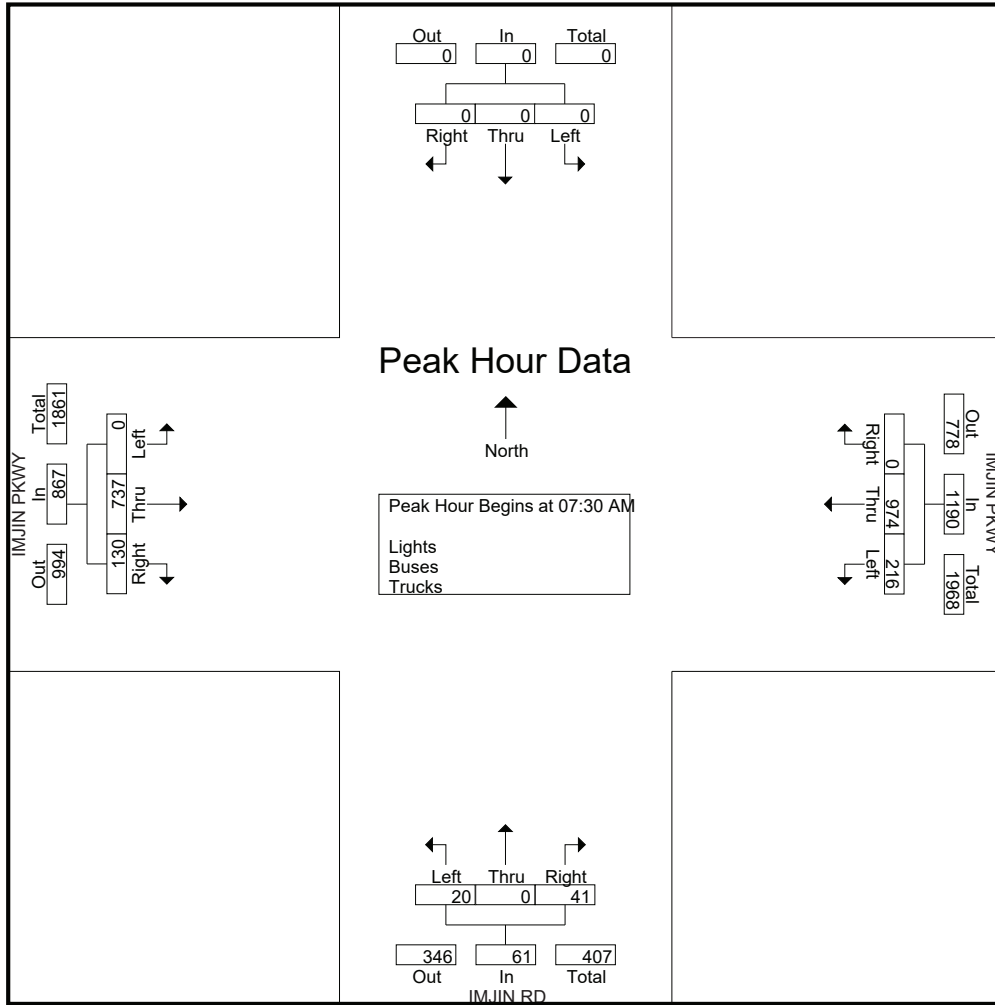
Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	296	18	0	314	6	0	2	0	8	11	124	0	0	135	457
07:15 AM	0	0	0	0	0	0	299	47	0	346	4	0	3	0	7	16	121	0	0	137	490
07:30 AM	0	0	0	0	0	0	257	72	0	329	11	0	4	2	17	31	179	0	0	210	556
07:45 AM	0	0	0	0	0	0	248	65	0	313	7	0	4	0	11	39	196	0	0	235	559
Total	0	0	0	0	0	0	1100	202	0	1302	28	0	13	2	43	97	620	0	0	717	2062
08:00 AM	0	0	0	0	0	0	209	44	0	253	13	0	5	0	18	28	183	0	0	211	482
08:15 AM	0	0	0	0	0	0	260	35	0	295	10	0	7	0	17	32	179	0	0	211	523
08:30 AM	0	0	0	0	0	0	251	30	0	281	10	0	3	0	13	18	161	0	0	179	473
08:45 AM	0	0	0	0	0	0	208	27	0	235	8	0	13	0	21	17	134	0	0	151	407
Total	0	0	0	0	0	0	928	136	0	1064	41	0	28	0	69	95	657	0	0	752	1885
Grand Total	0	0	0	0	0	0	2028	338	0	2366	69	0	41	2	112	192	1277	0	0	1469	3947
Apprch %	0	0	0	0	0	0	85.7	14.3	0	61.6	0	36.6	1.8	0	13.1	86.9	0	0	0	0	
Total %	0	0	0	0	0	0	51.4	8.6	0	59.9	1.7	0	1	0.1	2.8	4.9	32.4	0	0	37.2	
Lights	0	0	0	0	0	0	1977	332	0	2309	68	0	32	2	102	188	1250	0	0	1438	3849
% Lights	0	0	0	0	0	0	97.5	98.2	0	97.6	98.6	0	78	100	91.1	97.9	97.9	0	0	97.9	97.5
Buses	0	0	0	0	0	0	9	1	0	10	0	0	5	0	5	1	9	0	0	10	25
% Buses	0	0	0	0	0	0	0.4	0.3	0	0.4	0	0	12.2	0	4.5	0.5	0.7	0	0	0.7	0.6
Trucks	0	0	0	0	0	0	42	5	0	47	1	0	4	0	5	3	18	0	0	21	73
% Trucks	0	0	0	0	0	0	2.1	1.5	0	2	1.4	0	9.8	0	4.5	1.6	1.4	0	0	1.4	1.8

Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	257	72	329	11	0	4	15	31	179	0	210	554			
07:45 AM	0	0	0	0	0	0	248	65	313	7	0	4	11	39	196	0	235	559			
08:00 AM	0	0	0	0	0	0	209	44	253	13	0	5	18	28	183	0	211	482			
08:15 AM	0	0	0	0	0	0	260	35	295	10	0	7	17	32	179	0	211	523			
Total Volume	0	0	0	0	0	0	974	216	1190	41	0	20	61	130	737	0	867	2118			
% App. Total	0	0	0	0	0	0	81.8	18.2	67.2	0	0	32.8	67.2	15	85	0	92.2	94.7			
PHF	.000	.000	.000	.000	.000	.000	.937	.750	.904	.788	.000	.714	.847	.833	.940	.000	.922	.947			

Traffic Data Service

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File Name : 7AM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 7AM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

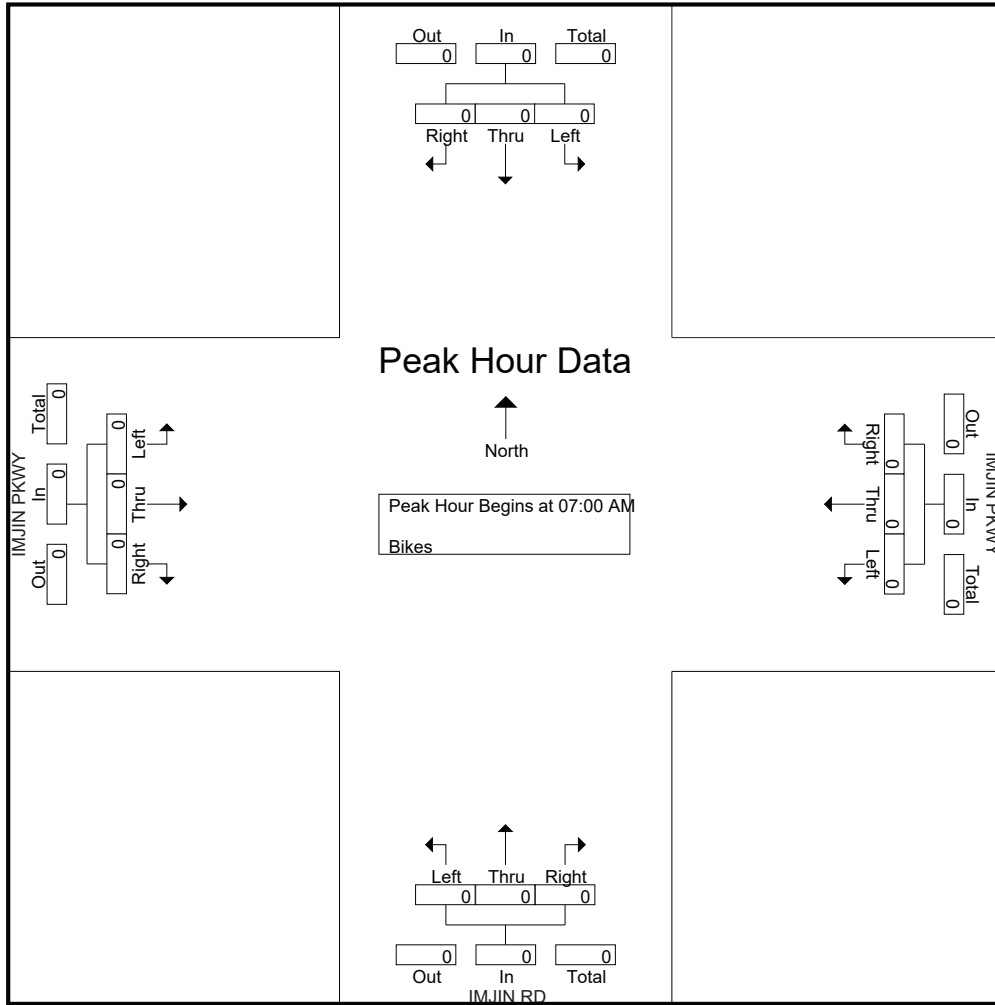
Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Start Time	Southbound				IMJIN PKWY Westbound				IMJIN RD Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Traffic Data Service

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File Name : 7AM FINAL
Site Code : 00000007
Start Date : 4/27/2017
Page No : 2



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File Name : 7PM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

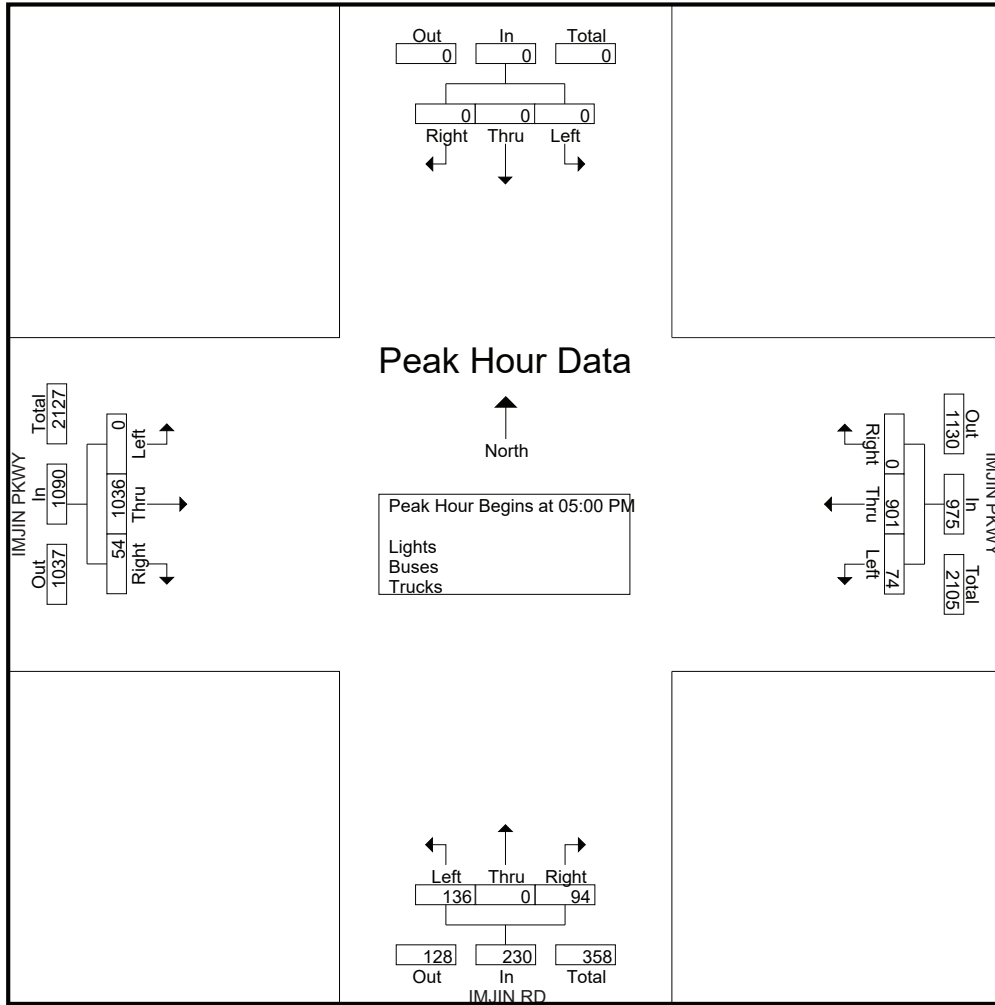
Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	194	23	0	217	29	0	27	1	57	11	254	0	0	265	539
04:15 PM	0	0	0	0	0	0	197	11	0	208	12	0	19	0	31	5	271	0	0	276	515
04:30 PM	0	0	0	0	0	0	213	15	0	228	23	0	16	0	39	13	242	0	0	255	522
04:45 PM	0	0	0	0	0	0	211	18	0	229	24	0	29	0	53	10	254	0	0	264	546
Total	0	0	0	0	0	0	815	67	0	882	88	0	91	1	180	39	1021	0	0	1060	2122
05:00 PM	0	0	0	0	0	0	219	12	0	231	21	0	34	0	55	14	268	0	0	282	568
05:15 PM	0	0	0	0	0	0	258	20	0	278	28	0	31	0	59	11	257	0	0	268	605
05:30 PM	0	0	0	0	0	0	219	22	0	241	25	0	43	0	68	10	256	0	0	266	575
05:45 PM	0	0	0	0	0	0	205	20	0	225	20	0	28	0	48	19	255	0	0	274	547
Total	0	0	0	0	0	0	901	74	0	975	94	0	136	0	230	54	1036	0	0	1090	2295
Grand Total	0	0	0	0	0	0	1716	141	0	1857	182	0	227	1	410	93	2057	0	0	2150	4417
Apprch %	0	0	0	0	0	0	92.4	7.6	0		44.4	0	55.4	0.2		4.3	95.7	0	0		
Total %	0	0	0	0	0	0	38.8	3.2	0	42	4.1	0	5.1	0	9.3	2.1	46.6	0	0	48.7	
Lights	0	0	0	0	0	0	1691	140	0	1831	181	0	221	1	403	92	2033	0	0	2125	4359
% Lights	0	0	0	0	0	0	98.5	99.3	0	98.6	99.5	0	97.4	100	98.3	98.9	98.8	0	0	98.8	98.7
Buses	0	0	0	0	0	0	8	0	0	8	0	0	5	0	5	0	4	0	0	4	17
% Buses	0	0	0	0	0	0	0.5	0	0	0.4	0	0	2.2	0	1.2	0	0.2	0	0	0.2	0.4
Trucks	0	0	0	0	0	0	17	1	0	18	1	0	1	0	2	1	20	0	0	21	41
% Trucks	0	0	0	0	0	0	1	0.7	0	1	0.5	0	0.4	0	0.5	1.1	1	0	0	1	0.9

Start Time	Southbound				IMJIN PKWY Westbound				IMJIN RD Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	219	12	231	21	0	34	55	14	268	0	282	568
05:15 PM	0	0	0	0	0	258	20	278	28	0	31	59	11	257	0	268	605
05:30 PM	0	0	0	0	0	219	22	241	25	0	43	68	10	256	0	266	575
05:45 PM	0	0	0	0	0	205	20	225	20	0	28	48	19	255	0	274	547
Total Volume	0	0	0	0	0	901	74	975	94	0	136	230	54	1036	0	1090	2295
% App. Total	0	0	0	0	0	92.4	7.6		40.9	0	59.1		5	95	0		
PHF	.000	.000	.000	.000	.000	.873	.841	.877	.839	.000	.791	.846	.711	.966	.000	.966	.948

Traffic Data Service

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File Name : 7PM FINAL
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 Start Date : 4/27/2017
 Page No : 2



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File Name : 7PM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	0	0	0	0	4
Apprch %	0	0	0	0		0	100	0	0		100	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	75	0	0	75	25	0	0	0	25	0	0	0	0		

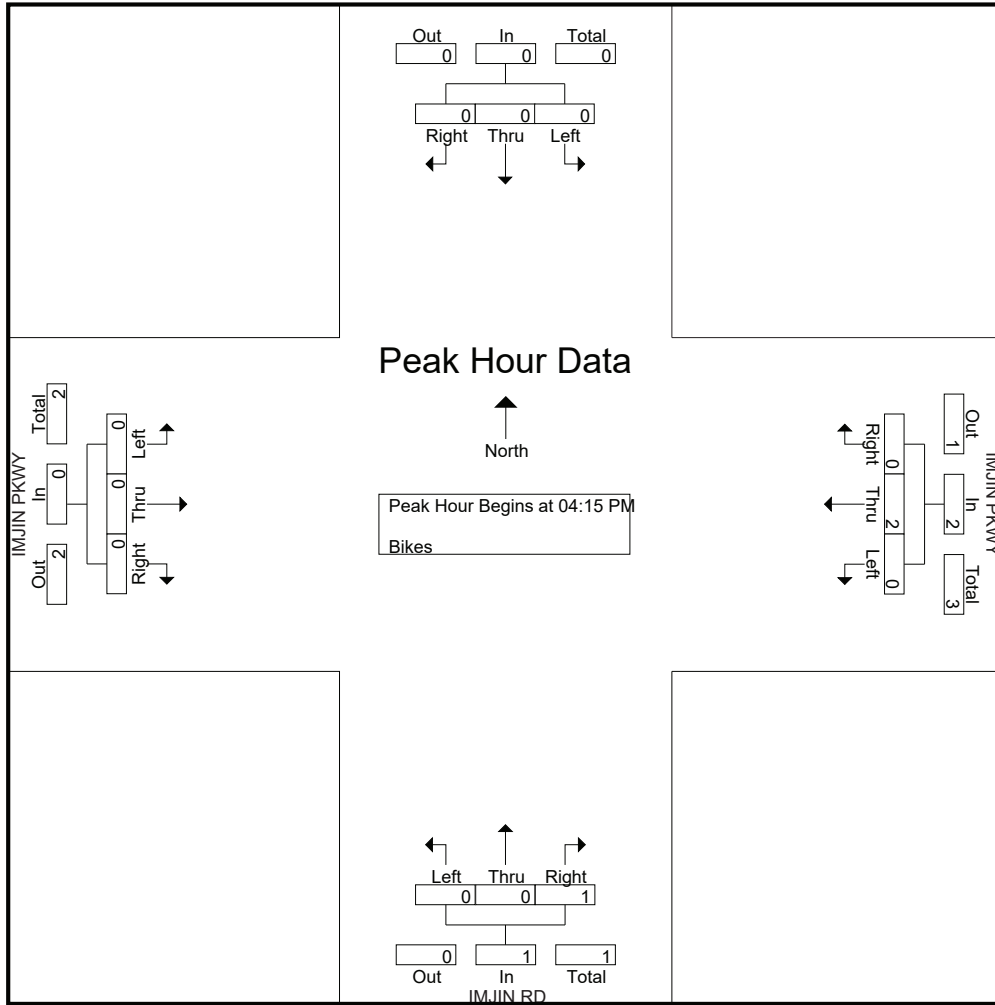
Start Time	Southbound					IMJIN PKWY Westbound					IMJIN RD Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	2	0	0	2	1	0	0	0	1	0	0	0	0	0	3
% App. Total	0	0	0	0		0	100	0	0		100	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000		.000	.500	.000	.000	.500	.250	.000	.000	.000	.250	.000	.000	.000	.000		.375

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

Traffic Data Service

San Jose, CA
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File Name : 7PM FINAL
 Site Code : 00000007
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 8AM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

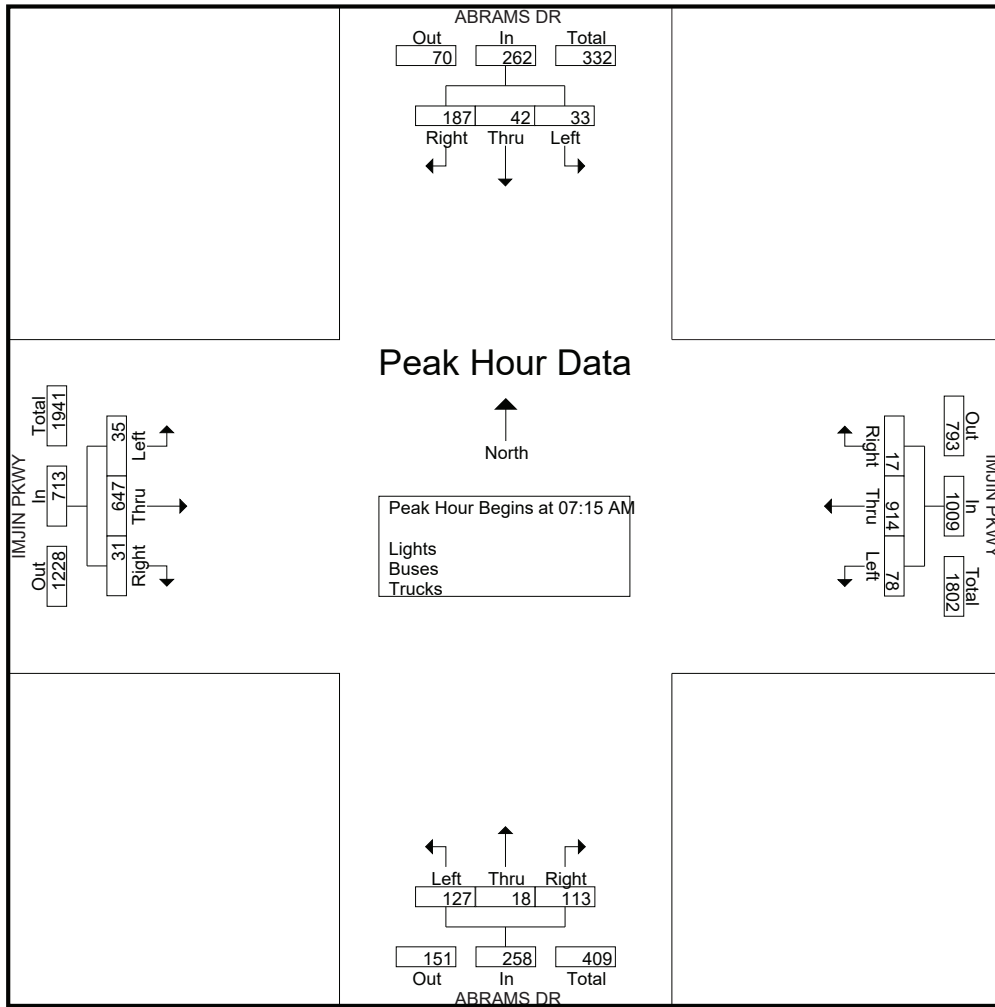
Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	45	9	6	0	60	4	226	11	0	241	13	4	34	0	51	6	116	2	2	126	478
07:15 AM	64	15	11	0	90	2	249	13	0	264	27	5	36	1	69	6	135	4	1	146	569
07:30 AM	55	18	12	0	85	3	225	21	0	249	36	3	39	0	78	6	175	7	0	188	600
07:45 AM	43	3	8	0	54	5	242	20	0	267	29	4	27	0	60	11	169	14	0	194	575
Total	207	45	37	0	289	14	942	65	0	1021	105	16	136	1	258	29	595	27	3	654	2222
08:00 AM	25	6	2	0	33	7	198	24	0	229	21	6	25	0	52	8	168	10	0	186	500
08:15 AM	23	3	5	0	31	5	245	16	0	266	21	5	23	0	49	4	169	12	0	185	531
08:30 AM	21	5	10	0	36	7	239	15	0	261	16	5	23	0	44	5	155	13	0	173	514
08:45 AM	14	0	4	0	18	7	186	11	0	204	19	3	21	0	43	6	124	6	0	136	401
Total	83	14	21	0	118	26	868	66	0	960	77	19	92	0	188	23	616	41	0	680	1946
Grand Total	290	59	58	0	407	40	1810	131	0	1981	182	35	228	1	446	52	1211	68	3	1334	4168
Apprch %	71.3	14.5	14.3	0		2	91.4	6.6	0		40.8	7.8	51.1	0.2		3.9	90.8	5.1	0.2		
Total %	7	1.4	1.4	0	9.8	1	43.4	3.1	0	47.5	4.4	0.8	5.5	0	10.7	1.2	29.1	1.6	0.1	32	
Lights	285	57	57	0	399	40	1763	123	0	1926	177	27	224	1	429	50	1184	68	3	1305	4059
% Lights	98.3	96.6	98.3	0	98	100	97.4	93.9	0	97.2	97.3	77.1	98.2	100	96.2	96.2	97.8	100	100	97.8	97.4
Buses	5	1	1	0	7	0	6	4	0	10	3	6	1	0	10	2	7	0	0	9	36
% Buses	1.7	1.7	1.7	0	1.7	0	0.3	3.1	0	0.5	1.6	17.1	0.4	0	2.2	3.8	0.6	0	0	0.7	0.9
Trucks	0	1	0	0	1	0	41	4	0	45	2	2	3	0	7	0	20	0	0	20	73
% Trucks	0	1.7	0	0	0.2	0	2.3	3.1	0	2.3	1.1	5.7	1.3	0	1.6	0	1.7	0	0	1.5	1.8

Start Time	ABRAMS DR Southbound				IMJIN PKWY Westbound				ABRAMS DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	64	15	11	90	2	249	13	264	27	5	36	68	6	135	4	145	567
07:30 AM	55	18	12	85	3	225	21	249	36	3	39	78	6	175	7	188	600
07:45 AM	43	3	8	54	5	242	20	267	29	4	27	60	11	169	14	194	575
08:00 AM	25	6	2	33	7	198	24	229	21	6	25	52	8	168	10	186	500
Total Volume	187	42	33	262	17	914	78	1009	113	18	127	258	31	647	35	713	2242
% App. Total	71.4	16	12.6		1.7	90.6	7.7		43.8	7	49.2		4.3	90.7	4.9		
PHF	.730	.583	.688	.728	.607	.918	.813	.945	.785	.750	.814	.827	.705	.924	.625	.919	.934

Traffic Data Service

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File Name : 8AM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 8AM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Apprch %	0	0	0	0	0	100	0	0	0	100	100	0	0	0	100	0	0	0	0	0	
Total %	0	0	0	0	0	50	0	0	0	50	50	0	0	0	50	0	0	0	0	0	

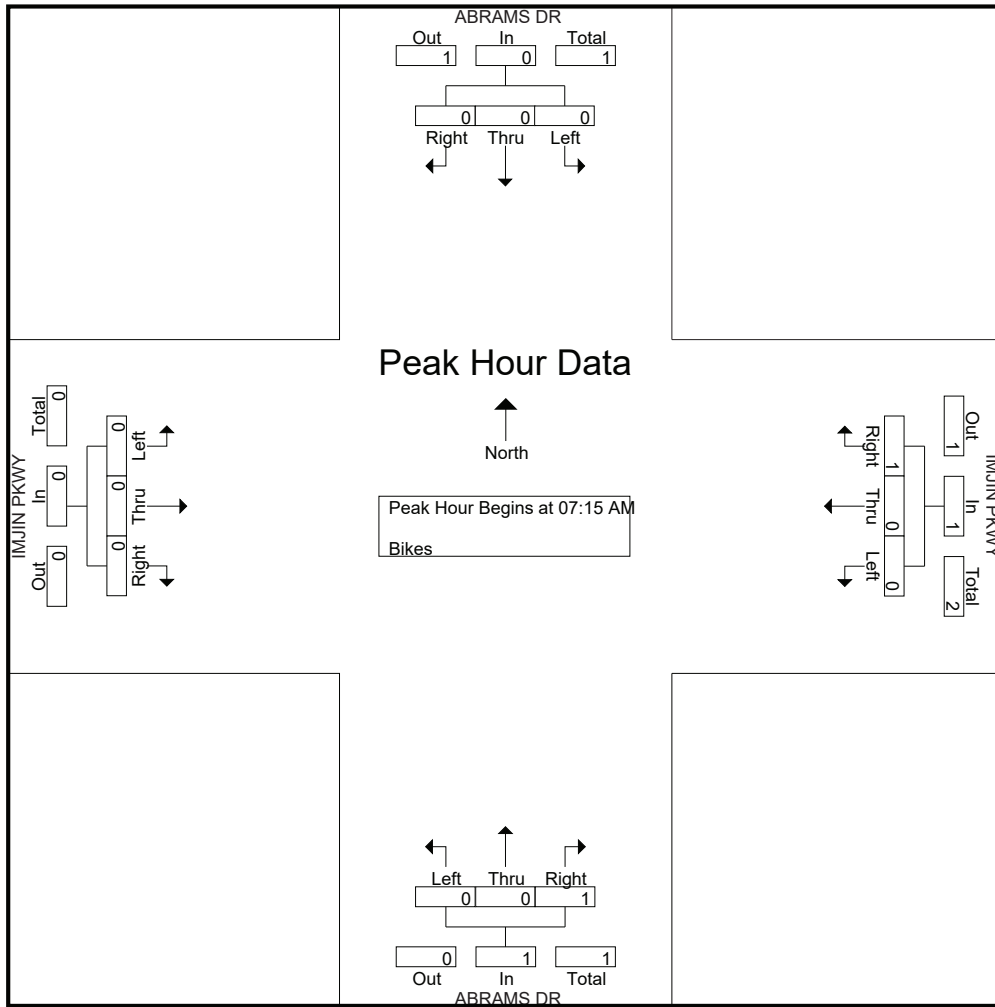
Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2
% App. Total	0	0	0	0	0	100	0	0	0	100	100	0	0	0	100	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.500

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

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File Name : 8AM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

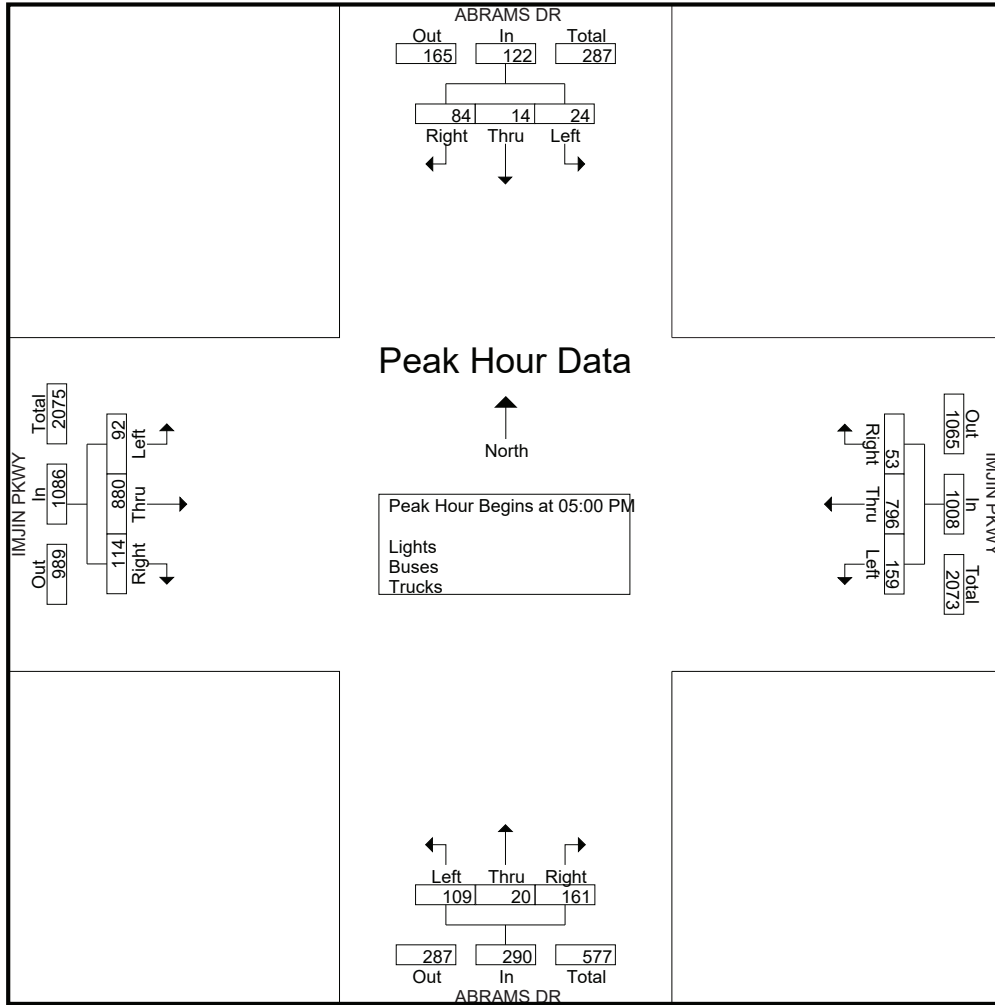
Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	19	2	7	1	29	13	163	37	0	213	43	0	30	0	73	25	219	19	0	263	578
04:15 PM	17	2	7	1	27	9	149	23	0	181	23	1	31	0	55	29	253	19	2	303	566
04:30 PM	20	1	9	0	30	9	187	31	0	227	34	10	25	0	69	21	222	15	1	259	585
04:45 PM	23	2	8	0	33	9	179	25	0	213	44	4	22	0	70	19	230	22	0	271	587
Total	79	7	31	2	119	40	678	116	0	834	144	15	108	0	267	94	924	75	3	1096	2316
05:00 PM	16	4	3	0	23	16	193	36	0	245	34	6	30	0	70	30	219	25	1	275	613
05:15 PM	17	2	5	0	24	9	247	28	0	284	43	3	24	0	70	25	244	25	0	294	672
05:30 PM	30	5	6	0	41	14	188	51	0	253	39	7	25	0	71	31	206	23	0	260	625
05:45 PM	21	3	10	0	34	14	168	44	0	226	45	4	30	0	79	28	211	19	0	258	597
Total	84	14	24	0	122	53	796	159	0	1008	161	20	109	0	290	114	880	92	1	1087	2507
Grand Total	163	21	55	2	241	93	1474	275	0	1842	305	35	217	0	557	208	1804	167	4	2183	4823
Apprch %	67.6	8.7	22.8	0.8		5	80	14.9	0		54.8	6.3	39	0		9.5	82.6	7.7	0.2		
Total %	3.4	0.4	1.1	0	5	1.9	30.6	5.7	0	38.2	6.3	0.7	4.5	0	11.5	4.3	37.4	3.5	0.1	45.3	
Lights	162	17	55	2	236	93	1454	272	0	1819	301	33	209	0	543	206	1778	167	4	2155	4753
% Lights	99.4	81	100	100	97.9	100	98.6	98.9	0	98.8	98.7	94.3	96.3	0	97.5	99	98.6	100	100	98.7	98.5
Buses	1	4	0	0	5	0	6	2	0	8	2	2	1	0	5	1	4	0	0	5	23
% Buses	0.6	19	0	0	2.1	0	0.4	0.7	0	0.4	0.7	5.7	0.5	0	0.9	0.5	0.2	0	0	0.2	0.5
Trucks	0	0	0	0	0	0	14	1	0	15	2	0	7	0	9	1	22	0	0	23	47
% Trucks	0	0	0	0	0	0	0.9	0.4	0	0.8	0.7	0	3.2	0	1.6	0.5	1.2	0	0	1.1	1

Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	16	4	3		23	16	193	36		245	34	6	30		70	30	219	25		274	612
05:15 PM	17	2	5		24	9	247	28		284	43	3	24		70	25	244	25		294	672
05:30 PM	30	5	6		41	14	188	51		253	39	7	25		71	31	206	23		260	625
05:45 PM	21	3	10		34	14	168	44		226	45	4	30		79	28	211	19		258	597
Total Volume	84	14	24		122	53	796	159		1008	161	20	109		290	114	880	92		1086	2506
% App. Total	68.9	11.5	19.7			5.3	79	15.8			55.5	6.9	37.6			10.5	81	8.5			
PHF	.700	.700	.600		.744	.828	.806	.779		.887	.894	.714	.908		.918	.919	.902	.920		.923	.932

Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

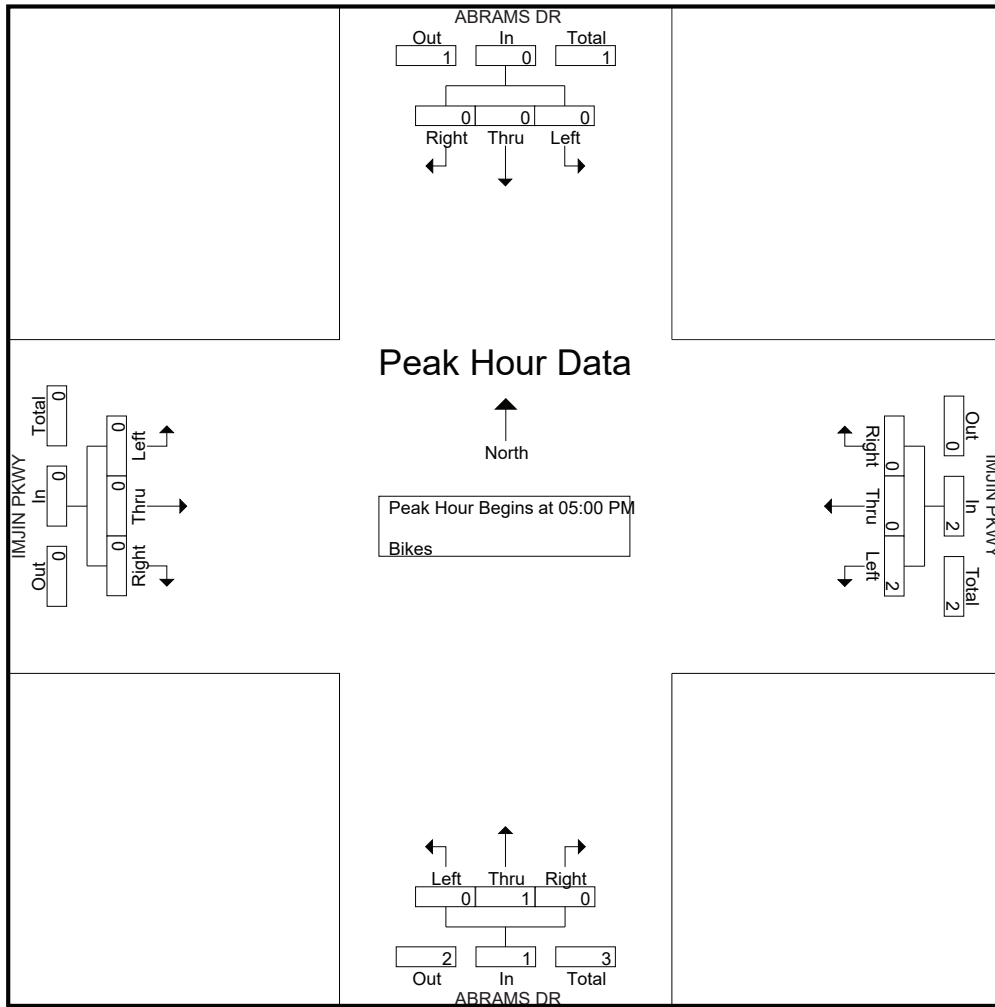
Start Time	ABRAMS DR Southbound					IMJIN PKWY Westbound					ABRAMS DR Northbound					IMJIN PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	3
Grand Total	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	3
Apprch %	0	0	0	0		0	0	100	0		0	100	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	66.7	0	66.7	0	33.3	0	0	33.3	0	0	0	0		

Start Time	ABRAMS DR Southbound				IMJIN PKWY Westbound				ABRAMS DR Northbound				IMJIN PKWY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
% App. Total	0	0	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.500	.000	.250	.000	.250	.000	.000	.000	.000	.375

Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

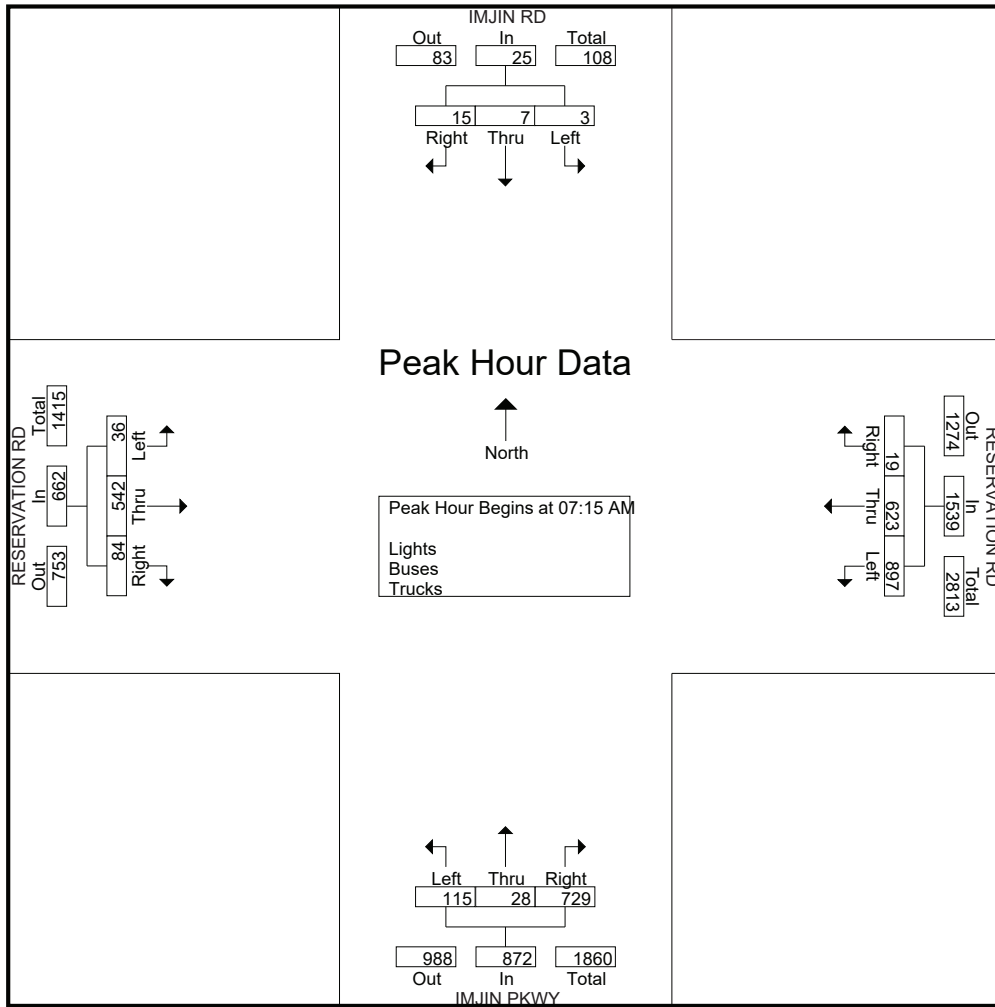
Start Time	IMJIN RD Southbound					RESERVATION RD Westbound					IMJIN PKWY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	1	2	0	0	3	5	175	265	0	445	110	4	10	0	124	12	93	1	0	106	678
07:15 AM	5	1	1	0	7	4	185	260	0	449	171	13	20	0	204	11	107	5	1	124	784
07:30 AM	2	1	1	0	4	3	166	233	0	402	190	3	33	1	227	20	176	9	0	205	838
07:45 AM	4	1	0	0	5	7	150	198	0	355	198	8	48	0	254	22	139	11	0	172	786
Total	12	5	2	0	19	19	676	956	0	1651	669	28	111	1	809	65	515	26	1	607	3086
08:00 AM	4	4	1	0	9	5	122	206	0	333	170	4	14	2	190	31	120	11	0	162	694
08:15 AM	2	5	1	0	8	5	125	250	0	380	174	7	17	0	198	17	95	10	0	122	708
08:30 AM	0	1	0	0	1	5	89	220	0	314	167	10	15	0	192	19	96	13	0	128	635
08:45 AM	2	4	2	0	8	7	96	183	0	286	119	14	10	1	144	11	95	8	0	114	552
Total	8	14	4	0	26	22	432	859	0	1313	630	35	56	3	724	78	406	42	0	526	2589
Grand Total	20	19	6	0	45	41	1108	1815	0	2964	1299	63	167	4	1533	143	921	68	1	1133	5675
Apprch %	44.4	42.2	13.3	0		1.4	37.4	61.2	0		84.7	4.1	10.9	0.3		12.6	81.3	6	0.1		
Total %	0.4	0.3	0.1	0	0.8	0.7	19.5	32	0	52.2	22.9	1.1	2.9	0.1	27	2.5	16.2	1.2	0	20	
Lights	18	16	5	0	39	41	1079	1763	0	2883	1269	61	162	4	1496	136	903	67	1	1107	5525
% Lights	90	84.2	83.3	0	86.7	100	97.4	97.1	0	97.3	97.7	96.8	97	100	97.6	95.1	98	98.5	100	97.7	97.4
Buses	0	0	0	0	0	0	9	7	0	16	8	0	4	0	12	4	6	0	0	10	38
% Buses	0	0	0	0	0	0	0.8	0.4	0	0.5	0.6	0	2.4	0	0.8	2.8	0.7	0	0	0.9	0.7
Trucks	2	3	1	0	6	0	20	45	0	65	22	2	1	0	25	3	12	1	0	16	112
% Trucks	10	15.8	16.7	0	13.3	0	1.8	2.5	0	2.2	1.7	3.2	0.6	0	1.6	2.1	1.3	1.5	0	1.4	2

Start Time	IMJIN RD Southbound				RESERVATION RD Westbound				IMJIN PKWY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	1	1	7	4	185	260	449	171	13	20	204	11	107	5	123	783
07:30 AM	2	1	1	4	3	166	233	402	190	3	33	226	20	176	9	205	837
07:45 AM	4	1	0	5	7	150	198	355	198	8	48	254	22	139	11	172	786
08:00 AM	4	4	1	9	5	122	206	333	170	4	14	188	31	120	11	162	692
Total Volume	15	7	3	25	19	623	897	1539	729	28	115	872	84	542	36	662	3098
% App. Total	60	28	12		1.2	40.5	58.3		83.6	3.2	13.2		12.7	81.9	5.4		
PHF	.750	.438	.750	.694	.679	.842	.863	.857	.920	.538	.599	.858	.677	.770	.818	.807	.925

Traffic Data Service

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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 9AM FINAL
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 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

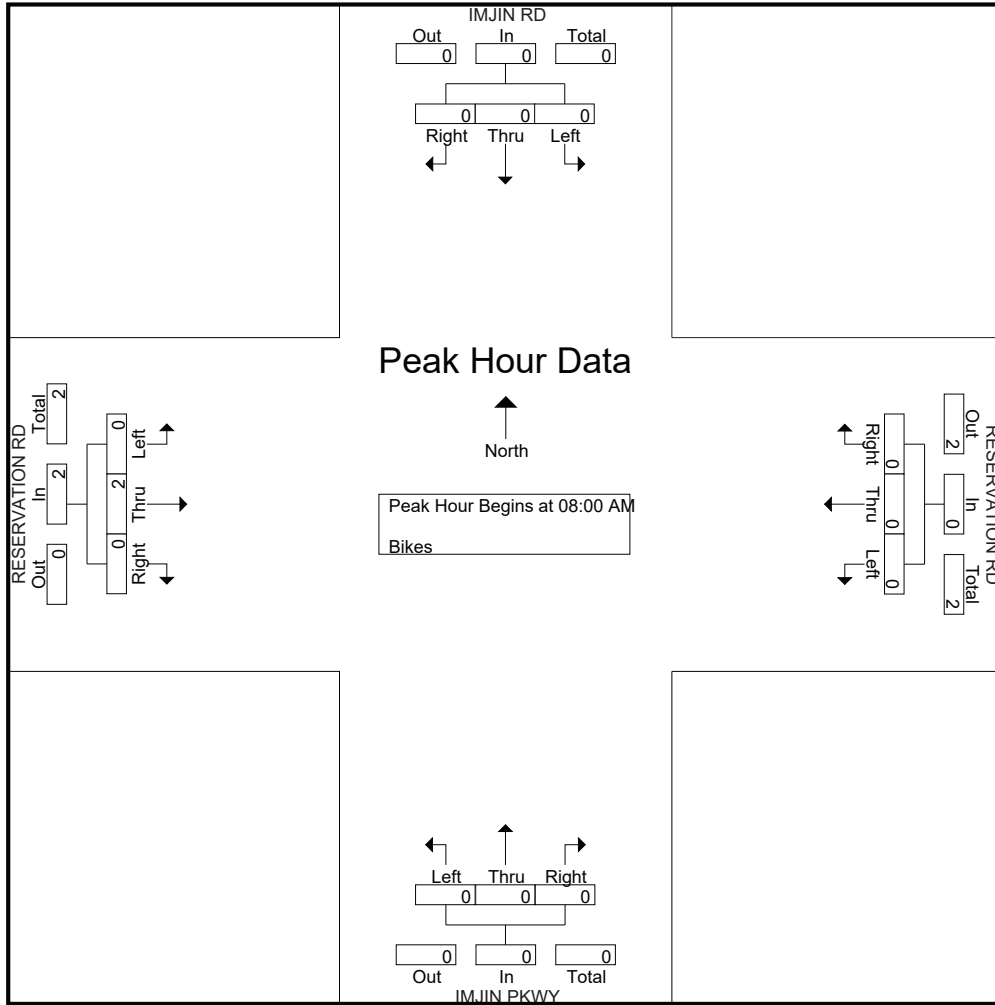
Start Time	IMJIN RD Southbound					RESERVATION RD Westbound					IMJIN PKWY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0	100	

Start Time	IMJIN RD Southbound				RESERVATION RD Westbound				IMJIN PKWY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.500

Traffic Data Service

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File Name : 9AM FINAL
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Page No : 2



Traffic Data Service

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File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

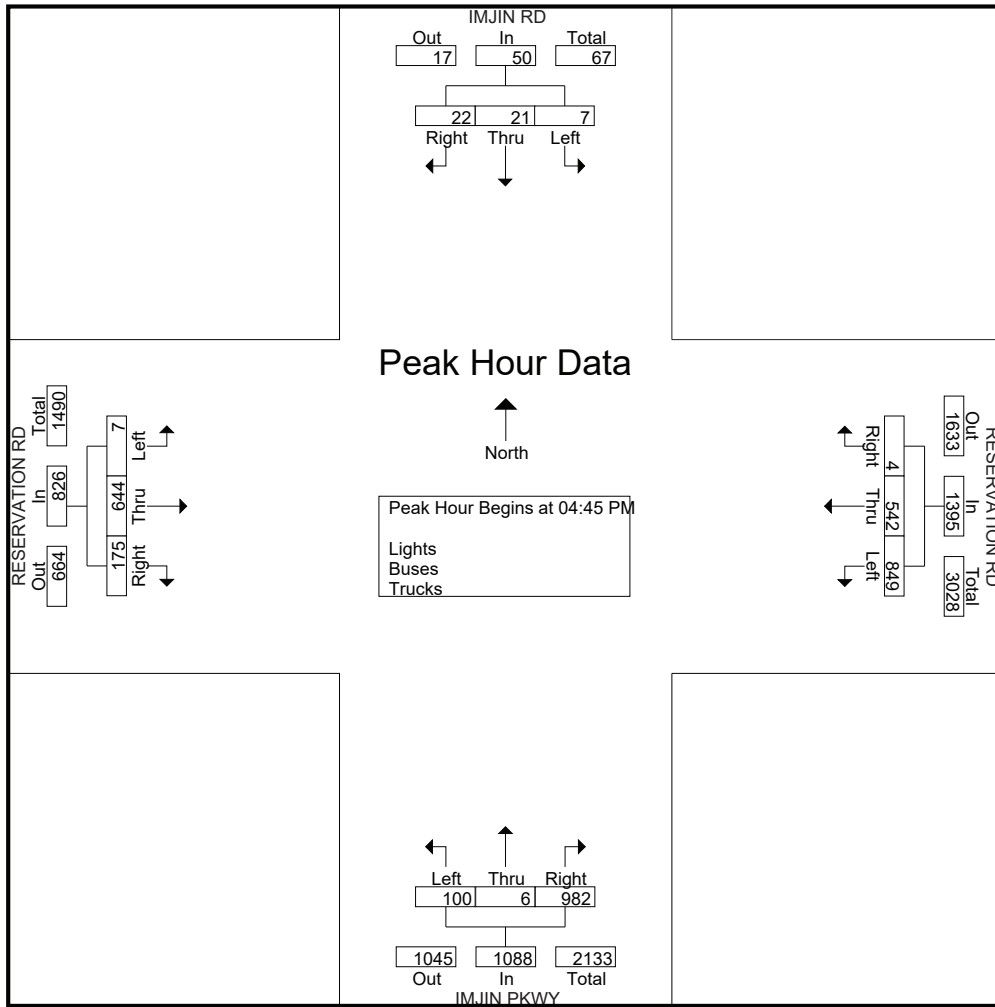
Start Time	IMJIN RD Southbound					RESERVATION RD Westbound					IMJIN PKWY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	9	16	2	0	27	1	133	171	0	305	252	3	17	0	272	39	142	0	0	181	785
04:15 PM	5	6	4	0	15	1	126	171	0	298	251	3	12	0	266	34	185	1	0	220	799
04:30 PM	10	8	7	0	25	0	126	177	0	303	236	3	35	1	275	51	152	5	0	208	811
04:45 PM	9	3	5	0	17	2	122	175	0	299	248	2	18	0	268	39	145	3	1	188	772
Total	33	33	18	0	84	4	507	694	0	1205	987	11	82	1	1081	163	624	9	1	797	3167
05:00 PM	8	9	0	0	17	1	117	210	0	328	241	2	23	0	266	43	164	2	0	209	820
05:15 PM	4	3	1	0	8	1	174	257	0	432	249	1	30	0	280	43	178	1	0	222	942
05:30 PM	1	6	1	0	8	0	129	207	0	336	244	1	29	0	274	50	157	1	1	209	827
05:45 PM	1	3	2	0	6	0	107	163	0	270	244	3	26	0	273	57	152	2	0	211	760
Total	14	21	4	0	39	2	527	837	0	1366	978	7	108	0	1093	193	651	6	1	851	3349
Grand Total	47	54	22	0	123	6	1034	1531	0	2571	1965	18	190	1	2174	356	1275	15	2	1648	6516
Apprch %	38.2	43.9	17.9	0		0.2	40.2	59.5	0		90.4	0.8	8.7	0		21.6	77.4	0.9	0.1		
Total %	0.7	0.8	0.3	0	1.9	0.1	15.9	23.5	0	39.5	30.2	0.3	2.9	0	33.4	5.5	19.6	0.2	0	25.3	
Lights	44	54	19	0	117	5	1013	1510	0	2528	1939	16	185	1	2141	348	1261	11	2	1622	6408
% Lights	93.6	100	86.4	0	95.1	83.3	98	98.6	0	98.3	98.7	88.9	97.4	100	98.5	97.8	98.9	73.3	100	98.4	98.3
Buses	1	0	0	0	1	0	9	6	0	15	6	0	3	0	9	7	10	3	0	20	45
% Buses	2.1	0	0	0	0.8	0	0.9	0.4	0	0.6	0.3	0	1.6	0	0.4	2	0.8	20	0	1.2	0.7
Trucks	2	0	3	0	5	1	12	15	0	28	20	2	2	0	24	1	4	1	0	6	63
% Trucks	4.3	0	13.6	0	4.1	16.7	1.2	1	0	1.1	1	11.1	1.1	0	1.1	0.3	0.3	6.7	0	0.4	1

Start Time	IMJIN RD Southbound				RESERVATION RD Westbound				IMJIN PKWY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	9	3	5	17	2	122	175	299	248	2	18	268	39	145	3	187	771
05:00 PM	8	9	0	17	1	117	210	328	241	2	23	266	43	164	2	209	820
05:15 PM	4	3	1	8	1	174	257	432	249	1	30	280	43	178	1	222	942
05:30 PM	1	6	1	8	0	129	207	336	244	1	29	274	50	157	1	208	826
Total Volume	22	21	7	50	4	542	849	1395	982	6	100	1088	175	644	7	826	3359
% App. Total	44	42	14		0.3	38.9	60.9		90.3	0.6	9.2		21.2	78	0.8		
PHF	.611	.583	.350	.735	.500	.779	.826	.807	.986	.750	.833	.971	.875	.904	.583	.930	.891

Traffic Data Service

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File Name : 9PM FINAL
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 Page No : 2



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File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	IMJIN RD Southbound					RESERVATION RD Westbound					IMJIN PKWY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

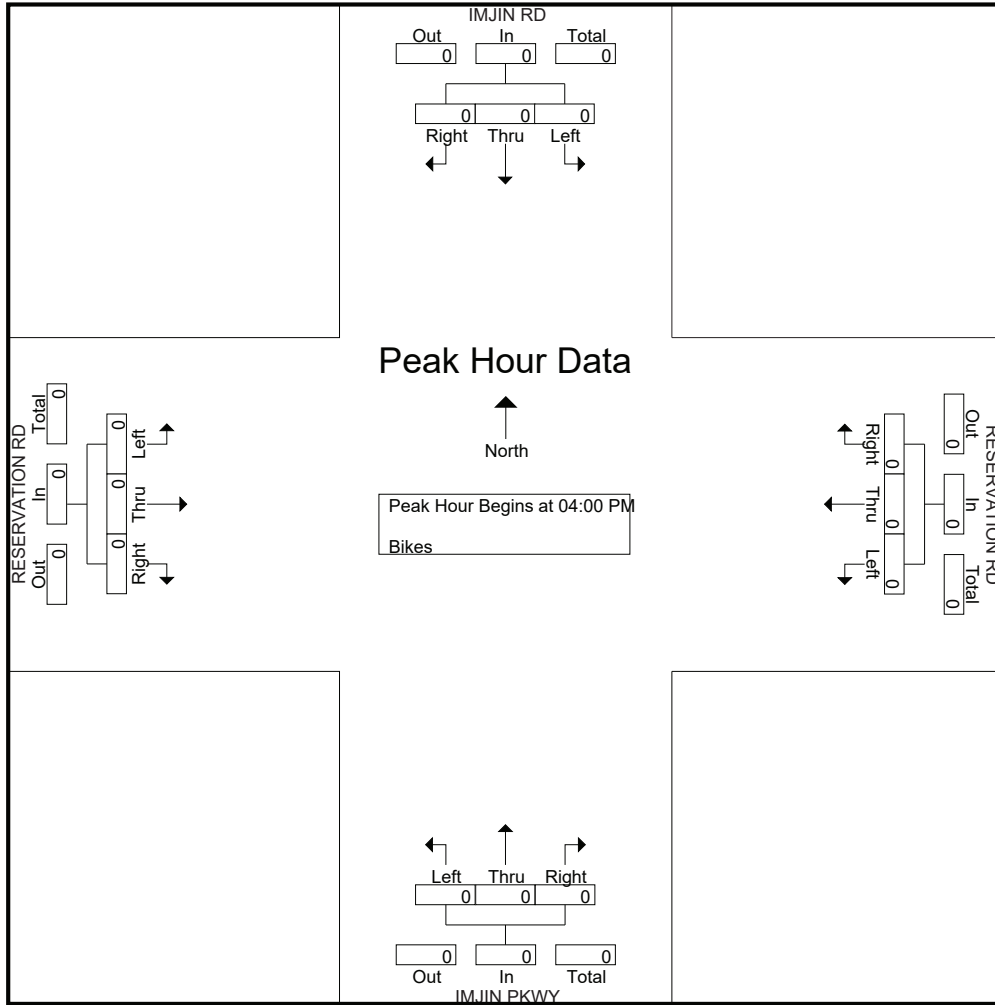
Start Time	IMJIN RD Southbound				RESERVATION RD Westbound				IMJIN PKWY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

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File Name : 9PM FINAL
Site Code : 00000009
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

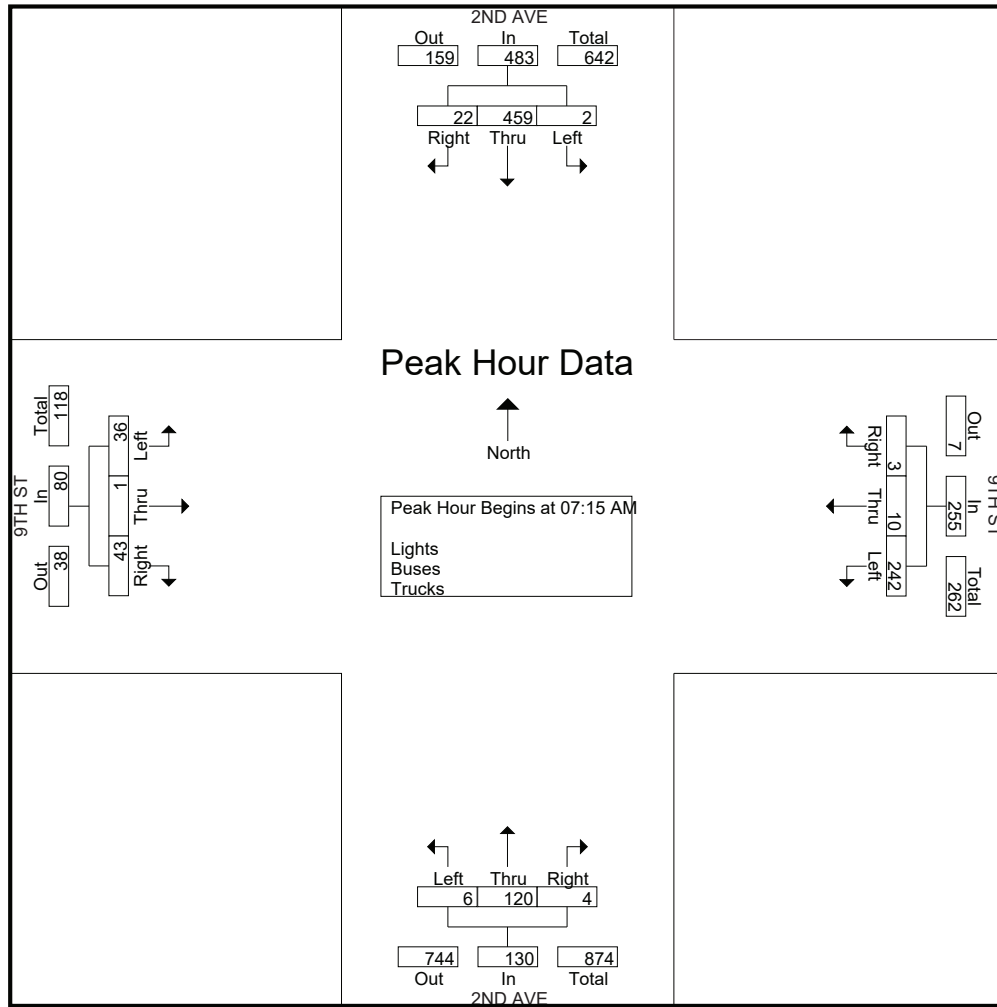
Start Time	2ND AVE Southbound					9TH ST Westbound					2ND AVE Northbound					9TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	2	48	3	0	53	0	1	18	0	19	0	9	3	1	13	3	0	5	0	8	93
07:15 AM	7	116	0	3	126	0	1	61	0	62	1	17	0	0	18	11	1	5	1	18	224
07:30 AM	1	92	0	2	95	2	3	84	0	89	0	27	1	0	28	12	0	10	3	25	237
07:45 AM	3	110	1	0	114	1	4	77	0	82	0	31	3	0	34	10	0	12	0	22	252
Total	13	366	4	5	388	3	9	240	0	252	1	84	7	1	93	36	1	32	4	73	806
08:00 AM	11	141	1	0	153	0	2	20	0	22	3	45	2	0	50	10	0	9	2	21	246
08:15 AM	5	111	0	1	117	1	1	14	1	17	1	20	3	1	25	0	0	9	0	9	168
08:30 AM	11	55	0	1	67	0	0	6	0	6	0	22	6	1	29	3	0	3	0	6	108
08:45 AM	6	62	1	1	70	0	0	6	0	6	1	23	1	0	25	5	0	5	0	10	111
Total	33	369	2	3	407	1	3	46	1	51	5	110	12	2	129	18	0	26	2	46	633
Grand Total	46	735	6	8	795	4	12	286	1	303	6	194	19	3	222	54	1	58	6	119	1439
Apprch %	5.8	92.5	0.8	1		1.3	4	94.4	0.3		2.7	87.4	8.6	1.4		45.4	0.8	48.7	5		
Total %	3.2	51.1	0.4	0.6	55.2	0.3	0.8	19.9	0.1	21.1	0.4	13.5	1.3	0.2	15.4	3.8	0.1	4	0.4	8.3	
Lights	43	722	6	8	779	3	11	286	1	301	6	188	17	3	214	54	1	54	6	115	1409
% Lights	93.5	98.2	100	100	98	75	91.7	100	100	99.3	100	96.9	89.5	100	96.4	100	100	93.1	100	96.6	97.9
Buses	1	9	0	0	10	0	1	0	0	1	0	2	1	0	3	0	0	2	0	2	16
% Buses	2.2	1.2	0	0	1.3	0	8.3	0	0	0.3	0	1	5.3	0	1.4	0	0	3.4	0	1.7	1.1
Trucks	2	4	0	0	6	1	0	0	0	1	0	4	1	0	5	0	0	2	0	2	14
% Trucks	4.3	0.5	0	0	0.8	25	0	0	0	0.3	0	2.1	5.3	0	2.3	0	0	3.4	0	1.7	1

Start Time	2ND AVE Southbound				9TH ST Westbound				2ND AVE Northbound				9TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	116	0	123	0	1	61	62	1	17	0	18	11	1	5	17	220
07:30 AM	1	92	0	93	2	3	84	89	0	27	1	28	12	0	10	22	232
07:45 AM	3	110	1	114	1	4	77	82	0	31	3	34	10	0	12	22	252
08:00 AM	11	141	1	153	0	2	20	22	3	45	2	50	10	0	9	19	244
Total Volume	22	459	2	483	3	10	242	255	4	120	6	130	43	1	36	80	948
% App. Total	4.6	95	0.4		1.2	3.9	94.9		3.1	92.3	4.6		53.8	1.2	45		
PHF	.500	.814	.500	.789	.375	.625	.720	.716	.333	.667	.500	.650	.896	.250	.750	.909	.940

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File Name : 10AM FINAL
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 Start Date : 4/27/2017
 Page No : 2



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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					9TH ST Westbound					2ND AVE Northbound					9TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	50	0	0	50	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	

Start Time	2ND AVE Southbound					9TH ST Westbound					2ND AVE Northbound					9TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500

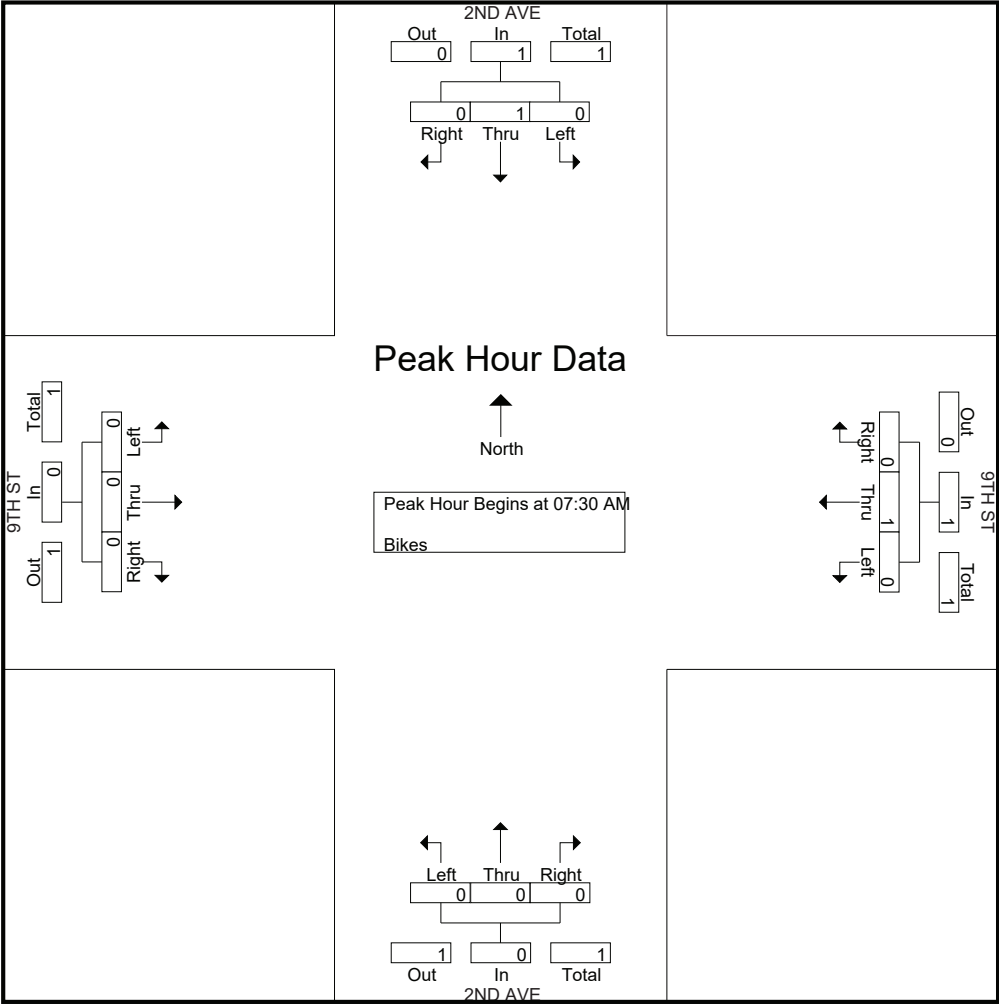
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

Traffic Data Service

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 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

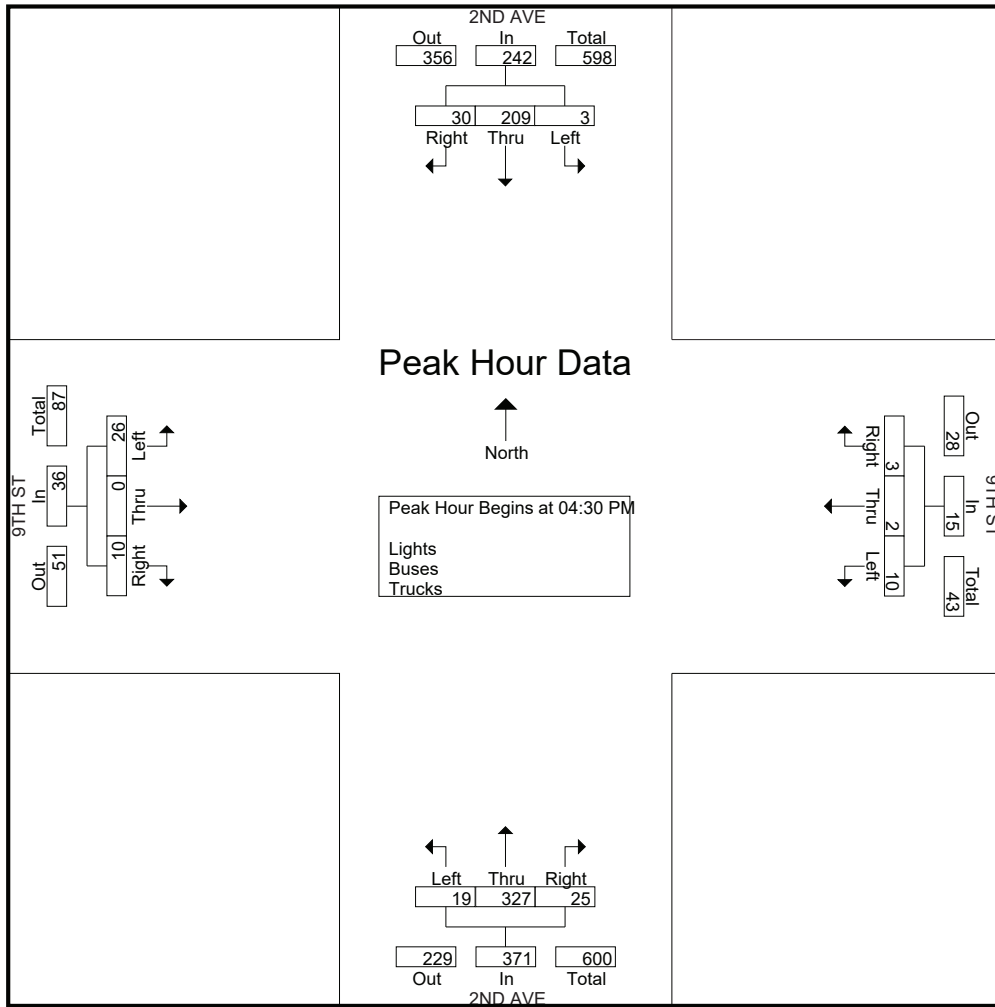
Start Time	2ND AVE Southbound					9TH ST Westbound					2ND AVE Northbound					9TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	4	46	2	0	52	0	1	5	0	6	5	55	2	0	62	2	0	7	3	12	132
04:15 PM	3	53	2	0	58	1	0	2	1	4	6	51	6	0	63	4	2	8	0	14	139
04:30 PM	5	63	1	0	69	2	0	0	2	4	7	62	9	0	78	4	0	5	1	10	161
04:45 PM	12	56	1	0	69	0	0	4	1	5	4	76	4	0	84	1	0	11	2	14	172
Total	24	218	6	0	248	3	1	11	4	19	22	244	21	0	287	11	2	31	6	50	604
05:00 PM	2	37	0	1	40	1	1	4	1	7	7	92	3	0	102	2	0	5	1	8	157
05:15 PM	11	53	1	1	66	0	1	2	4	7	7	97	3	0	107	3	0	5	1	9	189
05:30 PM	4	46	0	0	50	1	0	5	0	6	5	67	5	1	78	4	0	6	2	12	146
05:45 PM	9	53	1	0	63	3	0	4	2	9	7	75	2	0	84	3	1	8	3	15	171
Total	26	189	2	2	219	5	2	15	7	29	26	331	13	1	371	12	1	24	7	44	663
Grand Total	50	407	8	2	467	8	3	26	11	48	48	575	34	1	658	23	3	55	13	94	1267
Apprch %	10.7	87.2	1.7	0.4		16.7	6.2	54.2	22.9		7.3	87.4	5.2	0.2		24.5	3.2	58.5	13.8		
Total %	3.9	32.1	0.6	0.2	36.9	0.6	0.2	2.1	0.9	3.8	3.8	45.4	2.7	0.1	51.9	1.8	0.2	4.3	1	7.4	
Lights	50	396	8	2	456	8	2	26	11	47	48	572	33	1	654	23	3	54	13	93	1250
% Lights	100	97.3	100	100	97.6	100	66.7	100	100	97.9	100	99.5	97.1	100	99.4	100	100	98.2	100	98.9	98.7
Buses	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	11
% Buses	0	2.2	0	0	1.9	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.9
Trucks	0	2	0	0	2	0	1	0	0	1	0	1	1	0	2	0	0	1	0	1	6
% Trucks	0	0.5	0	0	0.4	0	33.3	0	0	2.1	0	0.2	2.9	0	0.3	0	0	1.8	0	1.1	0.5

Start Time	2ND AVE Southbound				9TH ST Westbound				2ND AVE Northbound				9TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	63	1	69	2	0	0	2	7	62	9	78	4	0	5	9	158
04:45 PM	12	56	1	69	0	0	4	4	4	76	4	84	1	0	11	12	169
05:00 PM	2	37	0	39	1	1	4	6	7	92	3	102	2	0	5	7	154
05:15 PM	11	53	1	65	0	1	2	3	7	97	3	107	3	0	5	8	183
Total Volume	30	209	3	242	3	2	10	15	25	327	19	371	10	0	26	36	664
% App. Total	12.4	86.4	1.2		20	13.3	66.7		6.7	88.1	5.1		27.8	0	72.2		
PHF	.625	.829	.750	.877	.375	.500	.625	.625	.893	.843	.528	.867	.625	.000	.591	.750	.907

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File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/27/2017
 Page No : 2



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File Name : 10PM FINAL
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 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

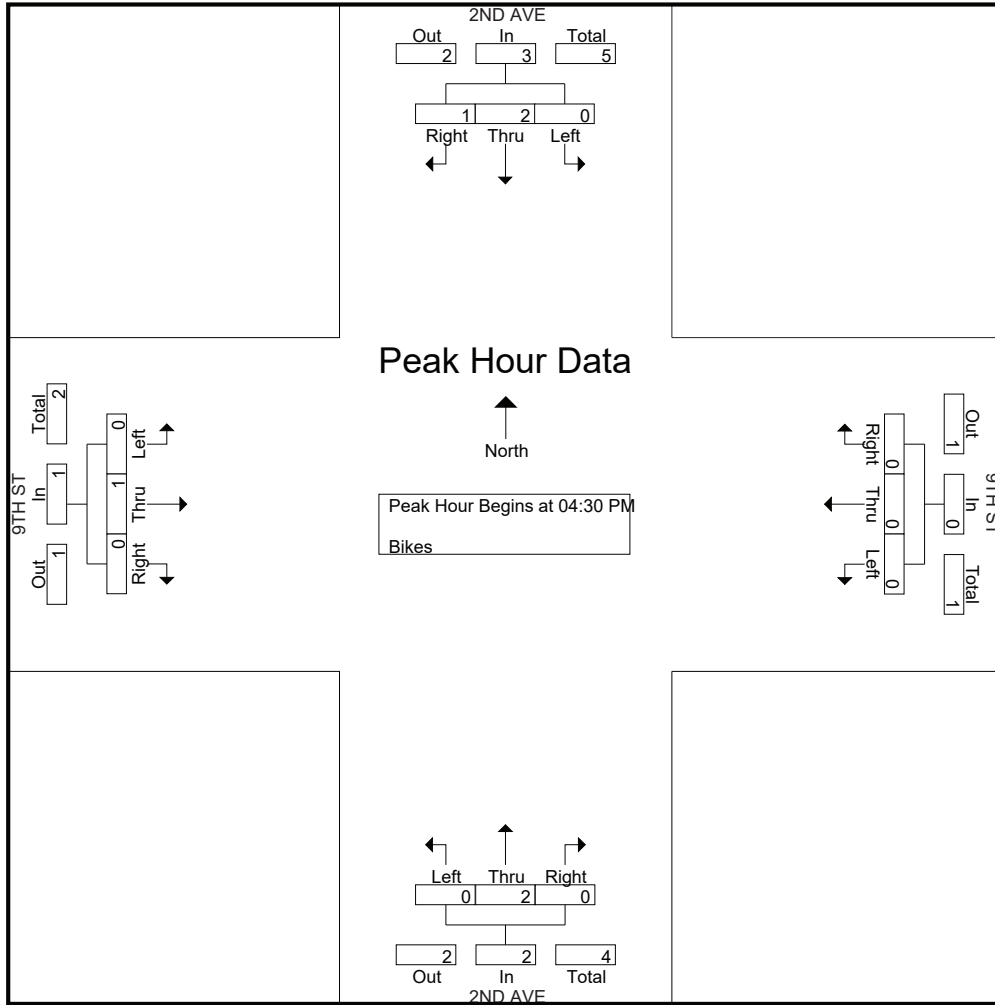
Start Time	2ND AVE Southbound					9TH ST Westbound					2ND AVE Northbound					9TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Grand Total	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	7
Apprch %	33.3	66.7	0	0		0	0	0	0		0	100	0	0		0	50	50	0		
Total %	14.3	28.6	0	0	42.9	0	0	0	0	0	0	28.6	0	0	28.6	0	14.3	14.3	0	28.6	

Start Time	2ND AVE Southbound				9TH ST Westbound				2ND AVE Northbound				9TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	2	0	3	0	0	0	0	0	2	0	2	0	1	0	1	6
% App. Total	33.3	66.7	0		0	0	0		0	100	0		0	100	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250	.500

Traffic Data Service

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File Name : 10PM FINAL
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Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

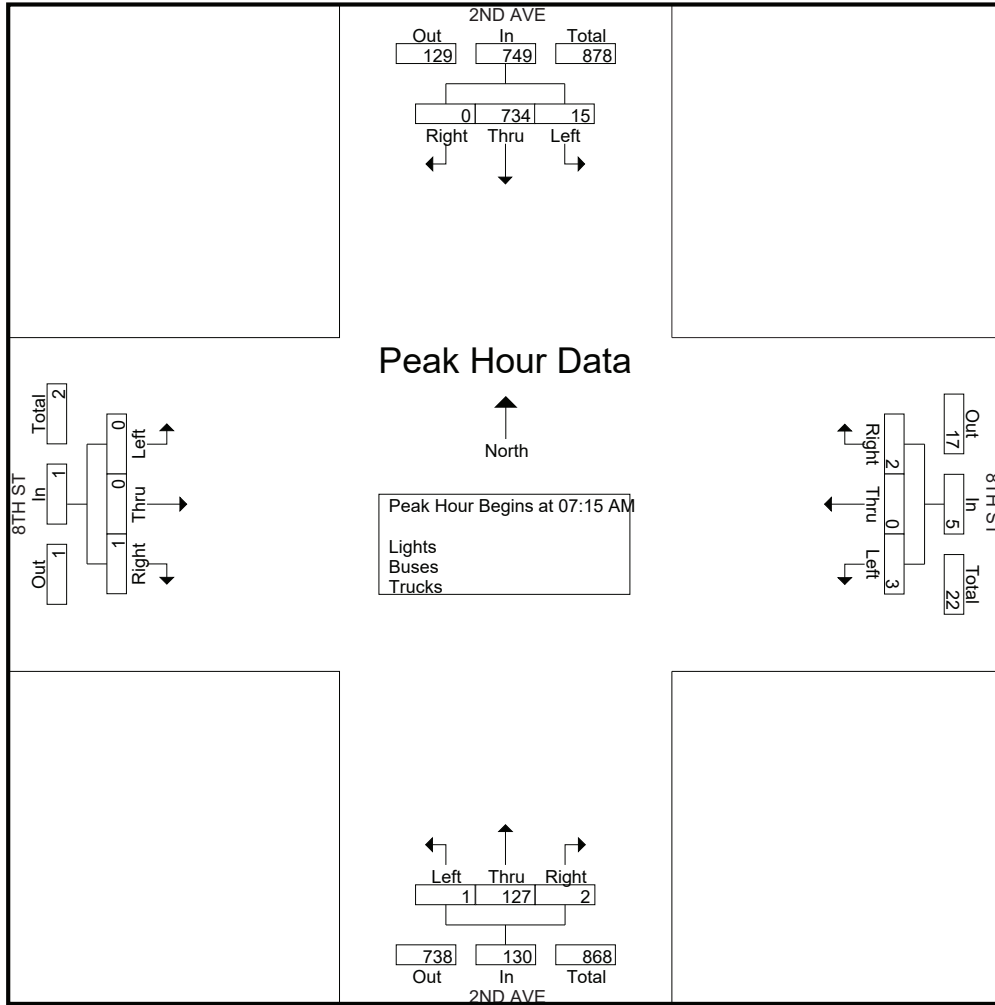
Start Time	2ND AVE Southbound					8TH ST Westbound					2ND AVE Northbound					8TH ST Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	0	65	0	0	65	0	0	2	0	2	0	12	0	0	12	0	0	0	0	0	0	79
07:15 AM	0	182	4	0	186	1	0	0	1	2	0	14	0	0	14	1	0	0	0	0	1	203
07:30 AM	0	187	2	0	189	0	0	0	0	0	1	30	0	0	31	0	0	0	0	0	0	220
07:45 AM	0	188	8	0	196	0	0	0	0	0	0	32	1	0	33	0	0	0	0	0	0	229
Total	0	622	14	0	636	1	0	2	1	4	1	88	1	0	90	1	0	0	0	0	1	731
08:00 AM	0	177	1	0	178	1	0	3	0	4	1	51	0	0	52	0	0	0	0	0	0	234
08:15 AM	1	123	0	0	124	1	0	1	2	4	1	24	0	0	25	0	0	0	0	0	0	153
08:30 AM	2	63	1	0	66	0	0	4	4	8	0	29	0	0	29	3	0	0	0	0	3	106
08:45 AM	0	73	0	0	73	1	0	0	0	1	0	21	1	1	23	0	0	1	0	0	1	98
Total	3	436	2	0	441	3	0	8	6	17	2	125	1	1	129	3	0	1	0	0	4	591
Grand Total	3	1058	16	0	1077	4	0	10	7	21	3	213	2	1	219	4	0	1	0	0	5	1322
Apprch %	0.3	98.2	1.5	0		19	0	47.6	33.3		1.4	97.3	0.9	0.5		80	0	20	0			
Total %	0.2	80	1.2	0	81.5	0.3	0	0.8	0.5	1.6	0.2	16.1	0.2	0.1	16.6	0.3	0	0.1	0	0.4		
Lights	2	1047	16	0	1065	3	0	7	7	17	3	206	1	1	211	3	0	0	0	0	3	1296
% Lights	66.7	99	100	0	98.9	75	0	70	100	81	100	96.7	50	100	96.3	75	0	0	0	0	60	98
Buses	0	9	0	0	9	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	13
% Buses	0	0.9	0	0	0.8	0	0	0	0	0	0	1.9	0	0	1.8	0	0	0	0	0	0	1
Trucks	1	2	0	0	3	1	0	3	0	4	0	3	1	0	4	1	0	1	0	0	2	13
% Trucks	33.3	0.2	0	0	0.3	25	0	30	0	19	0	1.4	50	0	1.8	25	0	100	0	0	40	1

Start Time	2ND AVE Southbound				8TH ST Westbound				2ND AVE Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	182	4	186	1	0	0	1	0	14	0	14	1	0	0	1	202
07:30 AM	0	187	2	189	0	0	0	0	1	30	0	31	0	0	0	0	220
07:45 AM	0	188	8	196	0	0	0	0	0	32	1	33	0	0	0	0	229
08:00 AM	0	177	1	178	1	0	3	4	1	51	0	52	0	0	0	0	234
Total Volume	0	734	15	749	2	0	3	5	2	127	1	130	1	0	0	1	885
% App. Total	0	98	2		40	0	60		1.5	97.7	0.8		100	0	0		
PHF	.000	.976	.469	.955	.500	.000	.250	.313	.500	.623	.250	.625	.250	.000	.000	.250	.946

Traffic Data Service

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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 2



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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

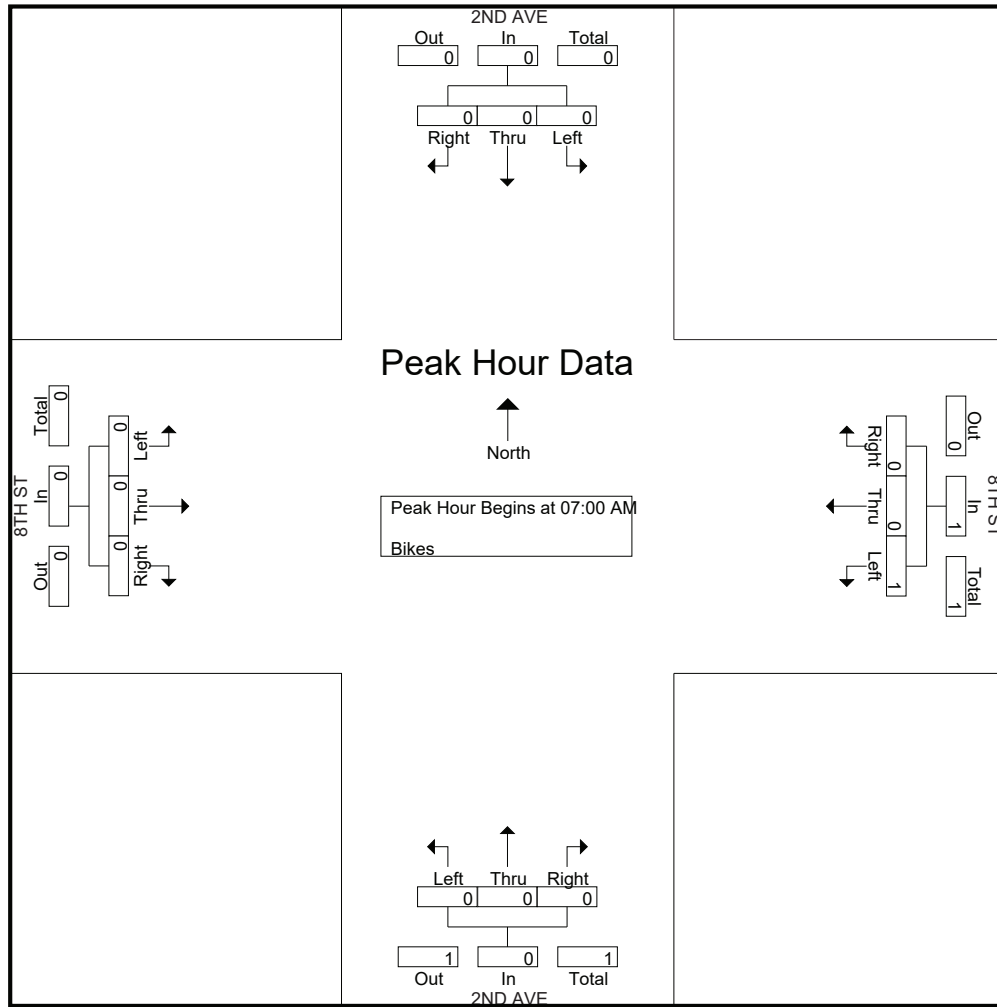
Start Time	2ND AVE Southbound					8TH ST Westbound					2ND AVE Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	100	0	100	0	0	0	0		0	0	0	0		

Start Time	2ND AVE Southbound				8TH ST Westbound				2ND AVE Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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File Name : 11AM FINAL
Site Code : 00000011
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

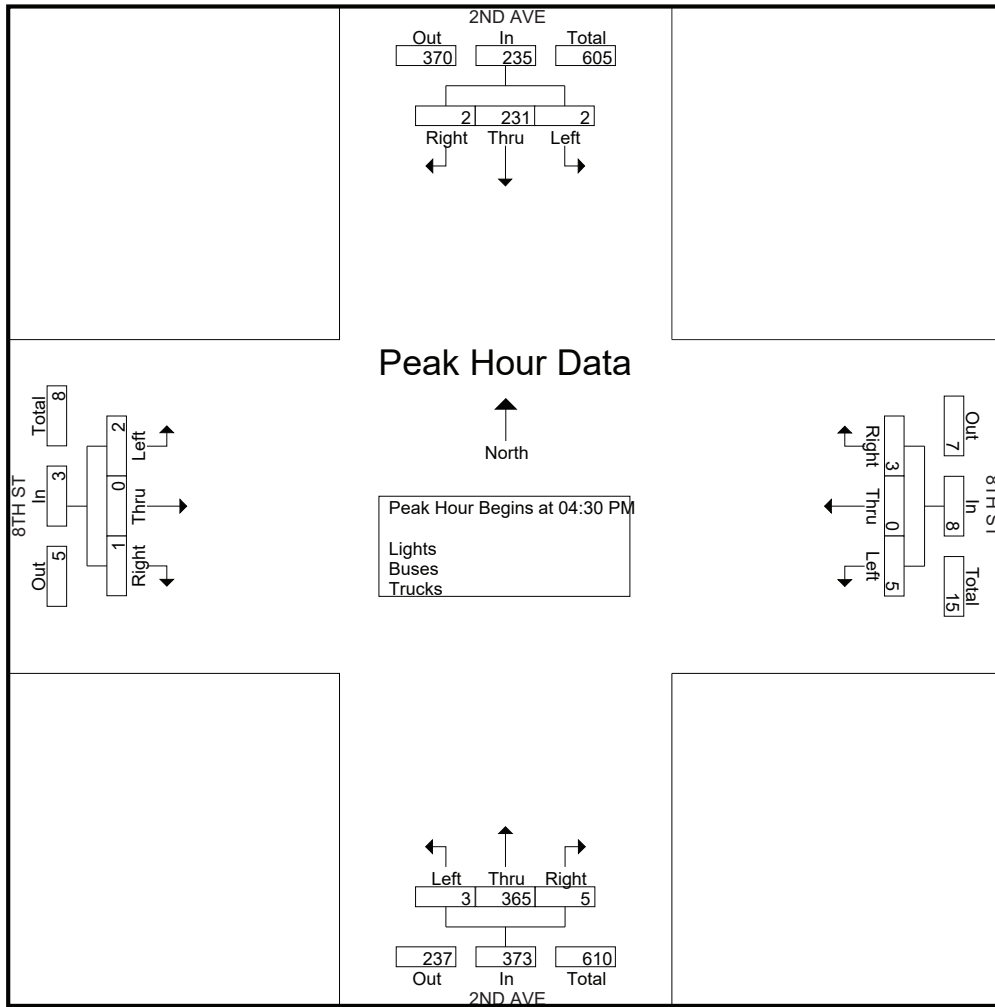
Start Time	2ND AVE Southbound					8TH ST Westbound					2ND AVE Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	53	0	0	54	6	0	1	0	7	1	55	1	0	57	0	0	0	0	0	118
04:15 PM	1	54	1	0	56	2	0	1	2	5	1	61	0	2	64	2	0	1	2	5	130
04:30 PM	1	67	0	2	70	0	0	0	1	1	2	77	2	0	81	1	0	1	2	4	156
04:45 PM	0	62	1	0	63	2	0	0	2	4	1	82	0	2	85	0	0	1	2	3	155
Total	3	236	2	2	243	10	0	2	5	17	5	275	3	4	287	3	0	3	6	12	559
05:00 PM	0	47	1	0	48	1	0	5	3	9	1	100	0	0	101	0	0	0	0	0	158
05:15 PM	1	55	0	0	56	0	0	0	4	4	1	106	1	0	108	0	0	0	0	0	168
05:30 PM	0	57	0	0	57	0	0	0	1	1	0	76	0	0	76	0	0	0	0	0	134
05:45 PM	0	59	0	0	59	0	0	0	2	2	0	86	4	0	90	2	0	0	0	2	153
Total	1	218	1	0	220	1	0	5	10	16	2	368	5	0	375	2	0	0	0	2	613
Grand Total	4	454	3	2	463	11	0	7	15	33	7	643	8	4	662	5	0	3	6	14	1172
Apprch %	0.9	98.1	0.6	0.4		33.3	0	21.2	45.5		1.1	97.1	1.2	0.6		35.7	0	21.4	42.9		
Total %	0.3	38.7	0.3	0.2	39.5	0.9	0	0.6	1.3	2.8	0.6	54.9	0.7	0.3	56.5	0.4	0	0.3	0.5	1.2	
Lights	4	443	3	2	452	11	0	7	15	33	6	640	8	4	658	5	0	3	6	14	1157
% Lights	100	97.6	100	100	97.6	100	0	100	100	100	85.7	99.5	100	100	99.4	100	0	100	100	100	98.7
Buses	0	9	0	0	9	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	11
% Buses	0	2	0	0	1.9	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.9
Trucks	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	4
% Trucks	0	0.4	0	0	0.4	0	0	0	0	0	14.3	0.2	0	0	0.3	0	0	0	0	0	0.3

Start Time	2ND AVE Southbound				8TH ST Westbound				2ND AVE Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	67	0	68	0	0	0	0	2	77	2	81	1	0	1	2	151
04:45 PM	0	62	1	63	2	0	0	2	1	82	0	83	0	0	1	1	149
05:00 PM	0	47	1	48	1	0	5	6	1	100	0	101	0	0	0	0	155
05:15 PM	1	55	0	56	0	0	0	0	1	106	1	108	0	0	0	0	164
Total Volume	2	231	2	235	3	0	5	8	5	365	3	373	1	0	2	3	619
% App. Total	0.9	98.3	0.9		37.5	0	62.5		1.3	97.9	0.8		33.3	0	66.7		
PHF	.500	.862	.500	.864	.375	.000	.250	.333	.625	.861	.375	.863	.250	.000	.500	.375	.944

Traffic Data Service

San Jose, CA
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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					8TH ST Westbound					2ND AVE Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
Apprch %	0	100	0	0		0	0	100	0		0	100	0	0		0	0	0	0		
Total %	0	33.3	0	0	33.3	0	0	33.3	0	33.3	0	33.3	0	0	33.3	0	0	0	0	0	

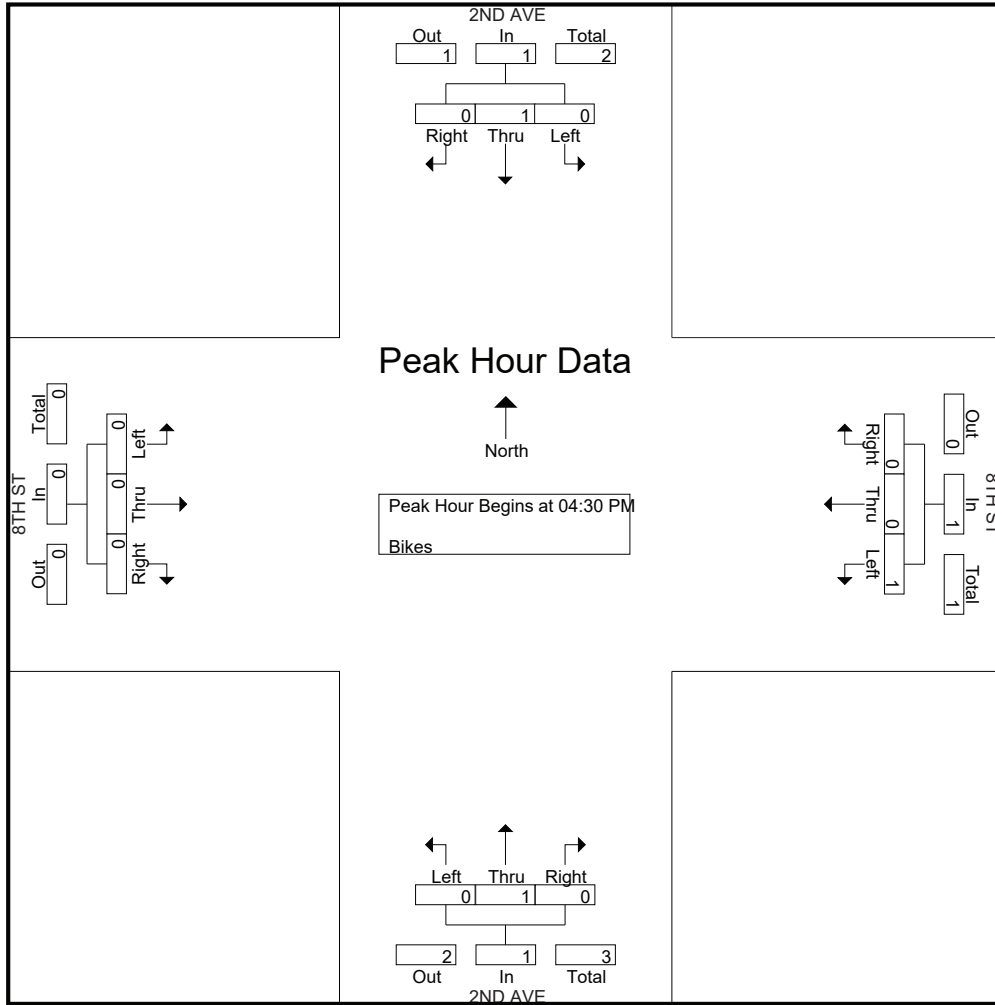
Start Time	2ND AVE Southbound				8TH ST Westbound				2ND AVE Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.250	.250	.000	.250	.000	.250	.000	.000	.000	.000	.750

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

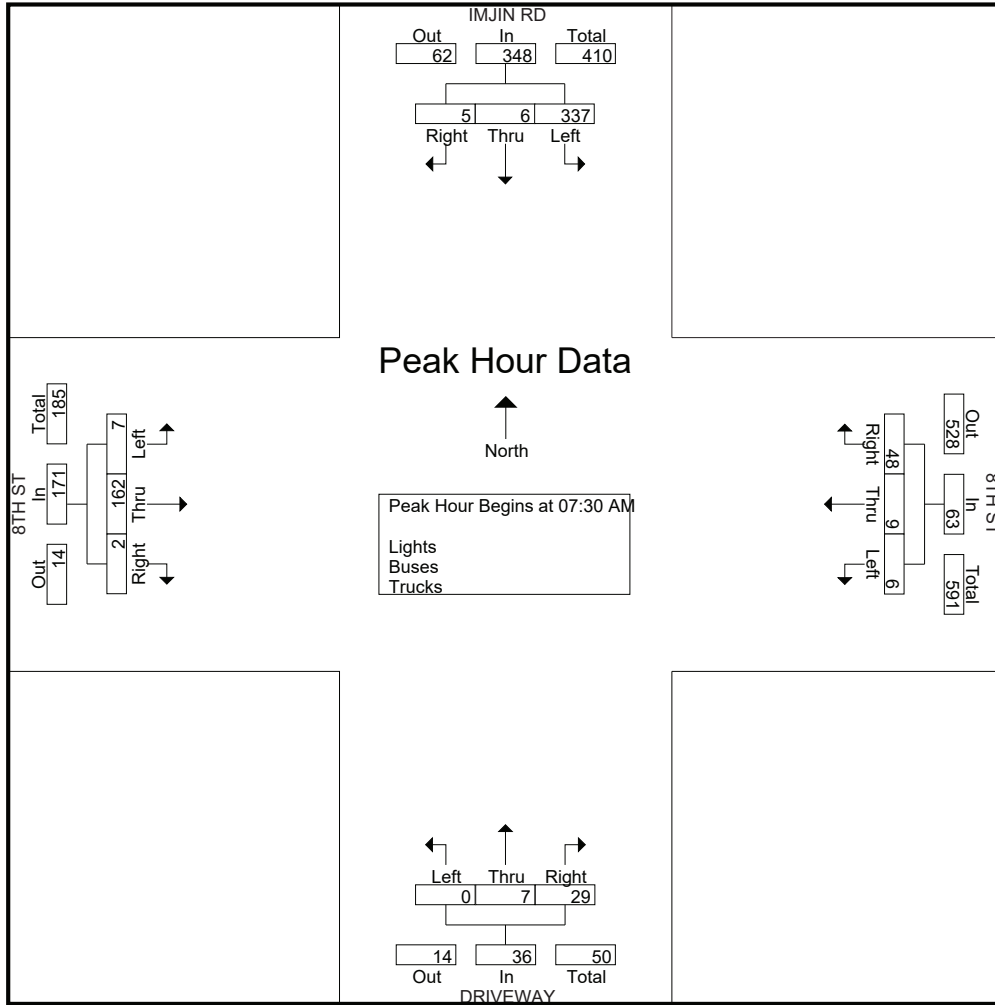
Start Time	IMJIN RD Southbound					8TH ST Westbound					DRIVEWAY Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	3	0	20	0	23	5	2	0	0	7	3	1	0	0	4	0	15	0	0	15	49
07:15 AM	0	2	58	0	60	5	1	0	0	6	1	1	0	0	2	0	30	1	0	31	99
07:30 AM	1	2	95	0	98	13	1	1	0	15	6	2	0	0	8	0	50	0	0	50	171
07:45 AM	2	1	109	0	112	9	4	1	0	14	9	2	0	0	11	1	51	1	0	53	190
Total	6	5	282	0	293	32	8	2	0	42	19	6	0	0	25	1	146	2	0	149	509
08:00 AM	1	3	67	0	71	13	2	3	0	18	8	2	0	0	10	0	41	1	0	42	141
08:15 AM	1	0	66	0	67	13	2	1	0	16	6	1	0	0	7	1	20	5	0	26	116
08:30 AM	0	1	47	0	48	9	3	0	0	12	3	2	0	0	5	0	12	0	0	12	77
08:45 AM	0	1	41	0	42	13	3	2	0	18	3	5	0	0	8	0	9	1	0	10	78
Total	2	5	221	0	228	48	10	6	0	64	20	10	0	0	30	1	82	7	0	90	412
Grand Total	8	10	503	0	521	80	18	8	0	106	39	16	0	0	55	2	228	9	0	239	921
Apprch %	1.5	1.9	96.5	0		75.5	17	7.5	0		70.9	29.1	0	0		0.8	95.4	3.8	0		
Total %	0.9	1.1	54.6	0	56.6	8.7	2	0.9	0	11.5	4.2	1.7	0	0	6	0.2	24.8	1	0	26	
Lights	8	10	496	0	514	71	15	8	0	94	39	16	0	0	55	2	220	9	0	231	894
% Lights	100	100	98.6	0	98.7	88.8	83.3	100	0	88.7	100	100	0	0	100	100	96.5	100	0	96.7	97.1
Buses	0	0	2	0	2	5	0	0	0	5	0	0	0	0	0	0	2	0	0	2	9
% Buses	0	0	0.4	0	0.4	6.2	0	0	0	4.7	0	0	0	0	0	0	0.9	0	0	0.8	1
Trucks	0	0	5	0	5	4	3	0	0	7	0	0	0	0	0	0	6	0	0	6	18
% Trucks	0	0	1	0	1	5	16.7	0	0	6.6	0	0	0	0	0	0	2.6	0	0	2.5	2

Start Time	IMJIN RD Southbound				8TH ST Westbound				DRIVEWAY Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	2	95	98	13	1	1	15	6	2	0	8	0	50	0	50	171
07:45 AM	2	1	109	112	9	4	1	14	9	2	0	11	1	51	1	53	190
08:00 AM	1	3	67	71	13	2	3	18	8	2	0	10	0	41	1	42	141
08:15 AM	1	0	66	67	13	2	1	16	6	1	0	7	1	20	5	26	116
Total Volume	5	6	337	348	48	9	6	63	29	7	0	36	2	162	7	171	618
% App. Total	1.4	1.7	96.8		76.2	14.3	9.5		80.6	19.4	0		1.2	94.7	4.1		
PHF	.625	.500	.773	.777	.923	.563	.500	.875	.806	.875	.000	.818	.500	.794	.350	.807	.813

Traffic Data Service

San Jose, CA
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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

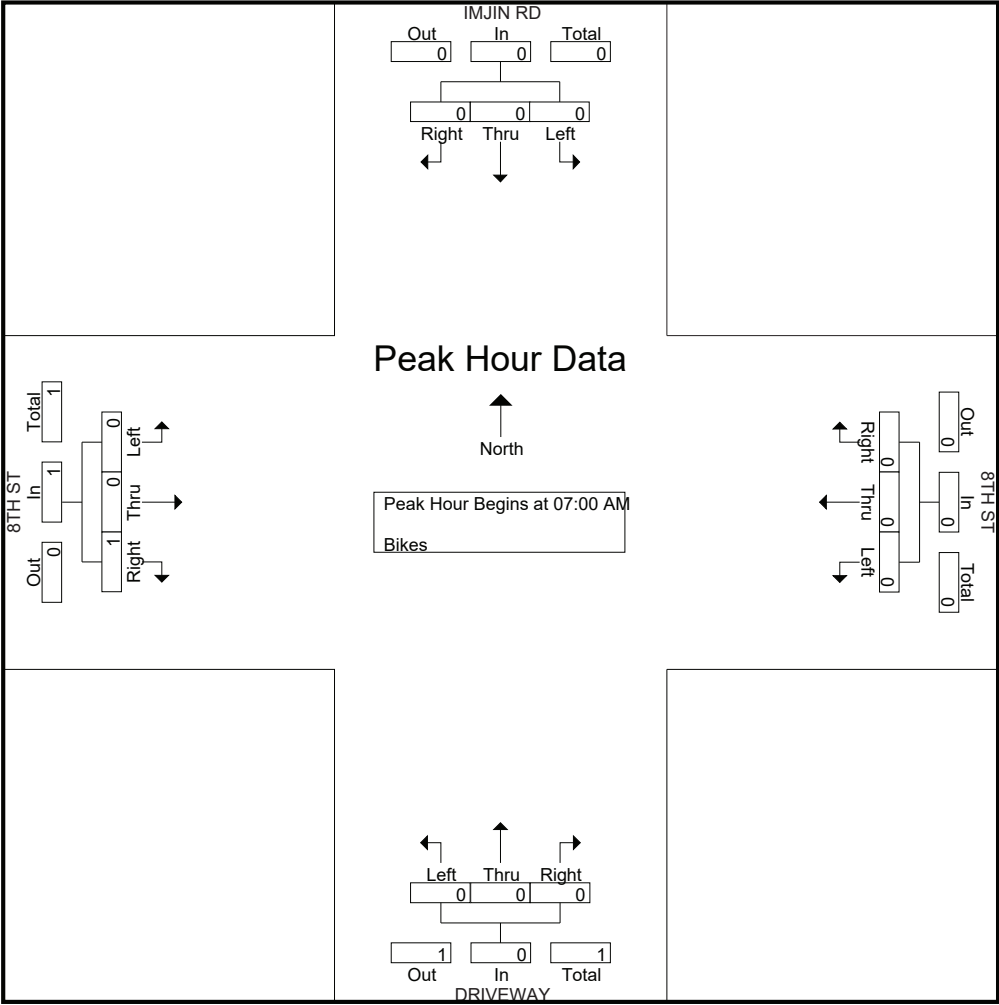
Start Time	IMJIN RD Southbound					8TH ST Westbound					DRIVEWAY Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	0

Start Time	IMJIN RD Southbound				8TH ST Westbound				DRIVEWAY Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Traffic Data Service

San Jose, CA
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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

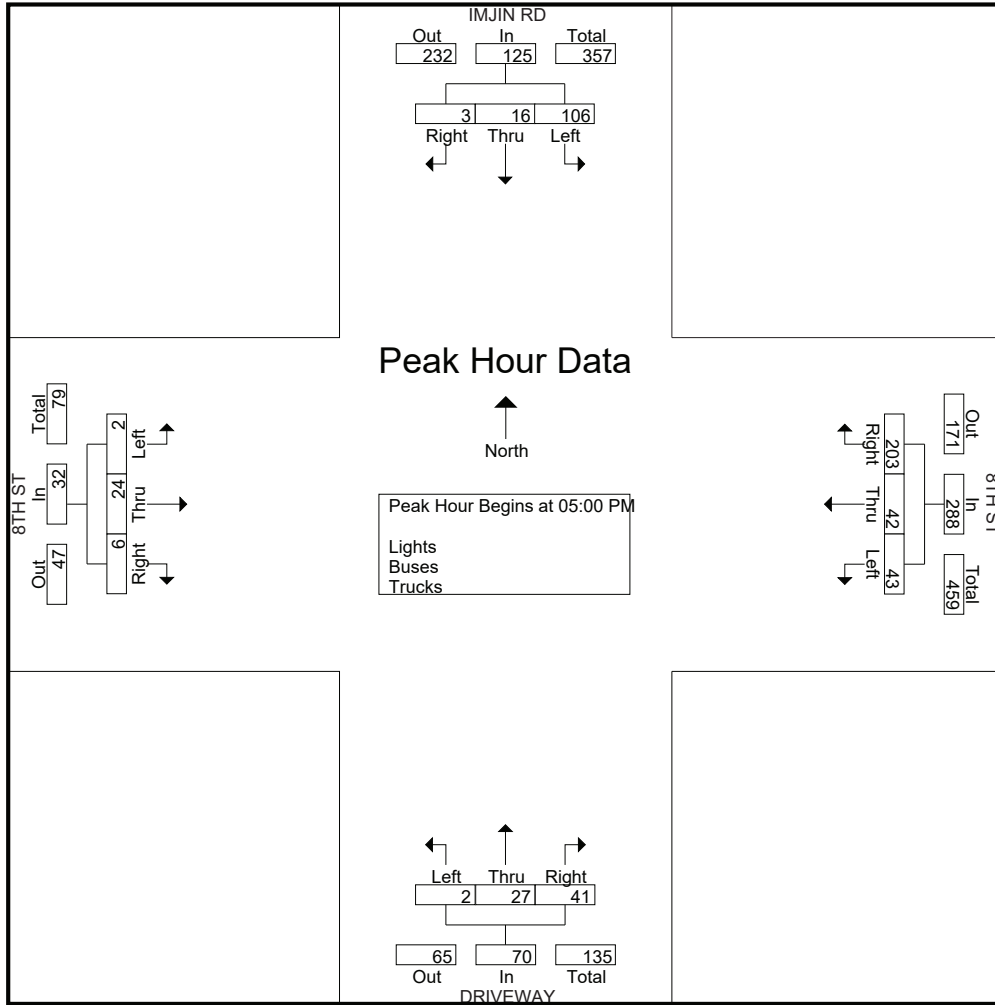
Start Time	IMJIN RD Southbound					8TH ST Westbound					DRIVEWAY Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	4	30	0	35	46	7	10	0	63	4	9	0	0	13	2	8	1	0	11	122
04:15 PM	0	0	16	0	16	26	7	3	0	36	6	5	1	0	12	0	7	1	0	8	72
04:30 PM	1	8	19	0	28	31	7	4	0	42	4	4	0	0	8	0	8	2	0	10	88
04:45 PM	2	6	19	0	27	46	9	6	0	61	4	10	0	0	14	0	5	0	0	5	107
Total	4	18	84	0	106	149	30	23	0	202	18	28	1	0	47	2	28	4	0	34	389
05:00 PM	0	5	20	0	25	48	12	10	0	70	2	5	0	0	7	2	8	1	0	11	113
05:15 PM	0	3	27	0	30	53	9	13	0	75	7	9	0	0	16	1	4	1	0	6	127
05:30 PM	2	2	29	0	33	58	10	5	0	73	14	6	2	0	22	1	4	0	0	5	133
05:45 PM	1	6	30	0	37	44	11	15	0	70	18	7	0	0	25	2	8	0	0	10	142
Total	3	16	106	0	125	203	42	43	0	288	41	27	2	0	70	6	24	2	0	32	515
Grand Total	7	34	190	0	231	352	72	66	0	490	59	55	3	0	117	8	52	6	0	66	904
Apprch %	3	14.7	82.3	0		71.8	14.7	13.5	0		50.4	47	2.6	0		12.1	78.8	9.1	0		
Total %	0.8	3.8	21	0	25.6	38.9	8	7.3	0	54.2	6.5	6.1	0.3	0	12.9	0.9	5.8	0.7	0	7.3	
Lights	7	34	188	0	229	347	72	65	0	484	58	54	3	0	115	8	50	6	0	64	892
% Lights	100	100	98.9	0	99.1	98.6	100	98.5	0	98.8	98.3	98.2	100	0	98.3	100	96.2	100	0	97	98.7
Buses	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	1	0	0	1	6
% Buses	0	0	0	0	0	1.4	0	0	0	1	0	0	0	0	0	0	1.9	0	0	1.5	0.7
Trucks	0	0	2	0	2	0	0	1	0	1	1	1	0	0	2	0	1	0	0	1	6
% Trucks	0	0	1.1	0	0.9	0	0	1.5	0	0.2	1.7	1.8	0	0	1.7	0	1.9	0	0	1.5	0.7

Start Time	IMJIN RD Southbound				8TH ST Westbound				DRIVEWAY Northbound				8TH ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	5	20	25	48	12	10	70	2	5	0	7	2	8	1	11	113
05:15 PM	0	3	27	30	53	9	13	75	7	9	0	16	1	4	1	6	127
05:30 PM	2	2	29	33	58	10	5	73	14	6	2	22	1	4	0	5	133
05:45 PM	1	6	30	37	44	11	15	70	18	7	0	25	2	8	0	10	142
Total Volume	3	16	106	125	203	42	43	288	41	27	2	70	6	24	2	32	515
% App. Total	2.4	12.8	84.8		70.5	14.6	14.9		58.6	38.6	2.9		18.8	75	6.2		
PHF	.375	.667	.883	.845	.875	.875	.717	.960	.569	.750	.250	.700	.750	.750	.500	.727	.907

Traffic Data Service

San Jose, CA
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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	IMJIN RD Southbound					8TH ST Westbound					DRIVEWAY Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	100	

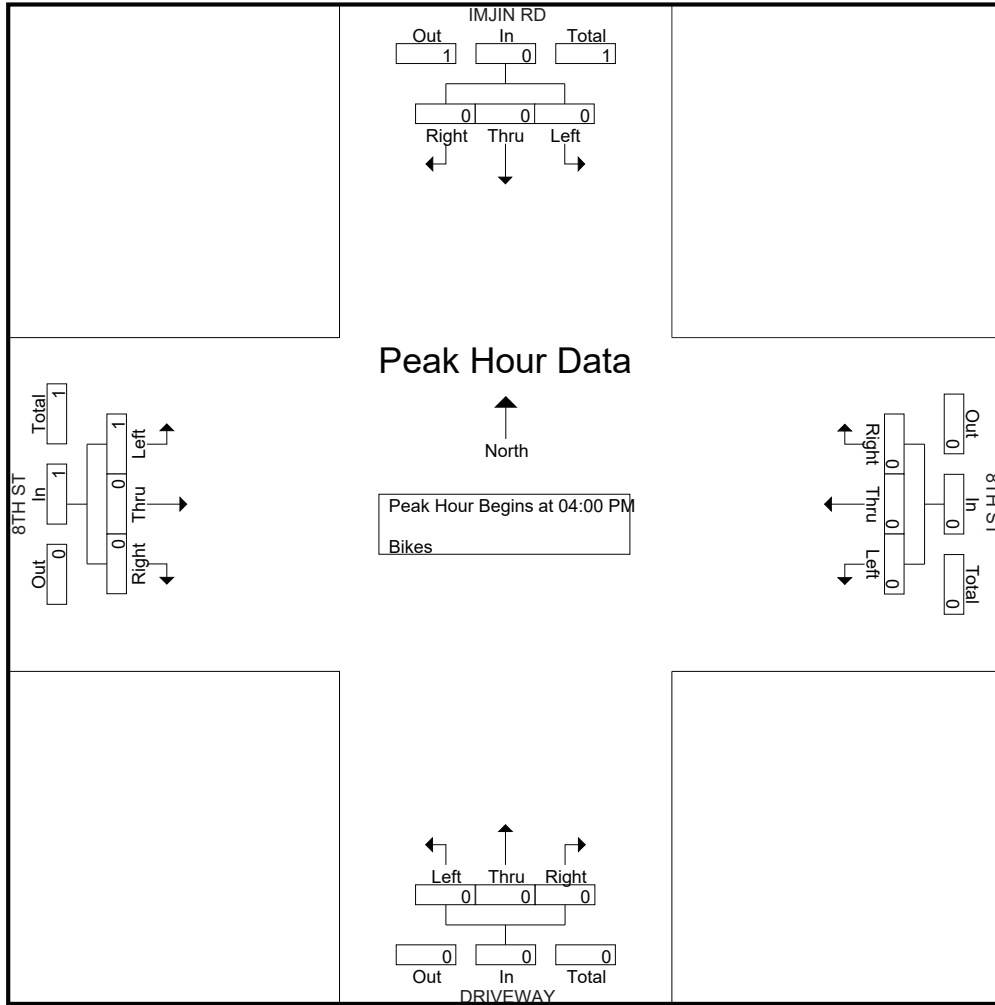
Start Time	IMJIN RD Southbound					8TH ST Westbound					DRIVEWAY Northbound					8TH ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.250		.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 12PM FINAL
Site Code : 00000012
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

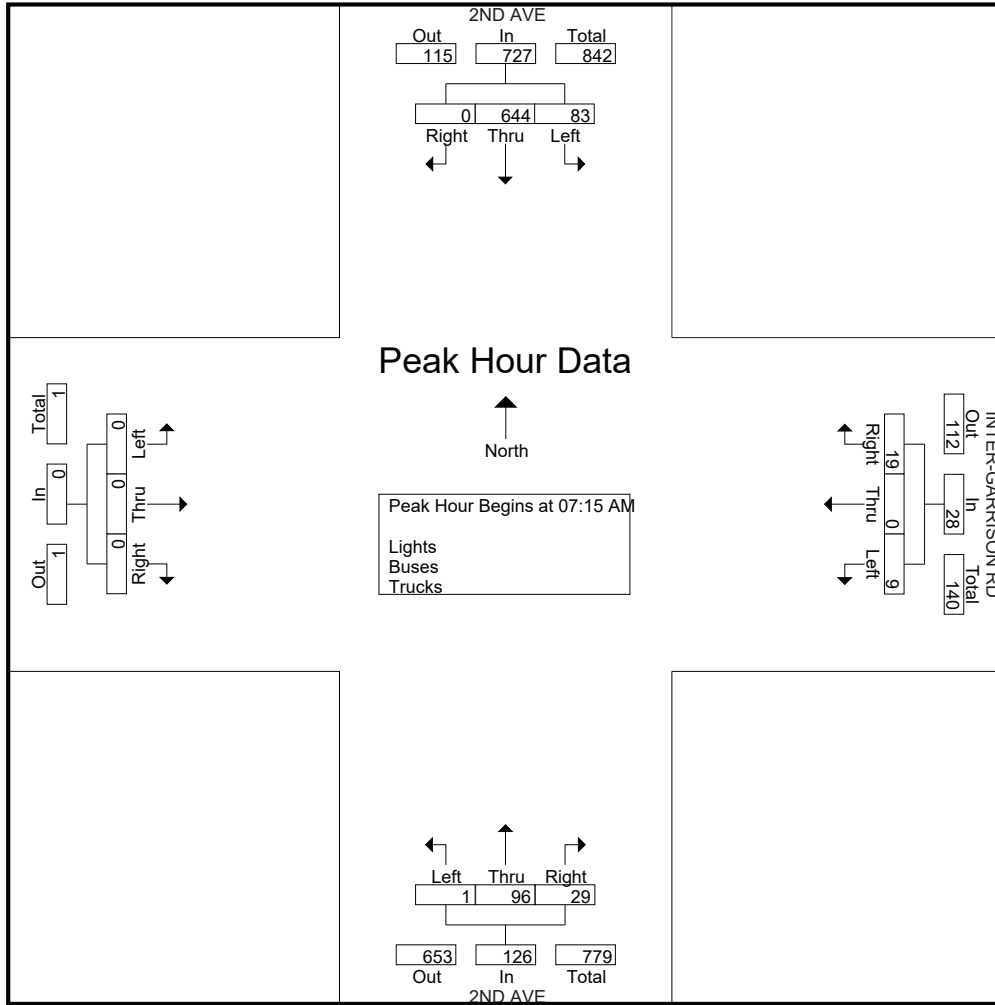
Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	61	3	0	64	1	0	4	0	5	4	10	0	0	14	0	0	0	0	0	83
07:15 AM	0	154	19	1	174	6	0	1	1	8	1	8	1	0	10	0	0	0	0	0	192
07:30 AM	0	178	9	0	187	3	0	2	0	5	13	21	0	0	34	0	0	0	0	0	226
07:45 AM	0	165	22	0	187	5	0	5	0	10	5	27	0	0	32	0	0	0	0	0	229
Total	0	558	53	1	612	15	0	12	1	28	23	66	1	0	90	0	0	0	0	0	730
08:00 AM	0	147	33	0	180	5	0	1	0	6	10	40	0	0	50	0	0	0	0	0	236
08:15 AM	0	103	24	0	127	2	0	2	0	4	8	20	0	0	28	0	0	0	0	0	159
08:30 AM	0	54	21	0	75	8	0	4	0	12	6	16	0	0	22	0	0	0	0	0	109
08:45 AM	0	52	18	0	70	10	0	1	4	15	15	10	0	0	25	0	0	0	0	0	110
Total	0	356	96	0	452	25	0	8	4	37	39	86	0	0	125	0	0	0	0	0	614
Grand Total	0	914	149	1	1064	40	0	20	5	65	62	152	1	0	215	0	0	0	0	0	1344
Apprch %	0	85.9	14	0.1		61.5	0	30.8	7.7		28.8	70.7	0.5	0		0	0	0	0	0	
Total %	0	68	11.1	0.1	79.2	3	0	1.5	0.4	4.8	4.6	11.3	0.1	0	16	0	0	0	0	0	0
Lights	0	903	144	1	1048	39	0	19	5	63	62	146	1	0	209	0	0	0	0	0	1320
% Lights	0	98.8	96.6	100	98.5	97.5	0	95	100	96.9	100	96.1	100	0	97.2	0	0	0	0	0	98.2
Buses	0	5	4	0	9	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	13
% Buses	0	0.5	2.7	0	0.8	0	0	0	0	0	0	2.6	0	0	1.9	0	0	0	0	0	1
Trucks	0	6	1	0	7	1	0	1	0	2	0	2	0	0	2	0	0	0	0	0	11
% Trucks	0	0.7	0.7	0	0.7	2.5	0	5	0	3.1	0	1.3	0	0	0.9	0	0	0	0	0	0.8

Start Time	2ND AVE Southbound				INTER-GARRISON RD Westbound				2ND AVE Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	154	19	173	6	0	1	7	1	8	1	10	0	0	0	0	190
07:30 AM	0	178	9	187	3	0	2	5	13	21	0	34	0	0	0	0	226
07:45 AM	0	165	22	187	5	0	5	10	5	27	0	32	0	0	0	0	229
08:00 AM	0	147	33	180	5	0	1	6	10	40	0	50	0	0	0	0	236
Total Volume	0	644	83	727	19	0	9	28	29	96	1	126	0	0	0	0	881
% App. Total	0	88.6	11.4		67.9	0	32.1		23	76.2	0.8		0	0	0		
PHF	.000	.904	.629	.972	.792	.000	.450	.700	.558	.600	.250	.630	.000	.000	.000	.000	.933

Traffic Data Service

San Jose, CA
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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

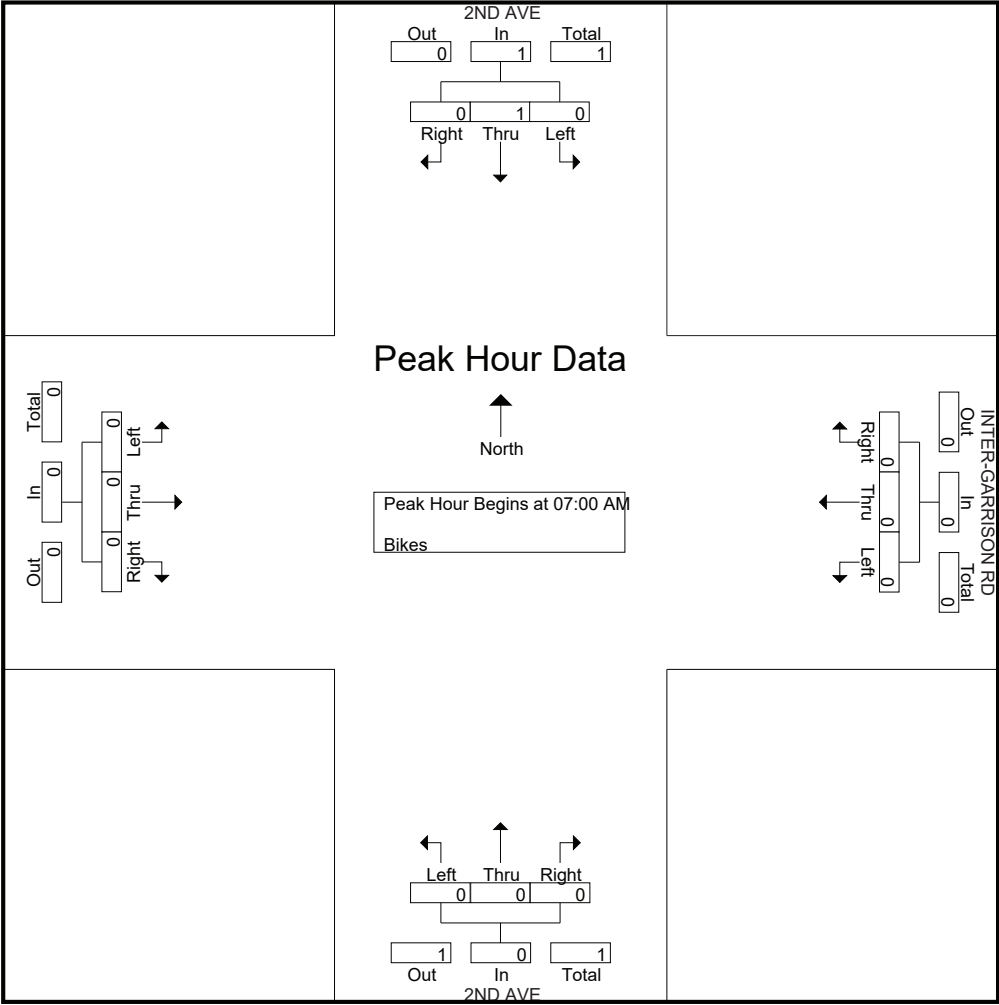
Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

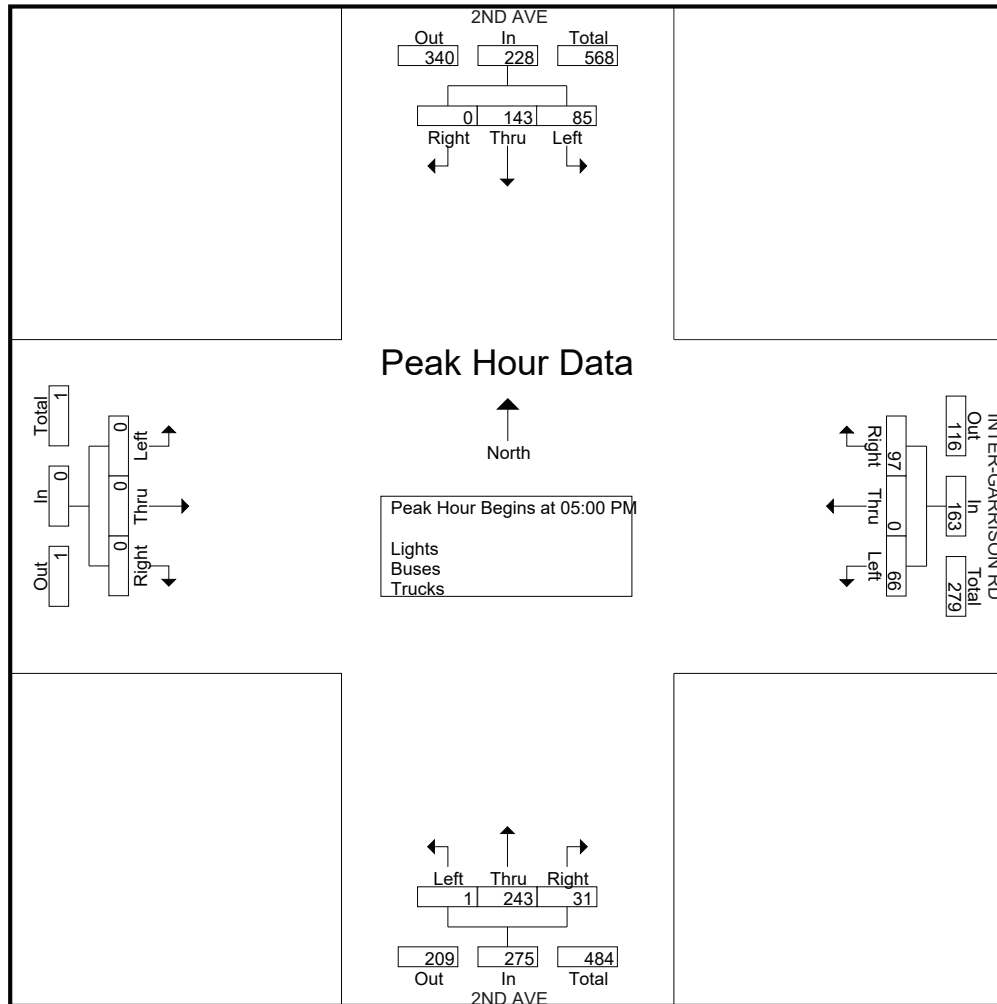
Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	33	15	0	48	17	0	15	0	32	6	30	0	0	36	0	0	0	0	0	116
04:15 PM	0	44	10	1	55	11	0	4	2	17	4	41	0	1	46	0	0	0	0	0	118
04:30 PM	0	50	13	1	64	18	0	7	0	25	6	45	0	0	51	0	0	0	0	0	140
04:45 PM	0	47	12	2	61	24	0	8	2	34	5	51	0	0	56	0	0	0	0	0	151
Total	0	174	50	4	228	70	0	34	4	108	21	167	0	1	189	0	0	0	0	0	525
05:00 PM	0	28	27	0	55	22	0	16	2	40	6	73	0	0	79	0	0	0	0	0	174
05:15 PM	0	37	15	0	52	35	0	12	0	47	10	57	0	0	67	0	0	0	0	0	166
05:30 PM	0	37	23	1	61	19	0	22	1	42	7	56	1	0	64	0	0	0	0	0	167
05:45 PM	0	41	20	0	61	21	0	16	1	38	8	57	0	0	65	0	0	0	0	0	164
Total	0	143	85	1	229	97	0	66	4	167	31	243	1	0	275	0	0	0	0	0	671
Grand Total	0	317	135	5	457	167	0	100	8	275	52	410	1	1	464	0	0	0	0	0	1196
Apprch %	0	69.4	29.5	1.1		60.7	0	36.4	2.9		11.2	88.4	0.2	0.2		0	0	0	0		
Total %	0	26.5	11.3	0.4	38.2	14	0	8.4	0.7	23	4.3	34.3	0.1	0.1	38.8	0	0	0	0	0	
Lights	0	312	130	5	447	167	0	100	8	275	52	405	1	1	459	0	0	0	0	0	1181
% Lights	0	98.4	96.3	100	97.8	100	0	100	100	100	100	98.8	100	100	98.9	0	0	0	0	0	98.7
Buses	0	4	4	0	8	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10
% Buses	0	1.3	3	0	1.8	0	0	0	0	0	0	0.5	0	0	0.4	0	0	0	0	0	0.8
Trucks	0	1	1	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5
% Trucks	0	0.3	0.7	0	0.4	0	0	0	0	0	0	0.7	0	0	0.6	0	0	0	0	0	0.4

Start Time	2ND AVE Southbound				INTER-GARRISON RD Westbound				2ND AVE Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	28	27	55	22	0	16	38	6	73	0	79	0	0	0	0	172
05:15 PM	0	37	15	52	35	0	12	47	10	57	0	67	0	0	0	0	166
05:30 PM	0	37	23	60	19	0	22	41	7	56	1	64	0	0	0	0	165
05:45 PM	0	41	20	61	21	0	16	37	8	57	0	65	0	0	0	0	163
Total Volume	0	143	85	228	97	0	66	163	31	243	1	275	0	0	0	0	666
% App. Total	0	62.7	37.3		59.5	0	40.5		11.3	88.4	0.4		0	0	0		
PHF	.000	.872	.787	.934	.693	.000	.750	.867	.775	.832	.250	.870	.000	.000	.000	.000	.968

Traffic Data Service

San Jose, CA
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File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	0	2	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	4
Grand Total	0	1	1	0	2	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	5
Apprch %	0	50	50	0		0	0	100	0		100	0	0	0		0	0	0	0		
Total %	0	20	20	0	40	0	0	40	0	40	20	0	0	0	20	0	0	0	0	0	

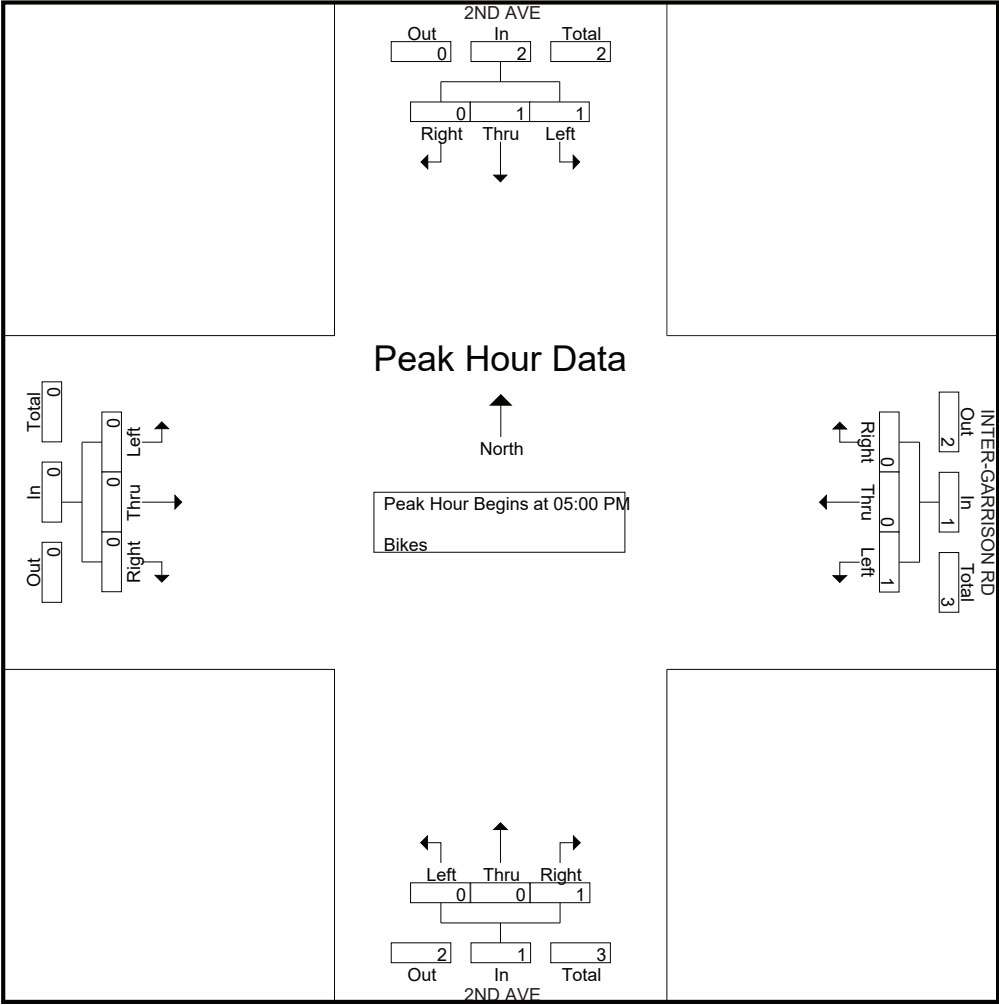
Start Time	2ND AVE Southbound					INTER-GARRISON RD Westbound					2ND AVE Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	1	0	2	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	4
% App. Total	0	50	50	0		0	0	100	0		100	0	0	0		0	0	0	0		
PHF	.000	.250	.250	0	.500	.000	.000	.250	0	.250	.250	.000	.000	0	.250	.000	.000	.000	0	.000	1.00

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:00 PM

Traffic Data Service

San Jose, CA
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File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

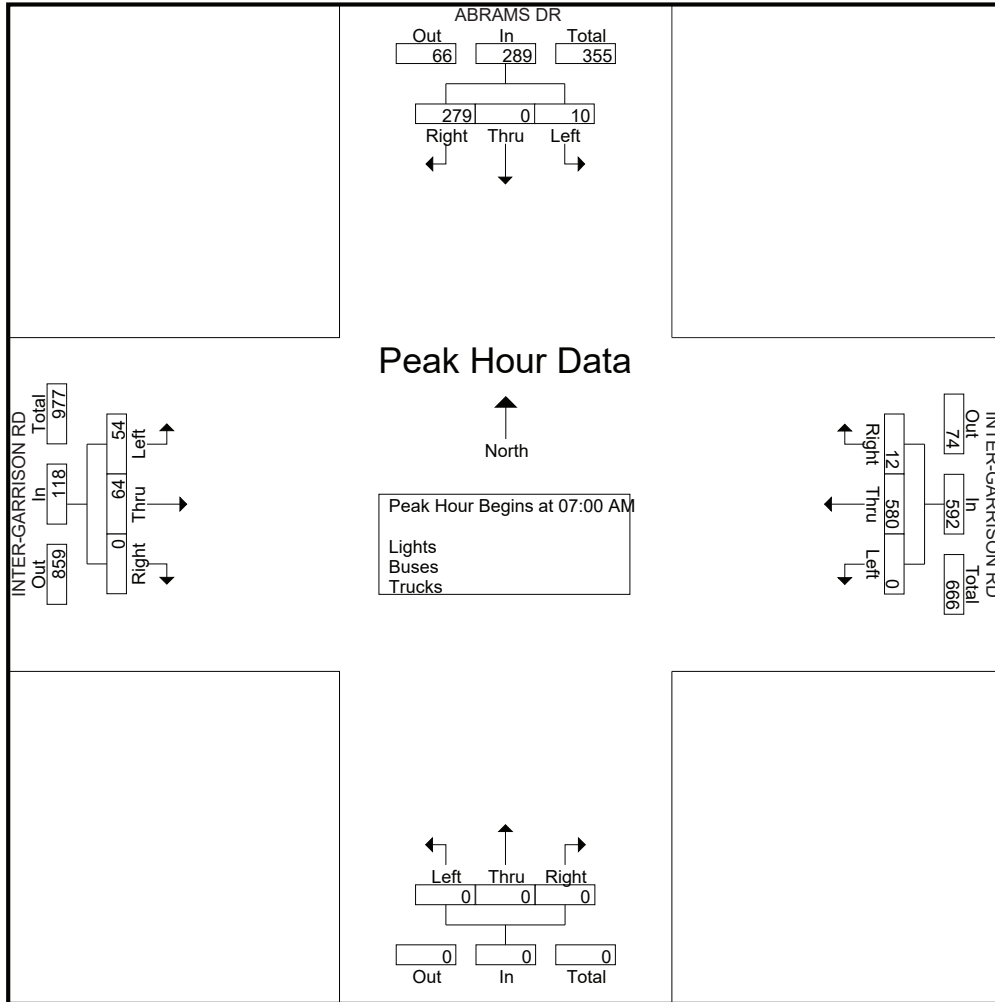
Start Time	ABRAMS DR Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	42	0	2	0	44	3	131	0	0	134	0	0	0	0	0	0	7	13	0	20	198
07:15 AM	82	0	4	0	86	2	175	0	0	177	0	0	0	0	0	0	13	9	0	22	285
07:30 AM	81	0	1	1	83	3	165	0	0	168	0	0	0	0	0	0	24	19	0	43	294
07:45 AM	74	0	3	0	77	4	109	0	0	113	0	0	0	0	0	0	20	13	0	33	223
Total	279	0	10	1	290	12	580	0	0	592	0	0	0	0	0	0	64	54	0	118	1000
08:00 AM	54	0	0	0	54	2	85	0	0	87	0	0	0	0	0	0	17	18	0	35	176
08:15 AM	40	0	3	0	43	0	88	0	0	88	0	0	0	0	0	0	8	12	0	20	151
08:30 AM	27	0	2	0	29	3	65	0	0	68	0	0	0	0	0	0	17	12	0	29	126
08:45 AM	45	0	2	0	47	4	58	0	0	62	0	0	0	0	0	0	7	11	0	18	127
Total	166	0	7	0	173	9	296	0	0	305	0	0	0	0	0	0	49	53	0	102	580
Grand Total	445	0	17	1	463	21	876	0	0	897	0	0	0	0	0	0	113	107	0	220	1580
Apprch %	96.1	0	3.7	0.2		2.3	97.7	0	0		0	0	0	0	0	0	51.4	48.6	0		
Total %	28.2	0	1.1	0.1	29.3	1.3	55.4	0	0	56.8	0	0	0	0	0	0	7.2	6.8	0	13.9	
Lights	439	0	17	1	457	16	867	0	0	883	0	0	0	0	0	0	109	95	0	204	1544
% Lights	98.7	0	100	100	98.7	76.2	99	0	0	98.4	0	0	0	0	0	0	96.5	88.8	0	92.7	97.7
Buses	4	0	0	0	4	5	6	0	0	11	0	0	0	0	0	0	1	11	0	12	27
% Buses	0.9	0	0	0	0.9	23.8	0.7	0	0	1.2	0	0	0	0	0	0	0.9	10.3	0	5.5	1.7
Trucks	2	0	0	0	2	0	3	0	0	3	0	0	0	0	0	0	3	1	0	4	9
% Trucks	0.4	0	0	0	0.4	0	0.3	0	0	0.3	0	0	0	0	0	0	2.7	0.9	0	1.8	0.6

Start Time	ABRAMS DR Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	42	0	2	44	3	131	0	134	0	0	0	0	0	7	13	20	198
07:15 AM	82	0	4	86	2	175	0	177	0	0	0	0	0	13	9	22	285
07:30 AM	81	0	1	82	3	165	0	168	0	0	0	0	0	24	19	43	293
07:45 AM	74	0	3	77	4	109	0	113	0	0	0	0	0	20	13	33	223
Total Volume	279	0	10	289	12	580	0	592	0	0	0	0	0	64	54	118	999
% App. Total	96.5	0	3.5		2	98	0		0	0	0	0	0	54.2	45.8		
PHF	.851	.000	.625	.840	.750	.829	.000	.836	.000	.000	.000	.000	.000	.667	.711	.686	.852

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

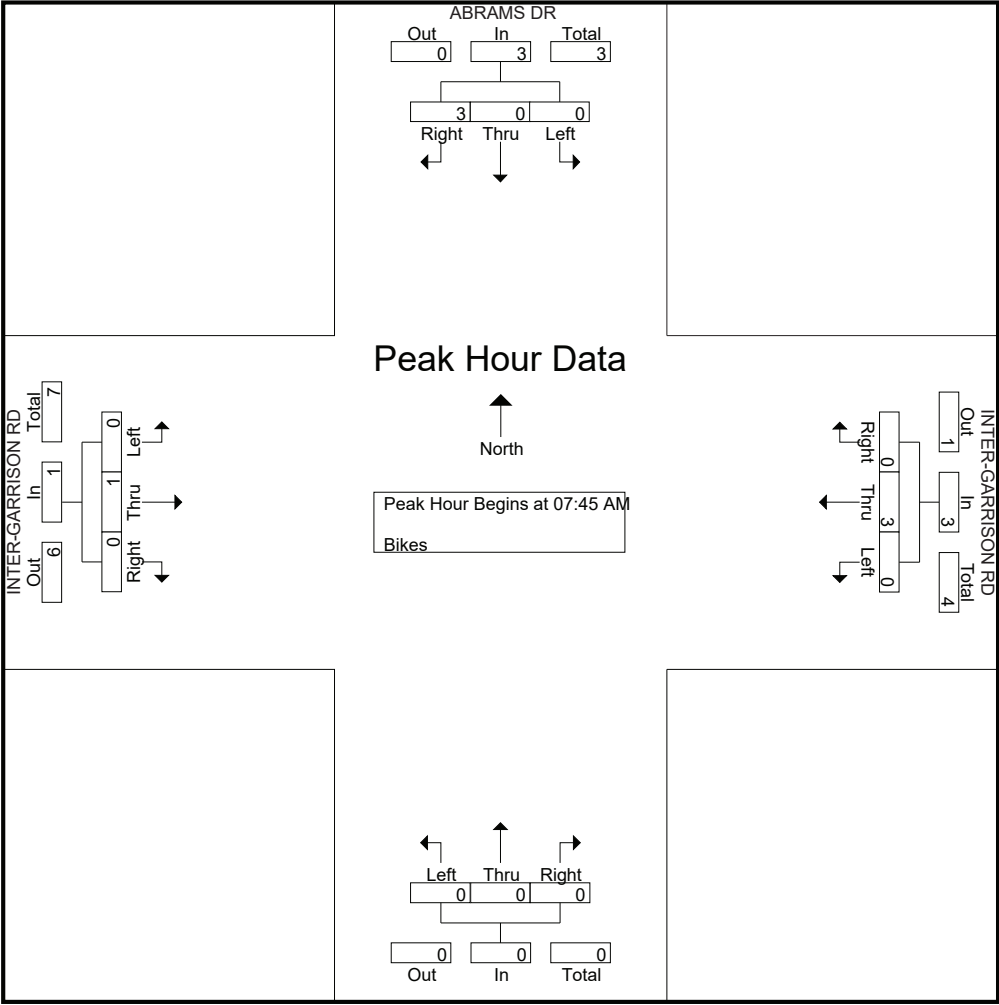
Start Time	ABRAMS DR Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
08:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	3	0	0	0	3	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	7
Grand Total	4	0	0	0	4	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	8
Apprch %	100	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	50	0	0	0	50	0	37.5	0	0	37.5	0	0	0	0	0	0	12.5	0	0	12.5	

Start Time	ABRAMS DR Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
Total Volume	3	0	0	3	0	3	0	3	0	0	0	0	0	1	0	1	7
% App. Total	100	0	0		0	100	0		0	0	0		0	100	0		
PHF	.750	.000	.000	.750	.000	.375	.000	.375	.000	.000	.000	.000	.000	.250	.000	.250	.583

Traffic Data Service

San Jose, CA
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File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

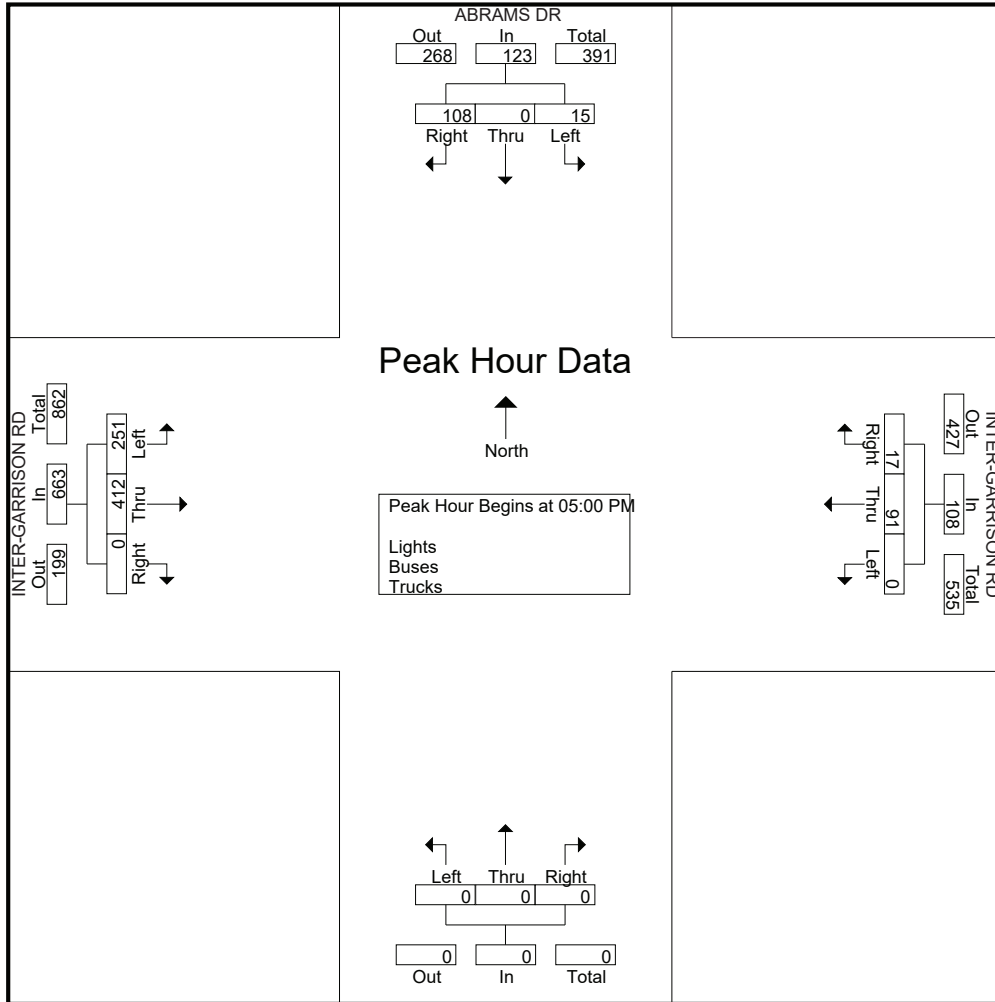
Start Time	ABRAMS DR Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	21	0	1	0	22	0	10	0	0	10	0	0	0	0	0	0	74	48	0	122	154
04:15 PM	29	0	0	0	29	4	24	0	0	28	0	0	0	0	0	0	65	43	0	108	165
04:30 PM	24	0	2	0	26	6	27	0	0	33	0	0	0	0	0	0	84	44	0	128	187
04:45 PM	20	0	3	0	23	4	28	0	0	32	0	0	0	0	0	0	91	58	0	149	204
Total	94	0	6	0	100	14	89	0	0	103	0	0	0	0	0	0	314	193	0	507	710
05:00 PM	23	0	0	0	23	5	28	0	0	33	0	0	0	0	0	0	112	67	0	179	235
05:15 PM	13	0	6	0	19	1	24	0	0	25	0	0	0	0	0	0	133	51	0	184	228
05:30 PM	34	0	5	0	39	5	17	0	0	22	0	0	0	0	0	0	94	69	0	163	224
05:45 PM	38	0	4	0	42	6	22	0	0	28	0	0	0	0	0	0	73	64	0	137	207
Total	108	0	15	0	123	17	91	0	0	108	0	0	0	0	0	0	412	251	0	663	894
Grand Total	202	0	21	0	223	31	180	0	0	211	0	0	0	0	0	0	726	444	0	1170	1604
Apprch %	90.6	0	9.4	0		14.7	85.3	0	0		0	0	0	0	0	0	62.1	37.9	0		
Total %	12.6	0	1.3	0	13.9	1.9	11.2	0	0	13.2	0	0	0	0	0	0	45.3	27.7	0	72.9	
Lights	195	0	18	0	213	25	169	0	0	194	0	0	0	0	0	0	721	430	0	1151	1558
% Lights	96.5	0	85.7	0	95.5	80.6	93.9	0	0	91.9	0	0	0	0	0	0	99.3	96.8	0	98.4	97.1
Buses	5	0	1	0	6	6	6	0	0	12	0	0	0	0	0	0	1	11	0	12	30
% Buses	2.5	0	4.8	0	2.7	19.4	3.3	0	0	5.7	0	0	0	0	0	0	0.1	2.5	0	1	1.9
Trucks	2	0	2	0	4	0	5	0	0	5	0	0	0	0	0	0	4	3	0	7	16
% Trucks	1	0	9.5	0	1.8	0	2.8	0	0	2.4	0	0	0	0	0	0	0.6	0.7	0	0.6	1

Start Time	ABRAMS DR Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	23	0	0	23	5	28	0	33	0	0	0	0	0	112	67	179	235
05:15 PM	13	0	6	19	1	24	0	25	0	0	0	0	0	133	51	184	228
05:30 PM	34	0	5	39	5	17	0	22	0	0	0	0	0	94	69	163	224
05:45 PM	38	0	4	42	6	22	0	28	0	0	0	0	0	73	64	137	207
Total Volume	108	0	15	123	17	91	0	108	0	0	0	0	0	412	251	663	894
% App. Total	87.8	0	12.2		15.7	84.3	0		0	0	0	0	0	62.1	37.9		
PHF	.711	.000	.625	.732	.708	.813	.000	.818	.000	.000	.000	.000	.000	.774	.909	.901	.951

Traffic Data Service

San Jose, CA
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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	ABRAMS DR Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	4	0	4	6
Grand Total	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2	4	0	6	8
Apprch %	100	0	0	0		0	100	0	0		0	0	0	0		0	33.3	66.7	0		
Total %	12.5	0	0	0	12.5	0	12.5	0	0	12.5	0	0	0	0	0	0	25	50	0	75	

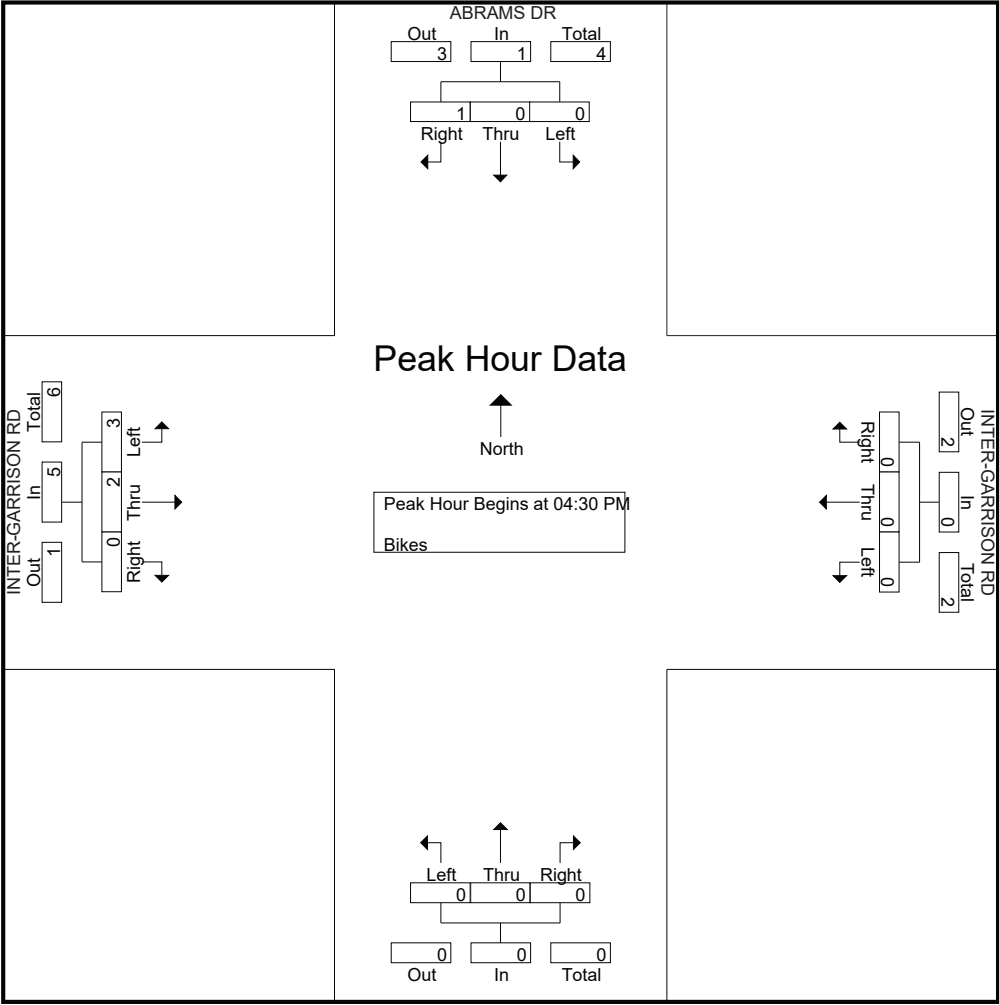
Start Time	ABRAMS DR Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	2	3	5	6
% App. Total	100	0	0		0	0	0		0	0	0		0	40	60		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.375	.625	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

San Jose, CA
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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

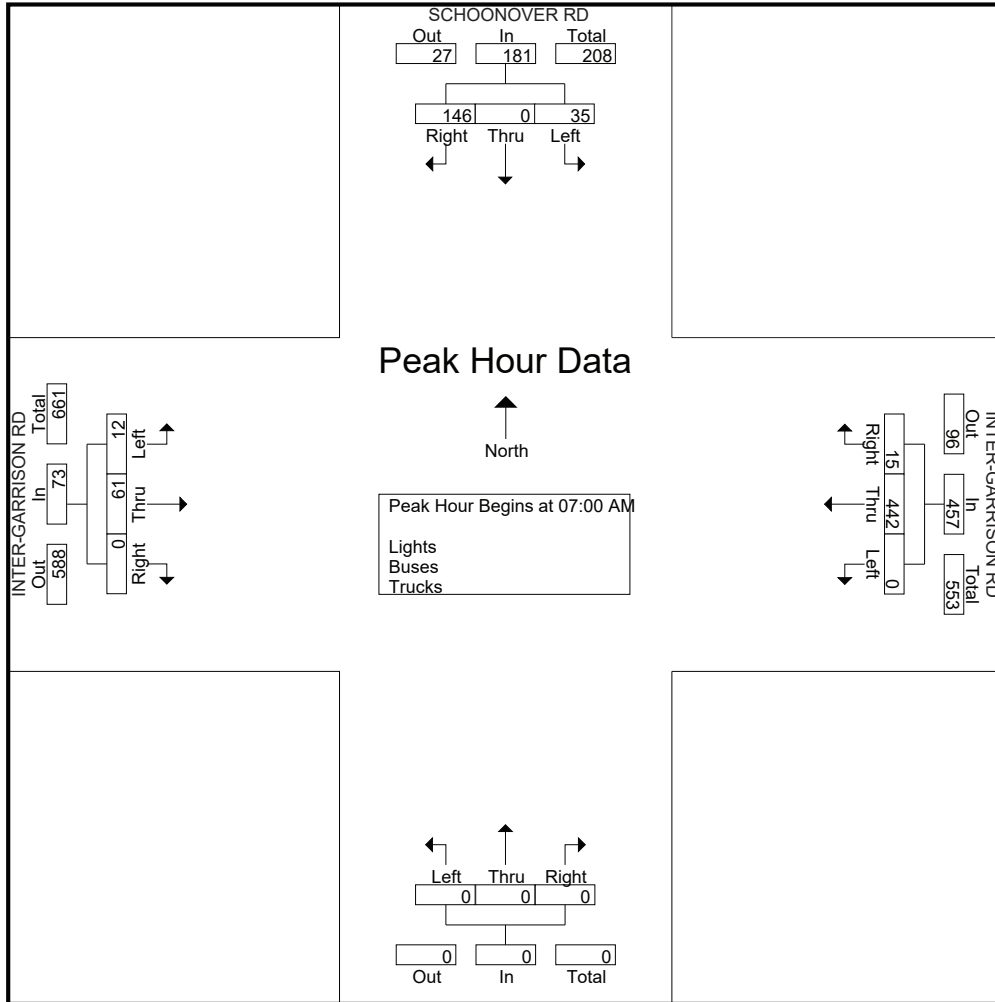
Start Time	SCHOONOVER RD Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	28	0	8	0	36	0	108	0	1	109	0	0	0	0	0	0	8	1	0	9	154
07:15 AM	44	0	8	0	52	5	150	0	0	155	0	0	0	0	0	0	14	3	0	17	224
07:30 AM	37	0	12	0	49	4	112	0	0	116	0	0	0	0	0	0	21	3	0	24	189
07:45 AM	37	0	7	0	44	6	72	0	0	78	0	0	0	0	0	0	18	5	0	23	145
Total	146	0	35	0	181	15	442	0	1	458	0	0	0	0	0	0	61	12	0	73	712
08:00 AM	17	0	5	0	22	4	74	0	0	78	0	0	0	0	0	0	13	4	0	17	117
08:15 AM	27	0	3	0	30	1	59	0	0	60	0	0	0	0	0	0	9	2	0	11	101
08:30 AM	14	0	2	0	16	0	52	0	0	52	0	0	0	0	0	0	13	6	0	19	87
08:45 AM	18	0	1	0	19	2	42	0	0	44	0	0	0	0	0	0	8	2	0	10	73
Total	76	0	11	0	87	7	227	0	0	234	0	0	0	0	0	0	43	14	0	57	378
Grand Total	222	0	46	0	268	22	669	0	1	692	0	0	0	0	0	0	104	26	0	130	1090
Apprch %	82.8	0	17.2	0		3.2	96.7	0	0.1		0	0	0	0	0	0	80	20	0		
Total %	20.4	0	4.2	0	24.6	2	61.4	0	0.1	63.5	0	0	0	0	0	0	9.5	2.4	0	11.9	
Lights	212	0	45	0	257	19	664	0	1	684	0	0	0	0	0	0	100	26	0	126	1067
% Lights	95.5	0	97.8	0	95.9	86.4	99.3	0	100	98.8	0	0	0	0	0	0	96.2	100	0	96.9	97.9
Buses	10	0	1	0	11	1	3	0	0	4	0	0	0	0	0	0	1	0	0	1	16
% Buses	4.5	0	2.2	0	4.1	4.5	0.4	0	0	0.6	0	0	0	0	0	0	1	0	0	0.8	1.5
Trucks	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	3	0	0	3	7
% Trucks	0	0	0	0	0	9.1	0.3	0	0	0.6	0	0	0	0	0	0	2.9	0	0	2.3	0.6

Start Time	SCHOONOVER RD Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	28	0	8	36	0	108	0	108	0	0	0	0	0	0	8	1	9	153
07:15 AM	44	0	8	52	5	150	0	155	0	0	0	0	0	0	14	3	17	224
07:30 AM	37	0	12	49	4	112	0	116	0	0	0	0	0	0	21	3	24	189
07:45 AM	37	0	7	44	6	72	0	78	0	0	0	0	0	0	18	5	23	145
Total Volume	146	0	35	181	15	442	0	457	0	0	0	0	0	0	61	12	73	711
% App. Total	80.7	0	19.3		3.3	96.7	0		0	0	0	0	0	0	83.6	16.4		
PHF	.830	.000	.729	.870	.625	.737	.000	.737	.000	.000	.000	.000	.000	.000	.726	.600	.760	.794

Traffic Data Service

San Jose, CA
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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	SCHOONOVER RD Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Grand Total	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4
Apprch %	50	0	50	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	25	0	25	0	50	0	25	0	0	25	0	0	0	0	0	0	25	0	0	25	

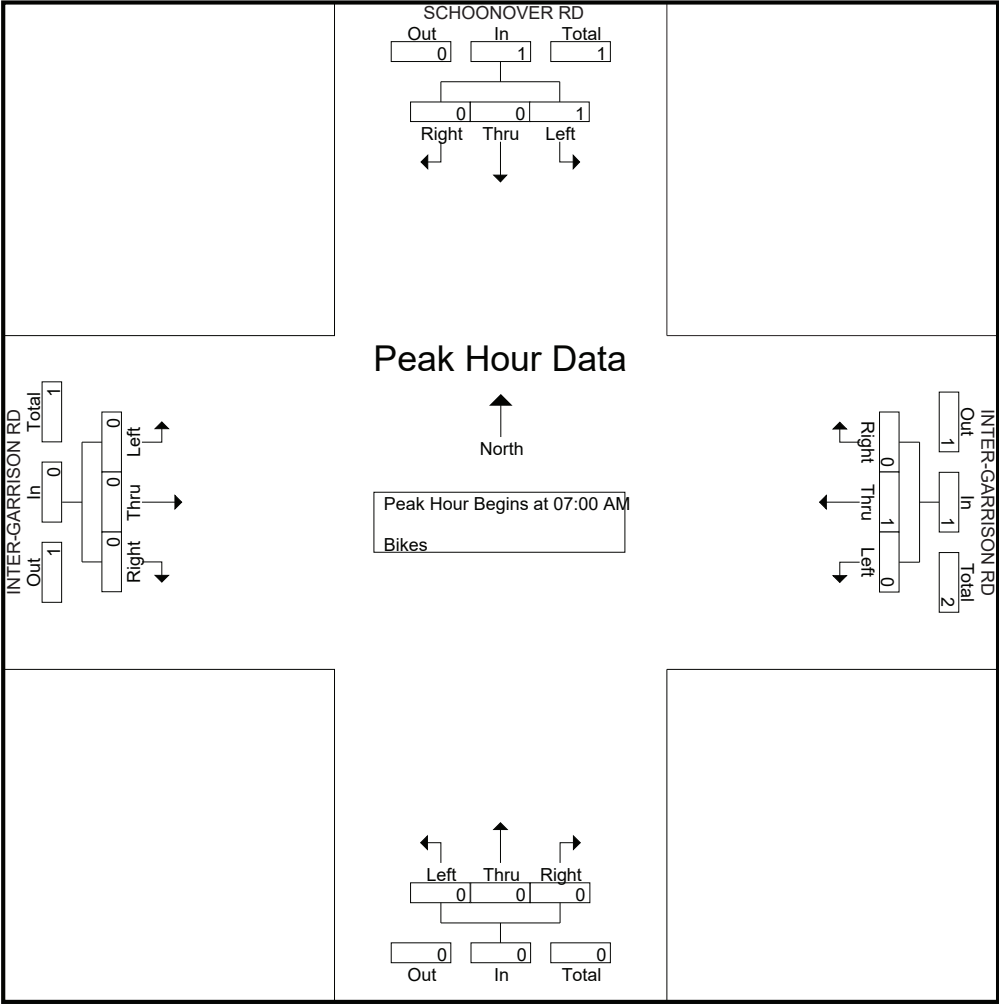
Start Time	SCHOONOVER RD Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	0	100	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.250	0	.250	.000	.250	.000	0	.250	.000	.000	.000	0	.000	.000	.000	.000	0	.000	.500

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 17PM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

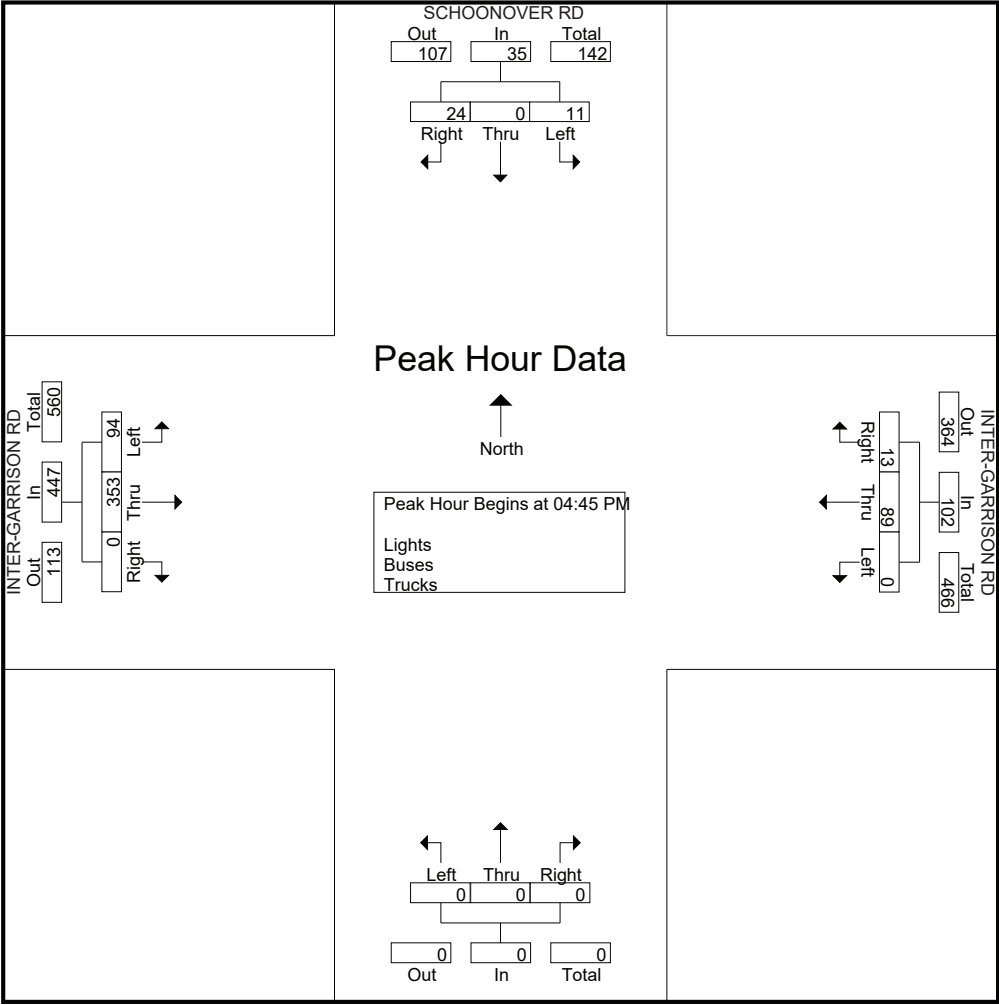
Start Time	SCHOONOVER RD Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	4	0	5	0	9	2	6	0	0	8	0	0	0	0	0	0	61	12	0	73	90
04:15 PM	9	0	2	0	11	5	20	0	0	25	0	0	0	0	0	0	56	13	0	69	105
04:30 PM	10	0	4	0	14	5	22	0	0	27	0	0	0	0	0	0	67	15	0	82	123
04:45 PM	7	0	3	3	13	3	24	0	0	27	0	0	0	0	0	0	76	19	0	95	135
Total	30	0	14	3	47	15	72	0	0	87	0	0	0	0	0	0	260	59	0	319	453
05:00 PM	3	0	3	1	7	4	31	0	0	35	0	0	0	0	0	0	86	28	0	114	156
05:15 PM	8	0	3	0	11	4	16	0	0	20	0	0	0	0	0	0	115	23	0	138	169
05:30 PM	6	0	2	2	10	2	18	0	0	20	0	0	0	0	0	0	76	24	0	100	130
05:45 PM	13	0	2	0	15	7	16	0	0	23	0	0	0	0	0	0	64	17	0	81	119
Total	30	0	10	3	43	17	81	0	0	98	0	0	0	0	0	0	341	92	0	433	574
Grand Total	60	0	24	6	90	32	153	0	0	185	0	0	0	0	0	0	601	151	0	752	1027
Apprch %	66.7	0	26.7	6.7		17.3	82.7	0	0		0	0	0	0	0	0	79.9	20.1	0		
Total %	5.8	0	2.3	0.6	8.8	3.1	14.9	0	0	18	0	0	0	0	0	0	58.5	14.7	0	73.2	
Lights	47	0	23	6	76	31	147	0	0	178	0	0	0	0	0	0	596	151	0	747	1001
% Lights	78.3	0	95.8	100	84.4	96.9	96.1	0	0	96.2	0	0	0	0	0	0	99.2	100	0	99.3	97.5
Buses	13	0	1	0	14	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	17
% Buses	21.7	0	4.2	0	15.6	3.1	0	0	0	0.5	0	0	0	0	0	0	0.3	0	0	0.3	1.7
Trucks	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9
% Trucks	0	0	0	0	0	0	3.9	0	0	3.2	0	0	0	0	0	0	0.5	0	0	0.4	0.9

Start Time	SCHOONOVER RD Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	0	3	10	3	24	0	27	0	0	0	0	0	76	19	95	132
05:00 PM	3	0	3	6	4	31	0	35	0	0	0	0	0	86	28	114	155
05:15 PM	8	0	3	11	4	16	0	20	0	0	0	0	0	115	23	138	169
05:30 PM	6	0	2	8	2	18	0	20	0	0	0	0	0	76	24	100	128
Total Volume	24	0	11	35	13	89	0	102	0	0	0	0	0	353	94	447	584
% App. Total	68.6	0	31.4		12.7	87.3	0		0	0	0	0	0	79	21		
PHF	.750	.000	.917	.795	.813	.718	.000	.729	.000	.000	.000	.000	.000	.767	.839	.810	.864

Traffic Data Service

San Jose, CA
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File Name : 17PM FINAL
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 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 17PM FINAL
 Site Code : 00000017
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

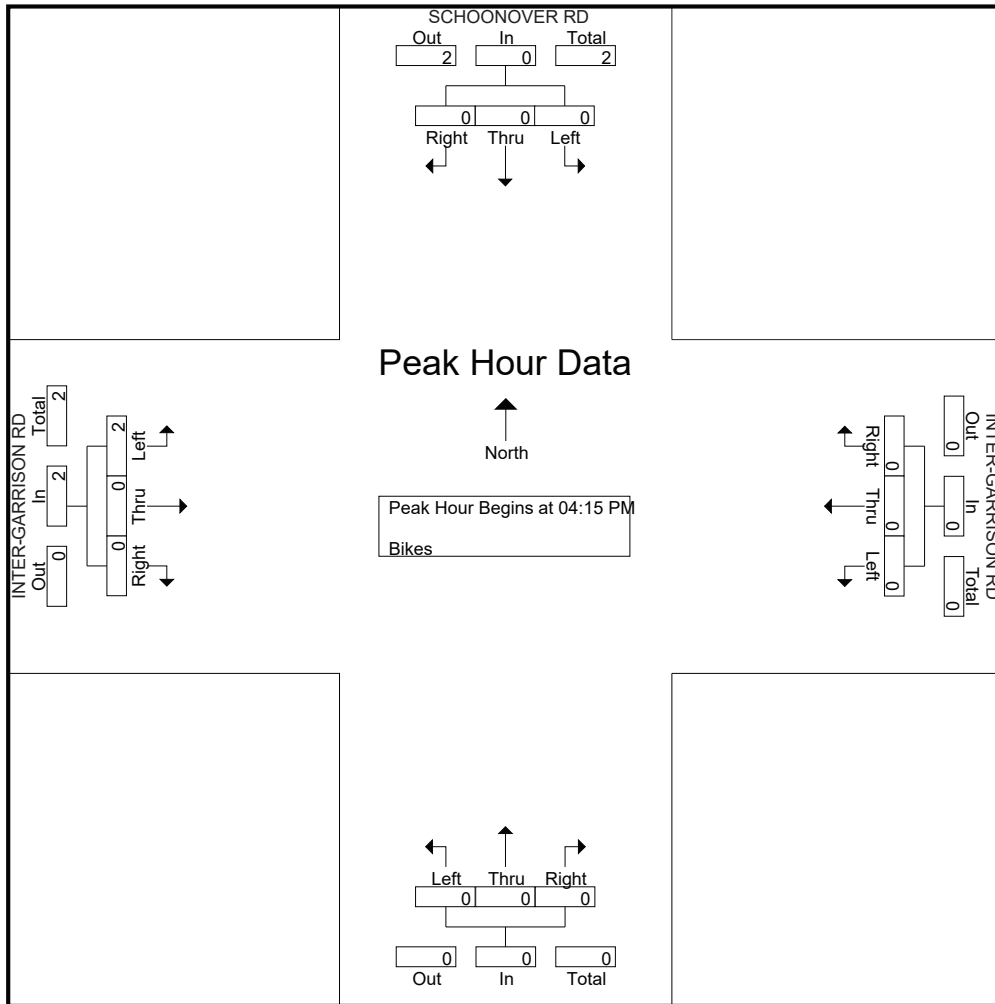
Start Time	SCHOONOVER RD Southbound					INTER-GARRISON RD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	100	

Start Time	SCHOONOVER RD Southbound				INTER-GARRISON RD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.500	.500

Traffic Data Service

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File Name : 17PM FINAL
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Page No : 2



Traffic Data Service

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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

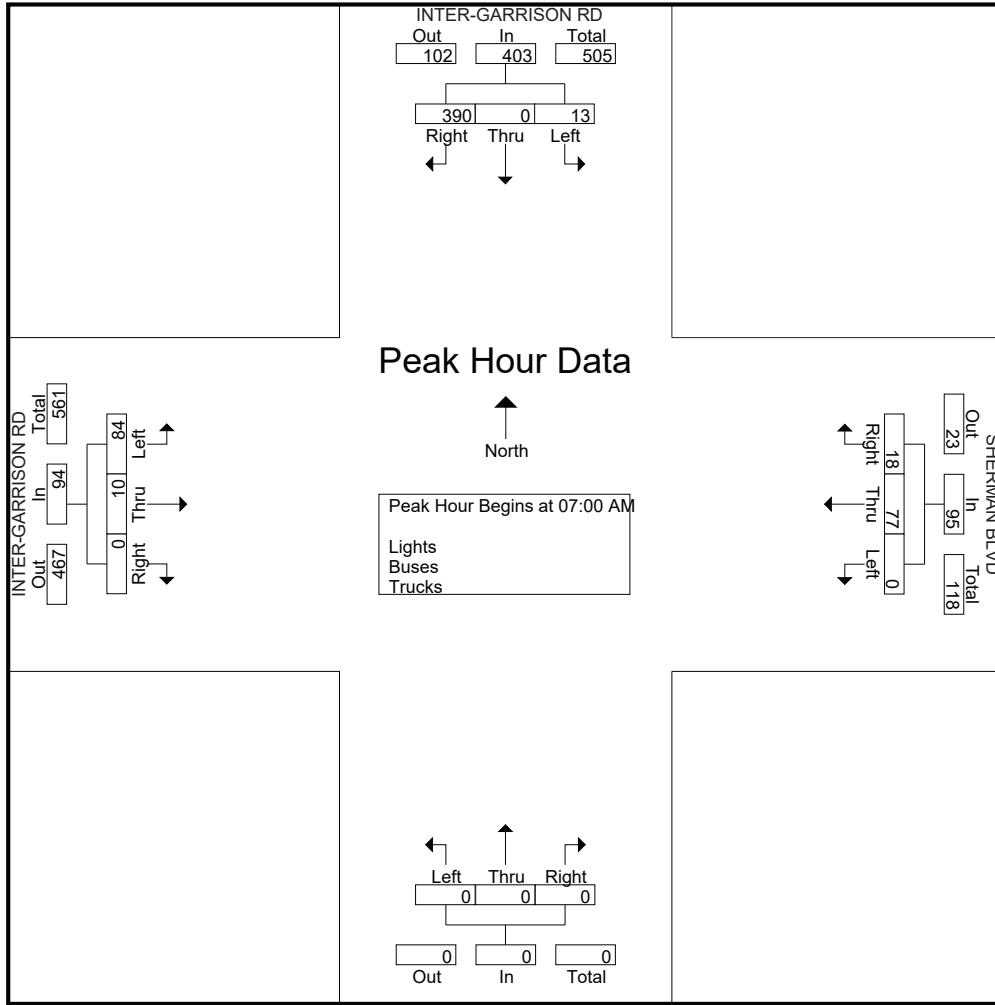
Start Time	INTER-GARRISON RD Southbound					SHERMAN BLVD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	103	0	7	0	110	6	20	0	0	26	0	0	0	0	0	0	1	14	0	15	151
07:15 AM	125	0	3	0	128	2	29	0	0	31	0	0	0	0	0	0	4	18	0	22	181
07:30 AM	97	0	1	0	98	6	18	0	0	24	0	0	0	0	0	0	2	25	0	27	149
07:45 AM	65	0	2	0	67	4	10	0	0	14	0	0	0	0	0	0	3	27	0	30	111
Total	390	0	13	0	403	18	77	0	0	95	0	0	0	0	0	0	10	84	0	94	592
08:00 AM	62	0	4	0	66	4	11	0	0	15	0	0	0	0	0	0	3	14	0	17	98
08:15 AM	53	0	3	0	56	3	7	0	0	10	0	0	0	0	0	0	2	9	0	11	77
08:30 AM	44	0	2	0	46	5	7	0	0	12	0	0	0	0	0	0	6	9	0	15	73
08:45 AM	34	0	3	0	37	4	10	0	0	14	0	0	0	0	0	0	4	6	0	10	61
Total	193	0	12	0	205	16	35	0	0	51	0	0	0	0	0	0	15	38	0	53	309
Grand Total	583	0	25	0	608	34	112	0	0	146	0	0	0	0	0	0	25	122	0	147	901
Apprch %	95.9	0	4.1	0		23.3	76.7	0	0		0	0	0	0	0	0	17	83	0		
Total %	64.7	0	2.8	0	67.5	3.8	12.4	0	0	16.2	0	0	0	0	0	0	2.8	13.5	0	16.3	
Lights	583	0	23	0	606	34	107	0	0	141	0	0	0	0	0	0	23	119	0	142	889
% Lights	100	0	92	0	99.7	100	95.5	0	0	96.6	0	0	0	0	0	0	92	97.5	0	96.6	98.7
Buses	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	5
% Buses	0	0	4	0	0.2	0	1.8	0	0	1.4	0	0	0	0	0	0	4	0.8	0	1.4	0.6
Trucks	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	1	2	0	3	7
% Trucks	0	0	4	0	0.2	0	2.7	0	0	2.1	0	0	0	0	0	0	4	1.6	0	2	0.8

Start Time	INTER-GARRISON RD Southbound				SHERMAN BLVD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	103	0	7	110	6	20	0	26	0	0	0	0	0	0	1	14	15	151
07:15 AM	125	0	3	128	2	29	0	31	0	0	0	0	0	0	4	18	22	181
07:30 AM	97	0	1	98	6	18	0	24	0	0	0	0	0	2	25	27	149	
07:45 AM	65	0	2	67	4	10	0	14	0	0	0	0	0	3	27	30	111	
Total Volume	390	0	13	403	18	77	0	95	0	0	0	0	0	10	84	94	592	
% App. Total	96.8	0	3.2		18.9	81.1	0		0	0	0	0	0	10.6	89.4			
PHF	.780	.000	.464	.787	.750	.664	.000	.766	.000	.000	.000	.000	.000	.625	.778	.783	.818	

Traffic Data Service

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File Name : 18AM FINAL
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 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	INTER-GARRISON RD Southbound					SHERMAN BLVD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	

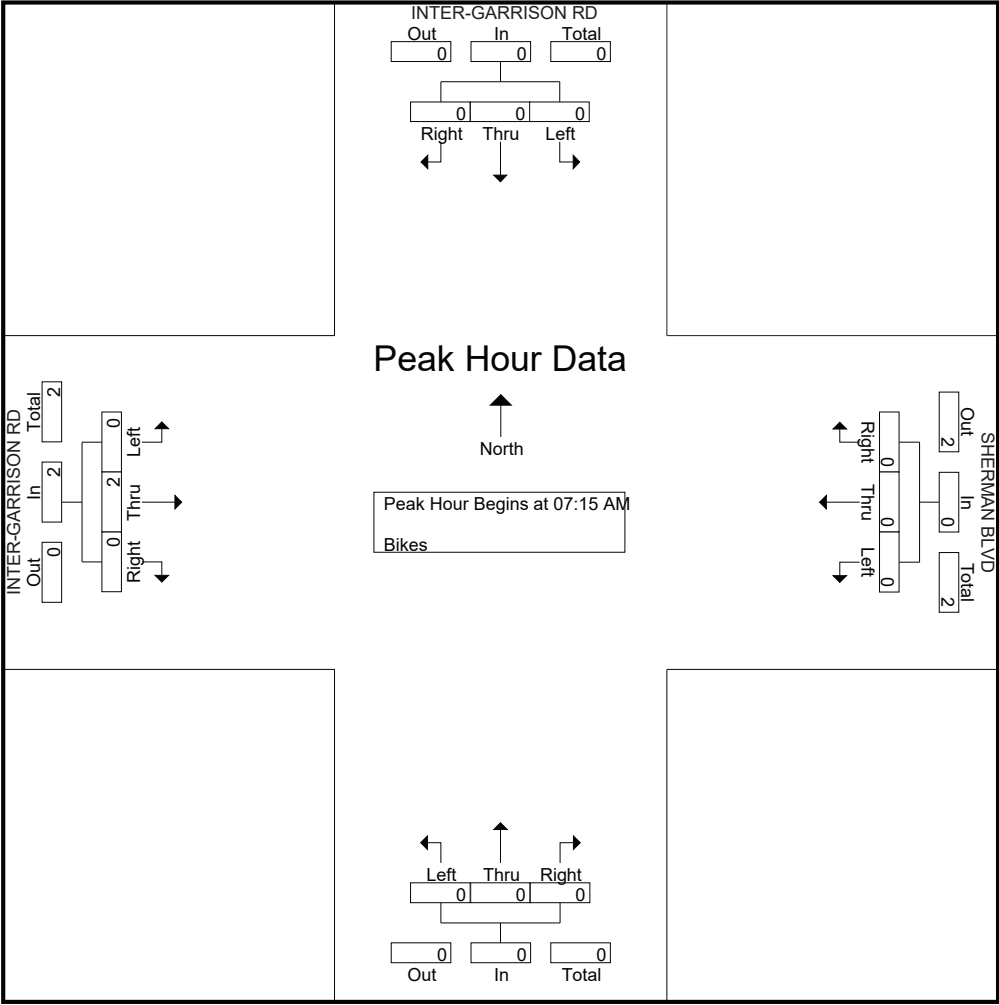
Start Time	INTER-GARRISON RD Southbound					SHERMAN BLVD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.500

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

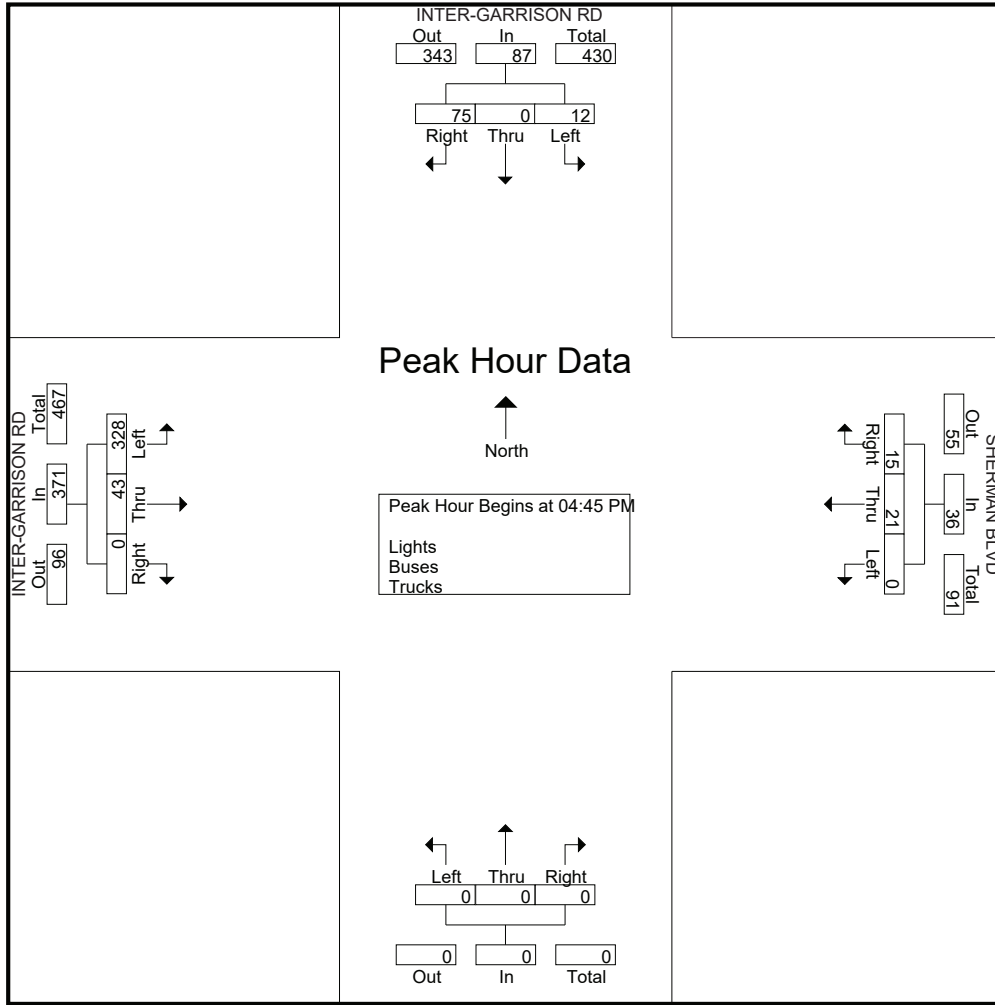
Start Time	INTER-GARRISON RD Southbound					SHERMAN BLVD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	9	0	7	0	16	2	4	0	0	6	0	0	0	0	0	0	11	53	0	64	86
04:15 PM	16	0	3	0	19	1	6	0	0	7	0	0	0	0	0	0	8	54	0	62	88
04:30 PM	21	0	3	0	24	3	5	0	0	8	0	0	0	0	0	0	6	60	0	66	98
04:45 PM	22	0	4	0	26	4	5	0	0	9	0	0	0	0	0	0	10	76	0	86	121
Total	68	0	17	0	85	10	20	0	0	30	0	0	0	0	0	0	35	243	0	278	393
05:00 PM	21	0	5	0	26	5	9	0	0	14	0	0	0	0	0	0	8	80	1	89	129
05:15 PM	16	0	2	0	18	2	5	0	0	7	0	0	0	0	0	0	12	105	0	117	142
05:30 PM	16	0	1	0	17	4	2	0	0	6	0	0	0	0	0	0	13	67	0	80	103
05:45 PM	16	0	2	0	18	5	4	0	0	9	0	0	0	0	0	0	13	54	0	67	94
Total	69	0	10	0	79	16	20	0	0	36	0	0	0	0	0	0	46	306	1	353	468
Grand Total	137	0	27	0	164	26	40	0	0	66	0	0	0	0	0	0	81	549	1	631	861
Apprch %	83.5	0	16.5	0		39.4	60.6	0	0		0	0	0	0	0	0	12.8	87	0.2		
Total %	15.9	0	3.1	0	19	3	4.6	0	0	7.7	0	0	0	0	0	0	9.4	63.8	0.1	73.3	
Lights	132	0	26	0	158	25	38	0	0	63	0	0	0	0	0	0	78	544	1	623	844
% Lights	96.4	0	96.3	0	96.3	96.2	95	0	0	95.5	0	0	0	0	0	0	96.3	99.1	100	98.7	98
Buses	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	2	1	0	3	5
% Buses	0.7	0	0	0	0.6	3.8	0	0	0	1.5	0	0	0	0	0	0	2.5	0.2	0	0.5	0.6
Trucks	4	0	1	0	5	0	2	0	0	2	0	0	0	0	0	0	1	4	0	5	12
% Trucks	2.9	0	3.7	0	3	0	5	0	0	3	0	0	0	0	0	0	1.2	0.7	0	0.8	1.4

Start Time	INTER-GARRISON RD Southbound				SHERMAN BLVD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	22	0	4	26	4	5	0	9	0	0	0	0	0	10	76	86	121
05:00 PM	21	0	5	26	5	9	0	14	0	0	0	0	0	8	80	88	128
05:15 PM	16	0	2	18	2	5	0	7	0	0	0	0	0	12	105	117	142
05:30 PM	16	0	1	17	4	2	0	6	0	0	0	0	0	13	67	80	103
Total Volume	75	0	12	87	15	21	0	36	0	0	0	0	0	43	328	371	494
% App. Total	86.2	0	13.8		41.7	58.3	0		0	0	0		0	11.6	88.4		
PHF	.852	.000	.600	.837	.750	.583	.000	.643	.000	.000	.000	.000	.000	.827	.781	.793	.870

Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	INTER-GARRISON RD Southbound					SHERMAN BLVD Westbound					Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0	100		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	

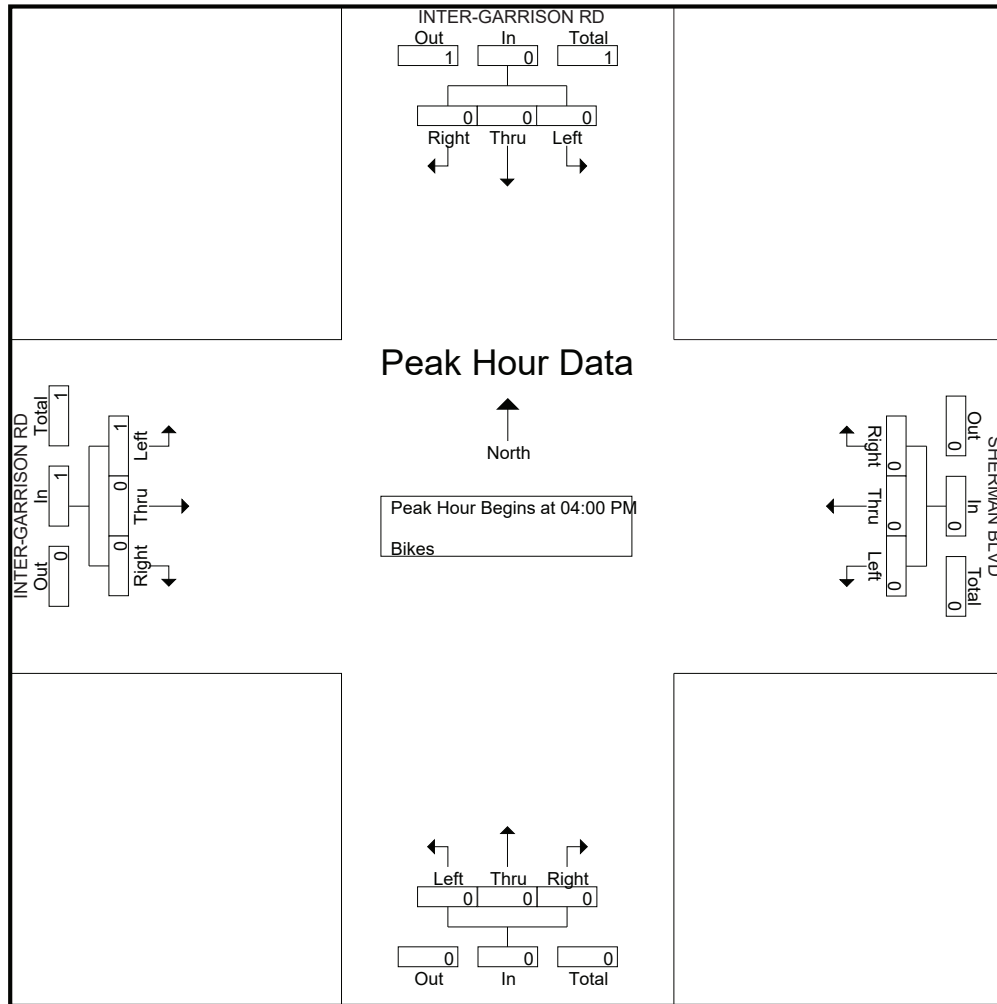
Start Time	INTER-GARRISON RD Southbound				SHERMAN BLVD Westbound				Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 18PM FINAL
Site Code : 00000018
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 19AM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

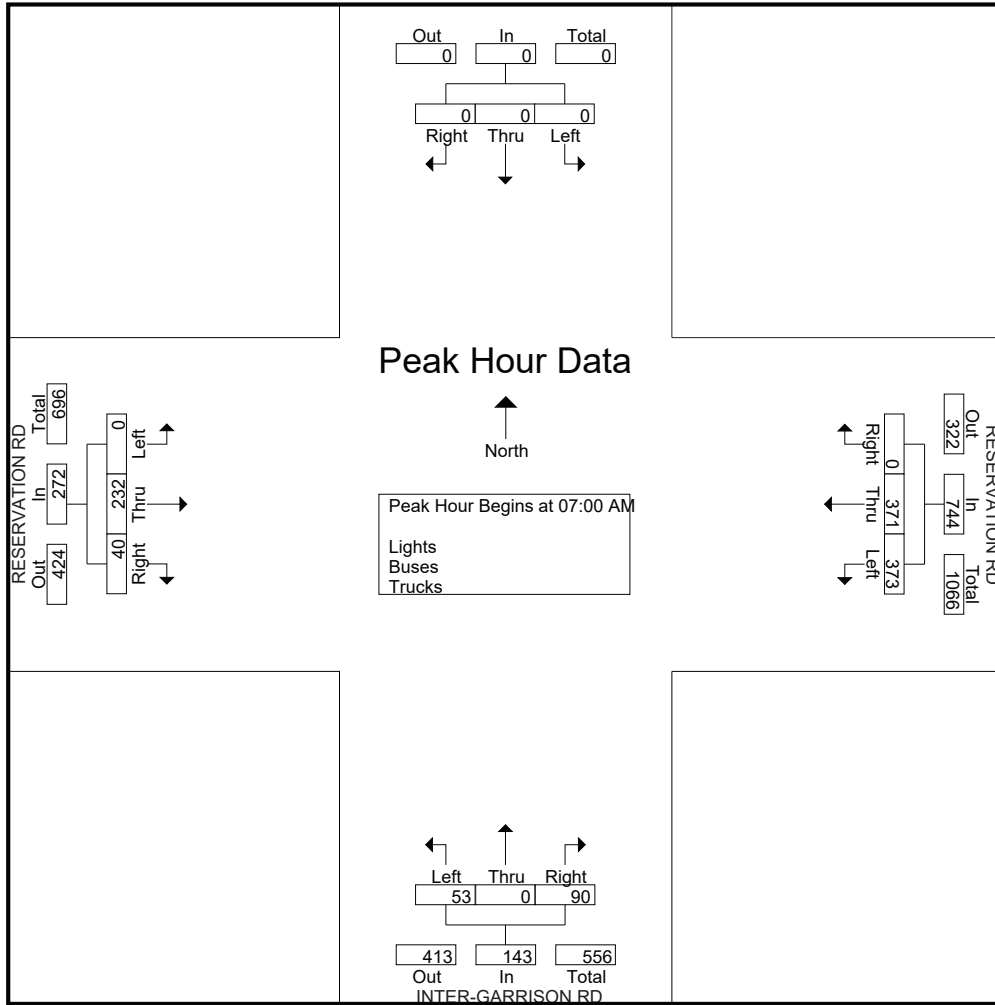
Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	112	102	0	214	18	0	17	0	35	10	37	0	0	47	296
07:15 AM	0	0	0	0	0	0	105	116	0	221	20	0	8	0	28	12	46	0	0	58	307
07:30 AM	0	0	0	0	0	0	75	89	0	164	24	0	17	0	41	8	69	0	0	77	282
07:45 AM	0	0	0	0	0	0	79	66	0	145	28	0	11	0	39	10	80	0	0	90	274
Total	0	0	0	0	0	0	371	373	0	744	90	0	53	0	143	40	232	0	0	272	1159
08:00 AM	0	0	0	0	0	0	81	57	0	138	13	0	11	0	24	15	51	0	0	66	228
08:15 AM	0	0	0	0	0	0	86	50	0	136	9	0	10	0	19	7	67	0	0	74	229
08:30 AM	0	0	0	0	0	0	66	42	0	108	9	0	5	0	14	4	44	0	0	48	170
08:45 AM	0	0	0	0	0	0	58	33	0	91	7	0	10	0	17	7	47	1	0	55	163
Total	0	0	0	0	0	0	291	182	0	473	38	0	36	0	74	33	209	1	0	243	790
Grand Total	0	0	0	0	0	0	662	555	0	1217	128	0	89	0	217	73	441	1	0	515	1949
Apprch %	0	0	0	0	0	0	54.4	45.6	0		59	0	41	0		14.2	85.6	0.2	0		
Total %	0	0	0	0	0	0	34	28.5	0	62.4	6.6	0	4.6	0	11.1	3.7	22.6	0.1	0	26.4	
Lights	0	0	0	0	0	0	634	554	0	1188	125	0	88	0	213	71	417	1	0	489	1890
% Lights	0	0	0	0	0	0	95.8	99.8	0	97.6	97.7	0	98.9	0	98.2	97.3	94.6	100	0	95	97
Buses	0	0	0	0	0	0	3	1	0	4	1	0	0	0	1	1	4	0	0	5	10
% Buses	0	0	0	0	0	0	0.5	0.2	0	0.3	0.8	0	0	0	0.5	1.4	0.9	0	0	1	0.5
Trucks	0	0	0	0	0	0	25	0	0	25	2	0	1	0	3	1	20	0	0	21	49
% Trucks	0	0	0	0	0	0	3.8	0	0	2.1	1.6	0	1.1	0	1.4	1.4	4.5	0	0	4.1	2.5

Start Time	Southbound				RESERVATION RD Westbound				INTER-GARRISON RD Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	112	102	214	18	0	17	35	10	37	0	47	296
07:15 AM	0	0	0	0	0	105	116	221	20	0	8	28	12	46	0	58	307
07:30 AM	0	0	0	0	0	75	89	164	24	0	17	41	8	69	0	77	282
07:45 AM	0	0	0	0	0	79	66	145	28	0	11	39	10	80	0	90	274
Total Volume	0	0	0	0	0	371	373	744	90	0	53	143	40	232	0	272	1159
% App. Total	0	0	0	0	0	49.9	50.1		62.9	0	37.1		14.7	85.3	0		
PHF	.000	.000	.000	.000	.000	.828	.804	.842	.804	.000	.779	.872	.833	.725	.000	.756	.944

Traffic Data Service

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File Name : 19AM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 19AM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	100	0	100	0	0	0	0		0	0	0	0		

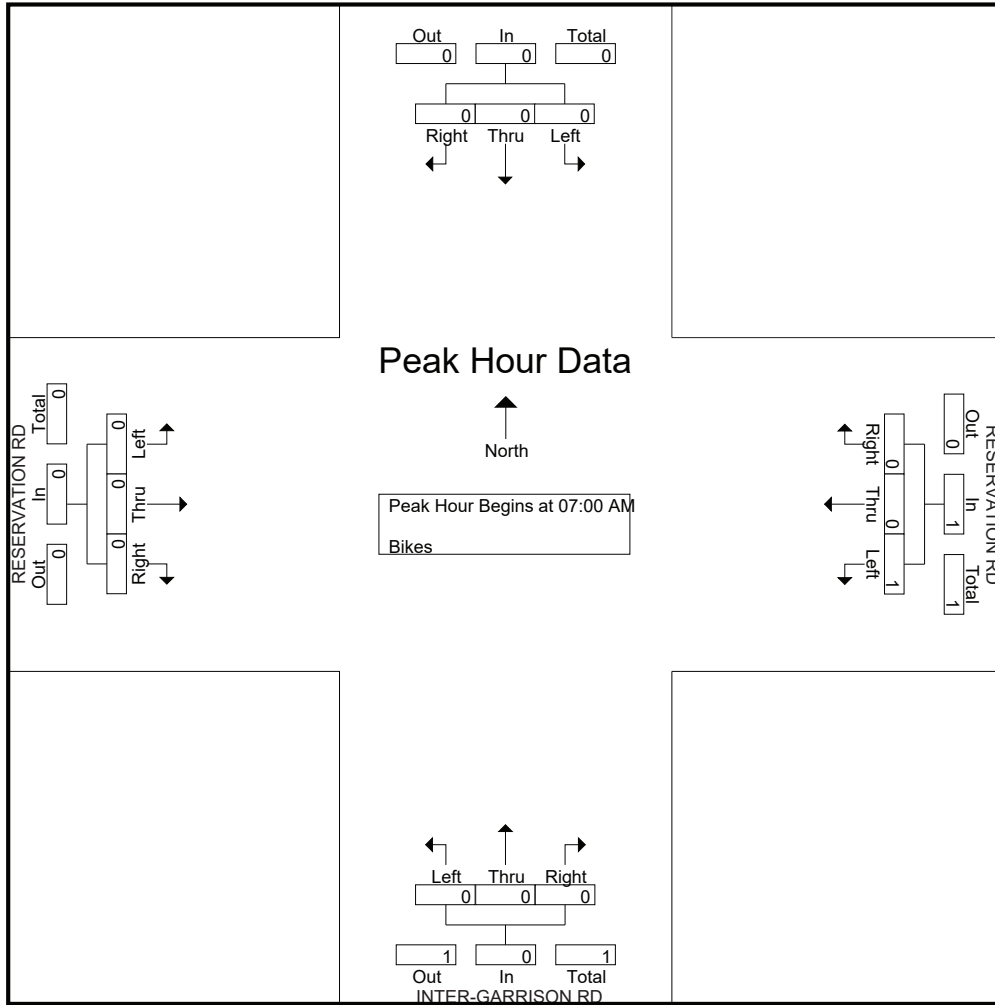
Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000		.000	.000	.250	.250		.000	.000	.000	.000		.000	.000	.000	.000		.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 19AM FINAL
Site Code : 00000019
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

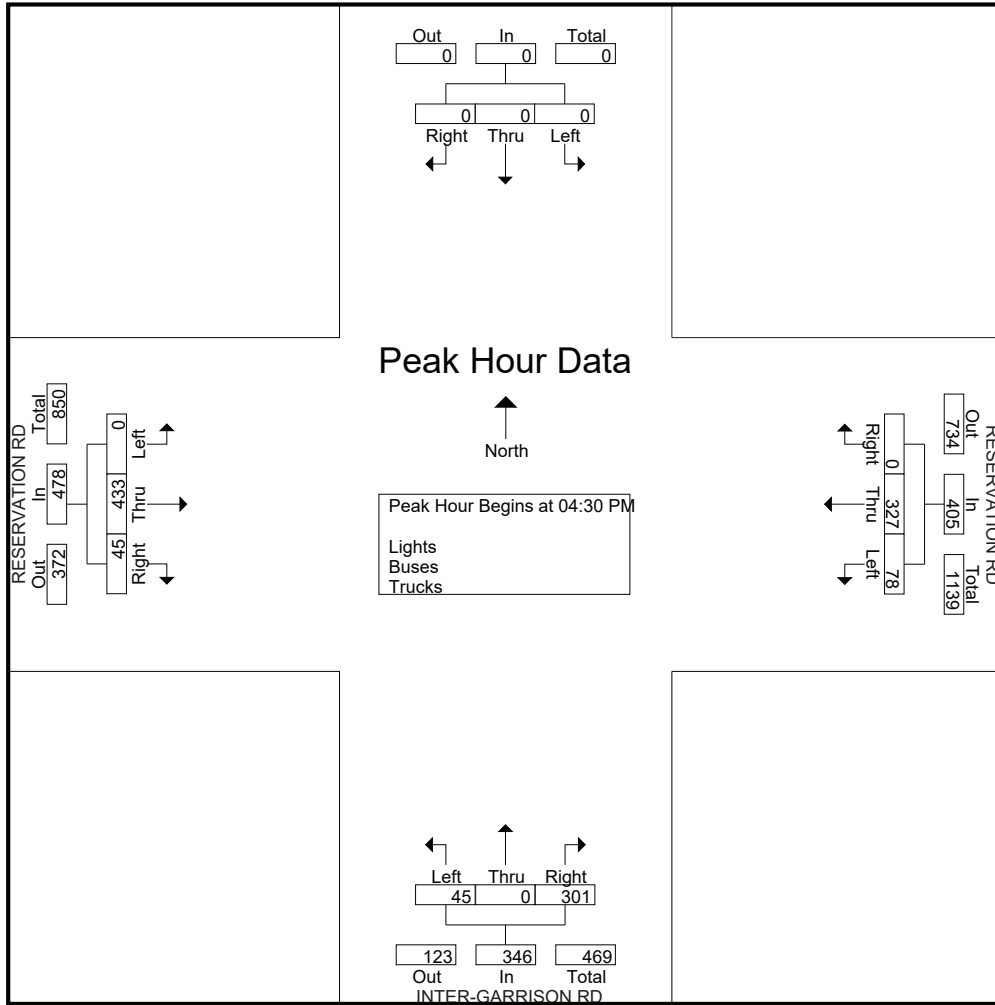
Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	47	10	0	57	52	0	5	0	57	14	87	0	0	101	215
04:15 PM	0	0	0	0	0	0	63	16	0	79	53	0	8	0	61	13	117	0	0	130	270
04:30 PM	0	0	0	0	0	0	85	18	0	103	58	0	10	0	68	10	105	0	0	115	286
04:45 PM	0	0	0	0	0	0	69	23	0	92	75	0	6	0	81	10	90	0	0	100	273
Total	0	0	0	0	0	0	264	67	0	331	238	0	29	0	267	47	399	0	0	446	1044
05:00 PM	0	0	0	0	0	0	75	20	0	95	70	0	16	0	86	12	104	0	0	116	297
05:15 PM	0	0	0	0	0	0	98	17	0	115	98	0	13	0	111	13	134	0	0	147	373
05:30 PM	0	0	0	0	0	0	62	15	0	77	73	0	12	0	85	13	94	0	0	107	269
05:45 PM	0	0	0	0	0	0	42	14	0	56	55	0	9	0	64	11	114	0	0	125	245
Total	0	0	0	0	0	0	277	66	0	343	296	0	50	0	346	49	446	0	0	495	1184
Grand Total	0	0	0	0	0	0	541	133	0	674	534	0	79	0	613	96	845	0	0	941	2228
Apprch %	0	0	0	0	0	0	80.3	19.7	0		87.1	0	12.9	0		10.2	89.8	0	0		
Total %	0	0	0	0	0	0	24.3	6	0	30.3	24	0	3.5	0	27.5	4.3	37.9	0	0	42.2	
Lights	0	0	0	0	0	0	527	128	0	655	529	0	78	0	607	95	830	0	0	925	2187
% Lights	0	0	0	0	0	0	97.4	96.2	0	97.2	99.1	0	98.7	0	99	99	98.2	0	0	98.3	98.2
Buses	0	0	0	0	0	0	1	1	0	2	1	0	1	0	2	0	3	0	0	3	7
% Buses	0	0	0	0	0	0	0.2	0.8	0	0.3	0.2	0	1.3	0	0.3	0	0.4	0	0	0.3	0.3
Trucks	0	0	0	0	0	0	13	4	0	17	4	0	0	0	4	1	12	0	0	13	34
% Trucks	0	0	0	0	0	0	2.4	3	0	2.5	0.7	0	0	0	0.7	1	1.4	0	0	1.4	1.5

Start Time	Southbound				RESERVATION RD Westbound				INTER-GARRISON RD Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	85	18	103	58	0	10	68	10	105	0	115	286
04:45 PM	0	0	0	0	0	69	23	92	75	0	6	81	10	90	0	100	273
05:00 PM	0	0	0	0	0	75	20	95	70	0	16	86	12	104	0	116	297
05:15 PM	0	0	0	0	0	98	17	115	98	0	13	111	13	134	0	147	373
Total Volume	0	0	0	0	0	327	78	405	301	0	45	346	45	433	0	478	1229
% App. Total	0	0	0	0	0	80.7	19.3		87	0	13		9.4	90.6	0		
PHF	.000	.000	.000	.000	.000	.834	.848	.880	.768	.000	.703	.779	.865	.808	.000	.813	.824

Traffic Data Service

San Jose, CA
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	100	0	100	0	0	0	0		0	0	0	0		

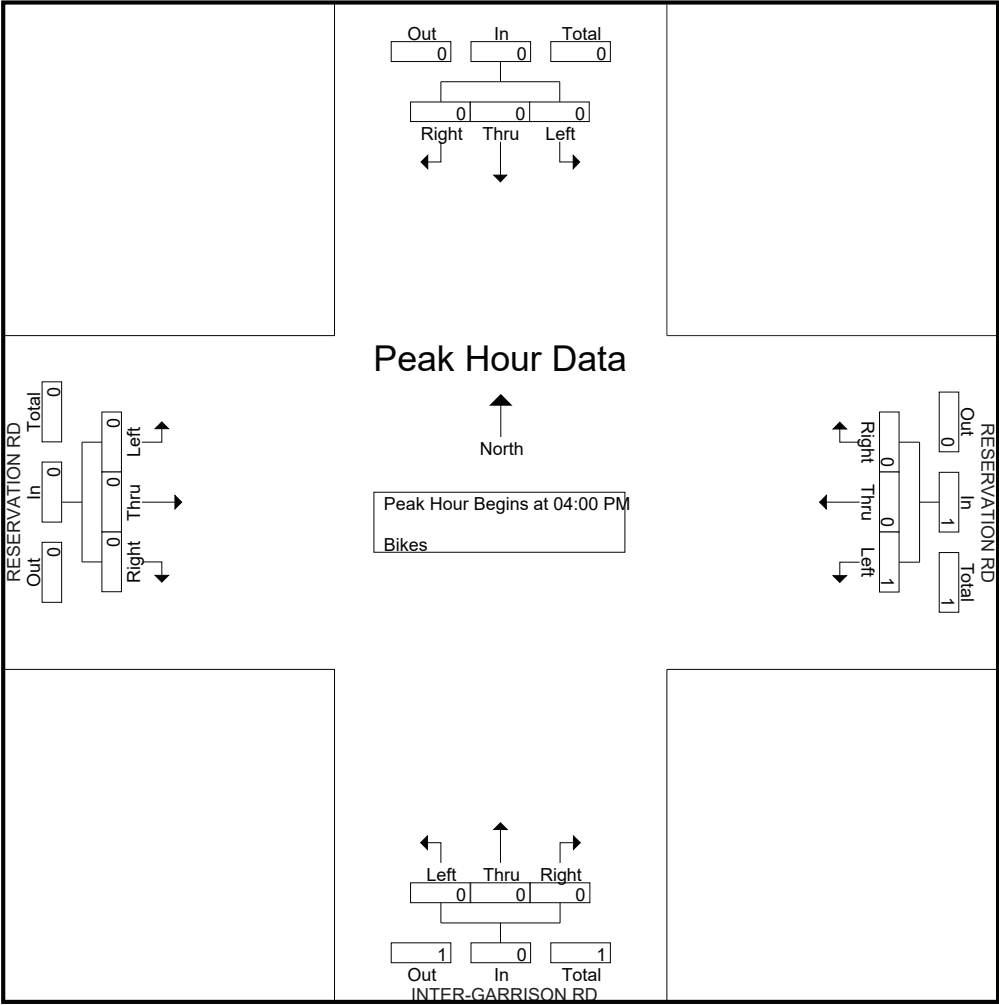
Start Time	Southbound					RESERVATION RD Westbound					INTER-GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000		.000	.000	.250	.250		.000	.000	.000	.000		.000	.000	.000	.000		.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 20AM FINAL
 Site Code : 00000020
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

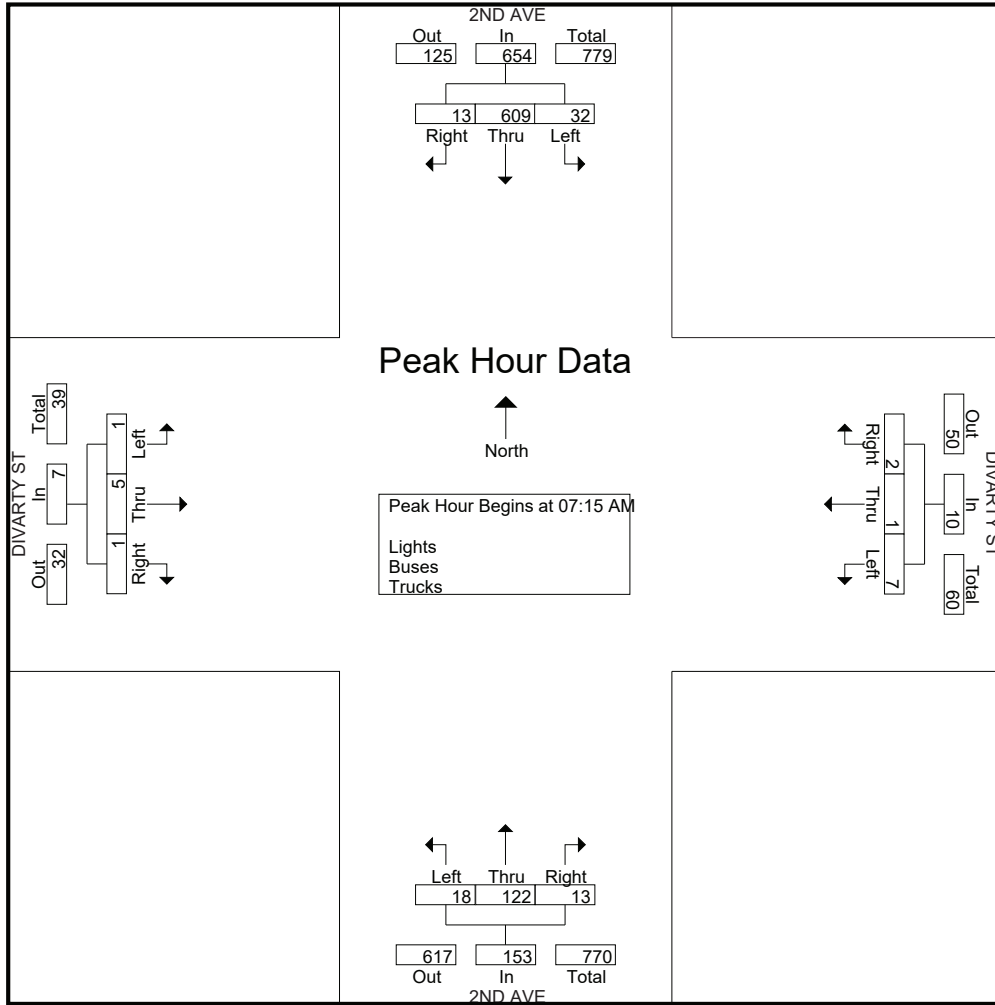
Start Time	2ND AVE Southbound					DIVARTY ST Westbound					2ND AVE Northbound					DIVARTY ST Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	0	60	1	0	61	0	0	0	0	0	0	13	2	0	15	0	0	0	0	0	0	76
07:15 AM	1	149	3	1	154	0	1	2	0	3	0	10	2	0	12	1	0	0	1	2	2	171
07:30 AM	1	176	5	0	182	1	0	2	0	3	5	32	1	0	38	0	3	1	1	5	5	228
07:45 AM	6	159	6	0	171	1	0	3	0	4	6	33	10	0	49	0	1	0	0	1	1	225
Total	8	544	15	1	568	2	1	7	0	10	11	88	15	0	114	1	4	1	2	8	8	700
08:00 AM	5	125	18	0	148	0	0	0	0	0	2	47	5	0	54	0	1	0	0	1	1	203
08:15 AM	5	95	7	3	110	1	0	2	0	3	4	24	0	0	28	2	0	3	0	5	5	146
08:30 AM	2	53	4	1	60	2	3	5	0	10	0	19	2	0	21	0	0	3	0	3	3	94
08:45 AM	1	45	8	0	54	2	1	2	5	10	3	20	7	0	30	0	2	2	0	4	4	98
Total	13	318	37	4	372	5	4	9	5	23	9	110	14	0	133	2	3	8	0	13	13	541
Grand Total	21	862	52	5	940	7	5	16	5	33	20	198	29	0	247	3	7	9	2	21	21	1241
Apprch %	2.2	91.7	5.5	0.5		21.2	15.2	48.5	15.2		8.1	80.2	11.7	0		14.3	33.3	42.9	9.5			
Total %	1.7	69.5	4.2	0.4	75.7	0.6	0.4	1.3	0.4	2.7	1.6	16	2.3	0	19.9	0.2	0.6	0.7	0.2	1.7		
Lights	21	850	51	5	927	6	4	16	5	31	20	194	25	0	239	1	6	9	2	18	18	1215
% Lights	100	98.6	98.1	100	98.6	85.7	80	100	100	93.9	100	98	86.2	0	96.8	33.3	85.7	100	100	85.7	97.9	97.9
Buses	0	4	1	0	5	0	0	0	0	0	0	3	0	0	3	1	0	0	0	0	1	9
% Buses	0	0.5	1.9	0	0.5	0	0	0	0	0	0	1.5	0	0	1.2	33.3	0	0	0	4.8	0.7	0.7
Trucks	0	8	0	0	8	1	1	0	0	2	0	1	4	0	5	1	1	0	0	2	2	17
% Trucks	0	0.9	0	0	0.9	14.3	20	0	0	6.1	0	0.5	13.8	0	2	33.3	14.3	0	0	9.5	1.4	1.4

Start Time	2ND AVE Southbound				DIVARTY ST Westbound				2ND AVE Northbound				DIVARTY ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	149	3	153	0	1	2	3	0	10	2	12	1	0	0	1	169
07:30 AM	1	176	5	182	1	0	2	3	5	32	1	38	0	3	1	4	227
07:45 AM	6	159	6	171	1	0	3	4	6	33	10	49	0	1	0	1	225
08:00 AM	5	125	18	148	0	0	0	0	2	47	5	54	0	1	0	1	203
Total Volume	13	609	32	654	2	1	7	10	13	122	18	153	1	5	1	7	824
% App. Total	2	93.1	4.9		20	10	70		8.5	79.7	11.8		14.3	71.4	14.3		
PHF	.542	.865	.444	.898	.500	.250	.583	.625	.542	.649	.450	.708	.250	.417	.250	.438	.907

Traffic Data Service

San Jose, CA
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File Name : 20AM FINAL
 Site Code : 00000020
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 Page No : 2



Traffic Data Service

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File Name : 20AM FINAL
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 Page No : 1

Groups Printed- Bikes

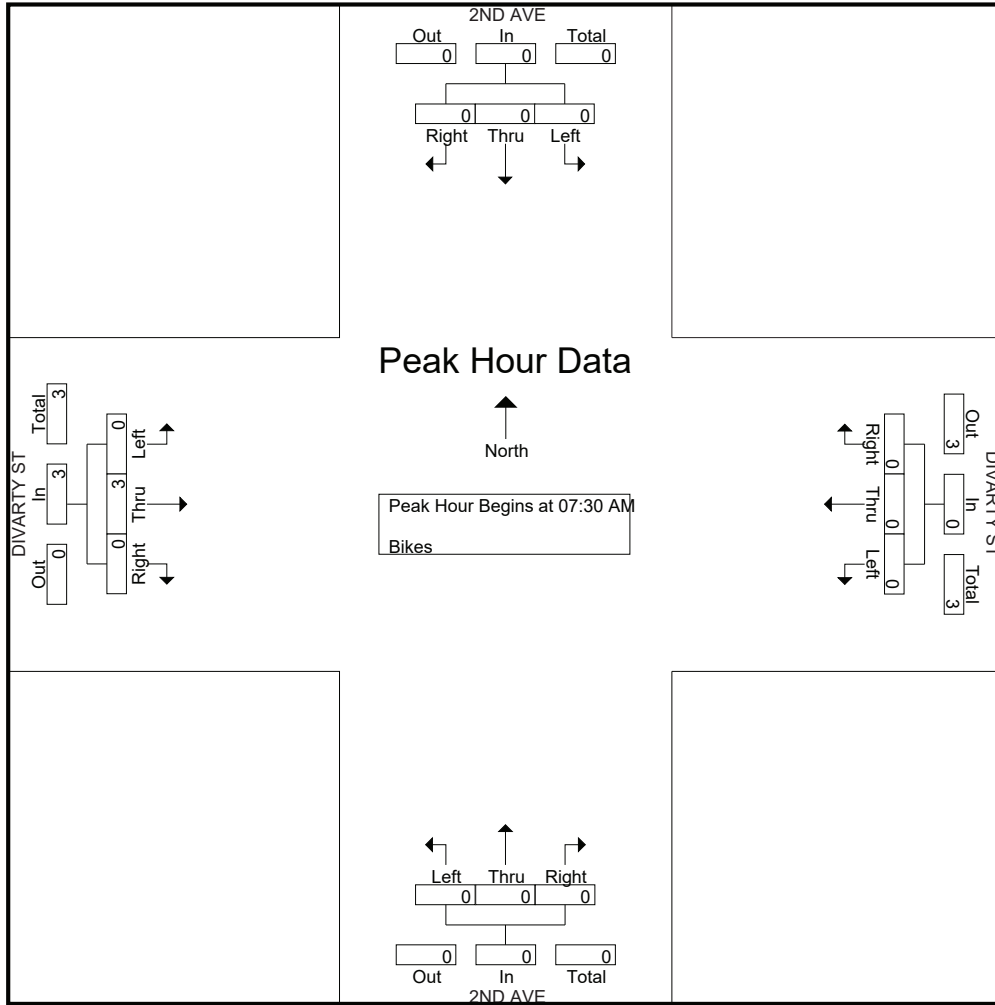
Start Time	2ND AVE Southbound					DIVARTY ST Westbound					2ND AVE Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	

Start Time	2ND AVE Southbound				DIVARTY ST Westbound				2ND AVE Northbound				DIVARTY ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750	.000	.750	.750

Traffic Data Service

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File Name : 20AM FINAL
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Page No : 2



Traffic Data Service

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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

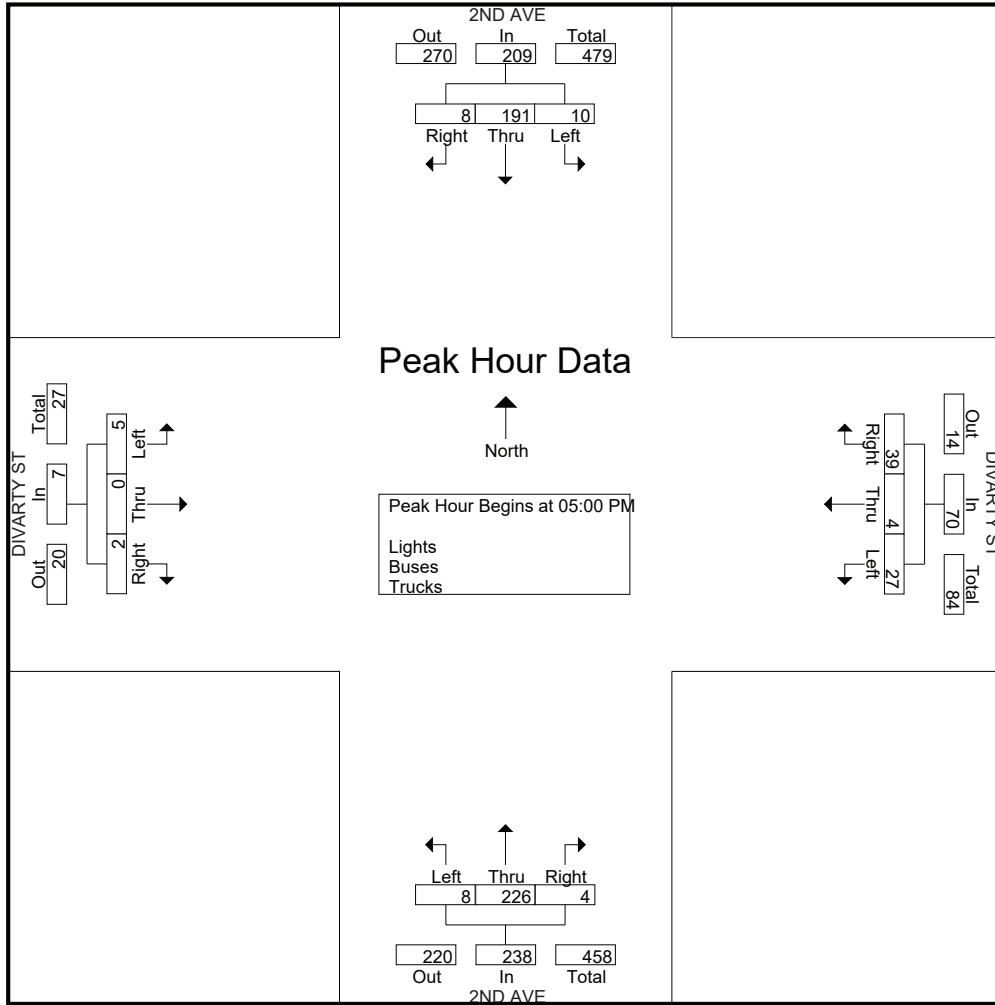
Start Time	2ND AVE Southbound					DIVARTY ST Westbound					2ND AVE Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	2	41	7	0	50	7	4	4	0	15	0	28	2	0	30	0	0	1	0	1	96
04:15 PM	5	39	2	0	46	8	1	3	1	13	2	33	4	0	39	0	1	3	2	6	104
04:30 PM	5	52	5	0	62	6	5	5	0	16	1	44	6	0	51	0	2	2	0	4	133
04:45 PM	1	52	2	2	57	8	2	2	1	13	1	44	2	1	48	4	0	3	1	8	126
Total	13	184	16	2	215	29	12	14	2	57	4	149	14	1	168	4	3	9	3	19	459
05:00 PM	2	38	4	1	45	18	1	7	2	28	2	62	1	1	66	0	0	2	0	2	141
05:15 PM	1	45	0	2	48	1	0	2	0	3	0	60	5	1	66	0	0	1	3	4	121
05:30 PM	2	54	4	1	61	8	1	8	0	17	0	55	0	0	55	0	0	1	1	2	135
05:45 PM	3	54	2	1	60	12	2	10	0	24	2	49	2	0	53	2	0	1	0	3	140
Total	8	191	10	5	214	39	4	27	2	72	4	226	8	2	240	2	0	5	4	11	537
Grand Total	21	375	26	7	429	68	16	41	4	129	8	375	22	3	408	6	3	14	7	30	996
Apprch %	4.9	87.4	6.1	1.6		52.7	12.4	31.8	3.1		2	91.9	5.4	0.7		20	10	46.7	23.3		
Total %	2.1	37.7	2.6	0.7	43.1	6.8	1.6	4.1	0.4	13	0.8	37.7	2.2	0.3	41	0.6	0.3	1.4	0.7	3	
Lights	21	369	26	7	423	67	16	41	4	128	8	372	21	3	404	6	3	14	7	30	985
% Lights	100	98.4	100	100	98.6	98.5	100	100	100	99.2	100	99.2	95.5	100	99	100	100	100	100	100	98.9
Buses	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	6
% Buses	0	1.1	0	0	0.9	1.5	0	0	0	0.8	0	0.3	0	0	0.2	0	0	0	0	0	0.6
Trucks	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	5
% Trucks	0	0.5	0	0	0.5	0	0	0	0	0	0	0.5	4.5	0	0.7	0	0	0	0	0	0.5

Start Time	2ND AVE Southbound				DIVARTY ST Westbound				2ND AVE Northbound				DIVARTY ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	38	4	44	18	1	7	26	2	62	1	65	0	0	2	2	137
05:15 PM	1	45	0	46	1	0	2	3	0	60	5	65	0	0	1	1	115
05:30 PM	2	54	4	60	8	1	8	17	0	55	0	55	0	0	1	1	133
05:45 PM	3	54	2	59	12	2	10	24	2	49	2	53	2	0	1	3	139
Total Volume	8	191	10	209	39	4	27	70	4	226	8	238	2	0	5	7	524
% App. Total	3.8	91.4	4.8		55.7	5.7	38.6		1.7	95	3.4		28.6	0	71.4		
PHF	.667	.884	.625	.871	.542	.500	.675	.673	.500	.911	.400	.915	.250	.000	.625	.583	.942

Traffic Data Service

San Jose, CA
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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

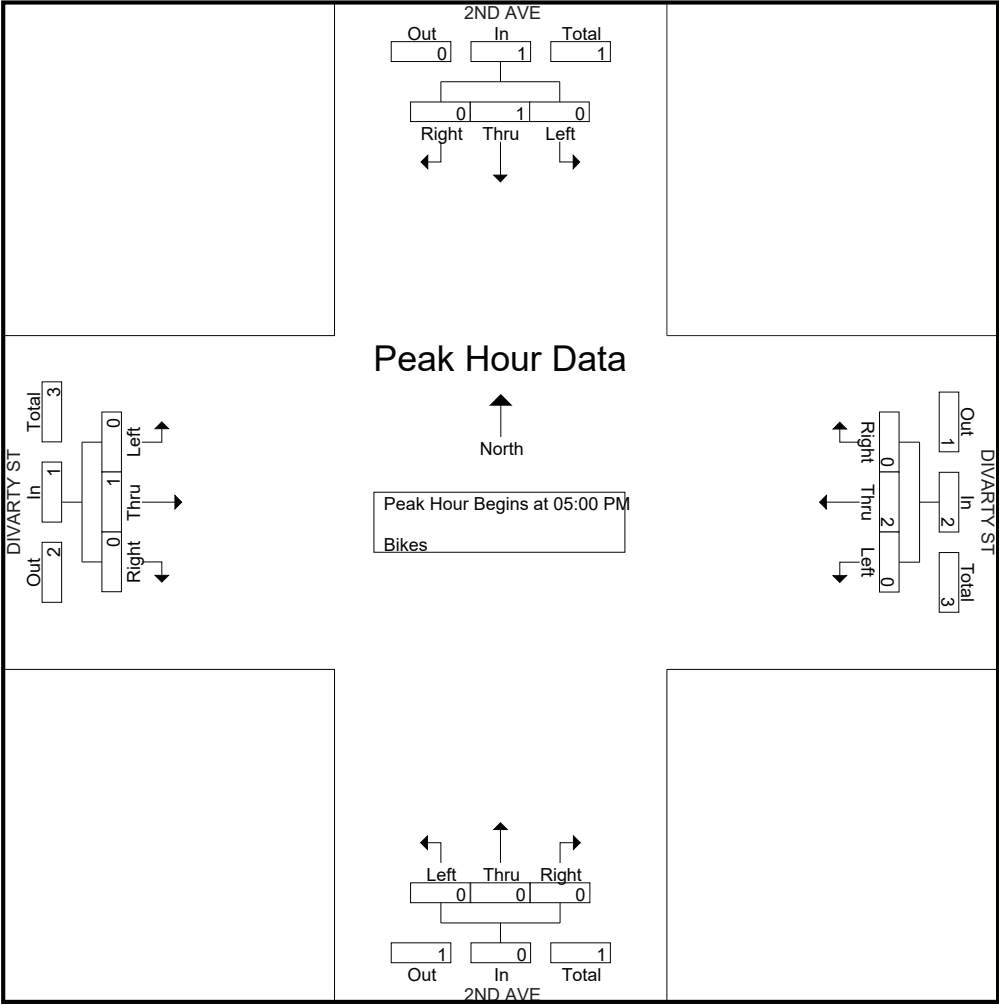
Start Time	2ND AVE Southbound					DIVARTY ST Westbound					2ND AVE Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4
Grand Total	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	4
Apprch %	0	100	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	25	0	0	25	0	50	0	0	50	0	0	0	0	0	0	25	0	0	25	

Start Time	2ND AVE Southbound				DIVARTY ST Westbound				2ND AVE Northbound				DIVARTY ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
% App. Total	0	100	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250	.500

Traffic Data Service

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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

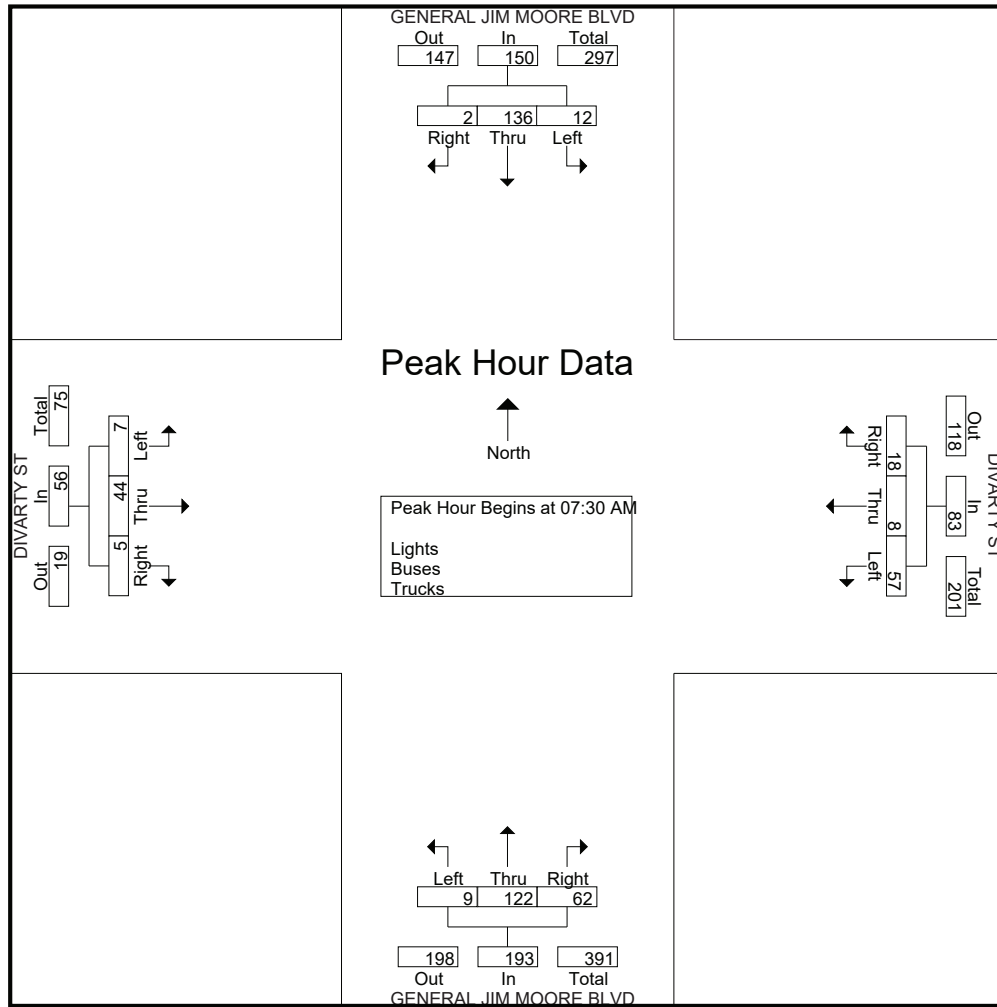
Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	10	1	0	11	0	0	9	0	9	3	4	2	0	9	1	0	0	0	1	30
07:15 AM	0	33	0	1	34	1	1	24	0	26	6	11	1	1	19	4	4	0	0	8	87
07:30 AM	1	51	0	0	52	2	0	34	0	36	7	25	1	1	34	1	8	3	0	12	134
07:45 AM	1	37	2	3	43	5	4	12	0	21	27	29	4	1	61	1	9	2	0	12	137
Total	2	131	3	4	140	8	5	79	0	92	43	69	8	3	123	7	21	5	0	33	388
08:00 AM	0	25	7	0	32	7	3	9	0	19	20	31	1	0	52	2	21	1	0	24	127
08:15 AM	0	23	3	3	29	4	1	2	0	7	8	37	3	0	48	1	6	1	0	8	92
08:30 AM	1	20	1	0	22	6	2	3	3	14	11	32	5	1	49	0	4	0	0	4	89
08:45 AM	0	13	2	0	15	11	4	7	0	22	16	30	5	0	51	1	9	1	1	12	100
Total	1	81	13	3	98	28	10	21	3	62	55	130	14	1	200	4	40	3	1	48	408
Grand Total	3	212	16	7	238	36	15	100	3	154	98	199	22	4	323	11	61	8	1	81	796
Apprch %	1.3	89.1	6.7	2.9		23.4	9.7	64.9	1.9		30.3	61.6	6.8	1.2		13.6	75.3	9.9	1.2		
Total %	0.4	26.6	2	0.9	29.9	4.5	1.9	12.6	0.4	19.3	12.3	25	2.8	0.5	40.6	1.4	7.7	1	0.1	10.2	
Lights	3	209	16	7	235	32	14	99	3	148	97	195	20	4	316	10	60	8	1	79	778
% Lights	100	98.6	100	100	98.7	88.9	93.3	99	100	96.1	99	98	90.9	100	97.8	90.9	98.4	100	100	97.5	97.7
Buses	0	1	0	0	1	4	0	1	0	5	0	2	0	0	2	0	1	0	0	1	9
% Buses	0	0.5	0	0	0.4	11.1	0	1	0	3.2	0	1	0	0	0.6	0	1.6	0	0	1.2	1.1
Trucks	0	2	0	0	2	0	1	0	0	1	1	2	2	0	5	1	0	0	0	1	9
% Trucks	0	0.9	0	0	0.8	0	6.7	0	0	0.6	1	1	9.1	0	1.5	9.1	0	0	0	1.2	1.1

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	51	0	0	52	2	0	34	0	36	7	25	1	0	33	1	8	3	0	12	133
07:45 AM	1	37	2	0	40	5	4	12	0	21	27	29	4	0	60	1	9	2	0	12	133
08:00 AM	0	25	7	0	32	7	3	9	0	19	20	31	1	0	52	2	21	1	0	24	127
08:15 AM	0	23	3	0	26	4	1	2	0	7	8	37	3	0	48	1	6	1	0	8	89
Total Volume	2	136	12	0	150	18	8	57	0	83	62	122	9	0	193	5	44	7	0	56	482
% App. Total	1.3	90.7	8	0		21.7	9.6	68.7	0		32.1	63.2	4.7	0		8.9	78.6	12.5	0		
PHF	.500	.667	.429		.721	.643	.500	.419		.576	.574	.824	.563		.804	.625	.524	.583		.583	.906

Traffic Data Service

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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	3	3
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	3	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	2	0	0	2	0	2	0	0	2	4
Grand Total	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	5	0	0	5	0	5	0	0	5	8
Apprch %	0	100	0	0		0	0	0	0		50	50	0	0		0	100	0	0		0	100	0	0		
Total %	0	12.5	0	0	12.5	0	0	0	0	0	12.5	12.5	0	0	25	0	62.5	0	0	62.5	0	62.5	0	0	62.5	

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	0	0	3	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1
Total Volume	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	5	0	0	5	0	5	0	0	5	8
% App. Total	0	100	0	0		0	0	0	0		50	50	0	0		0	100	0	0		0	100	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.250	.000	.250	.250	.000	.417	.000	.000	.417	.000	.417	.000	.000	.417	.667

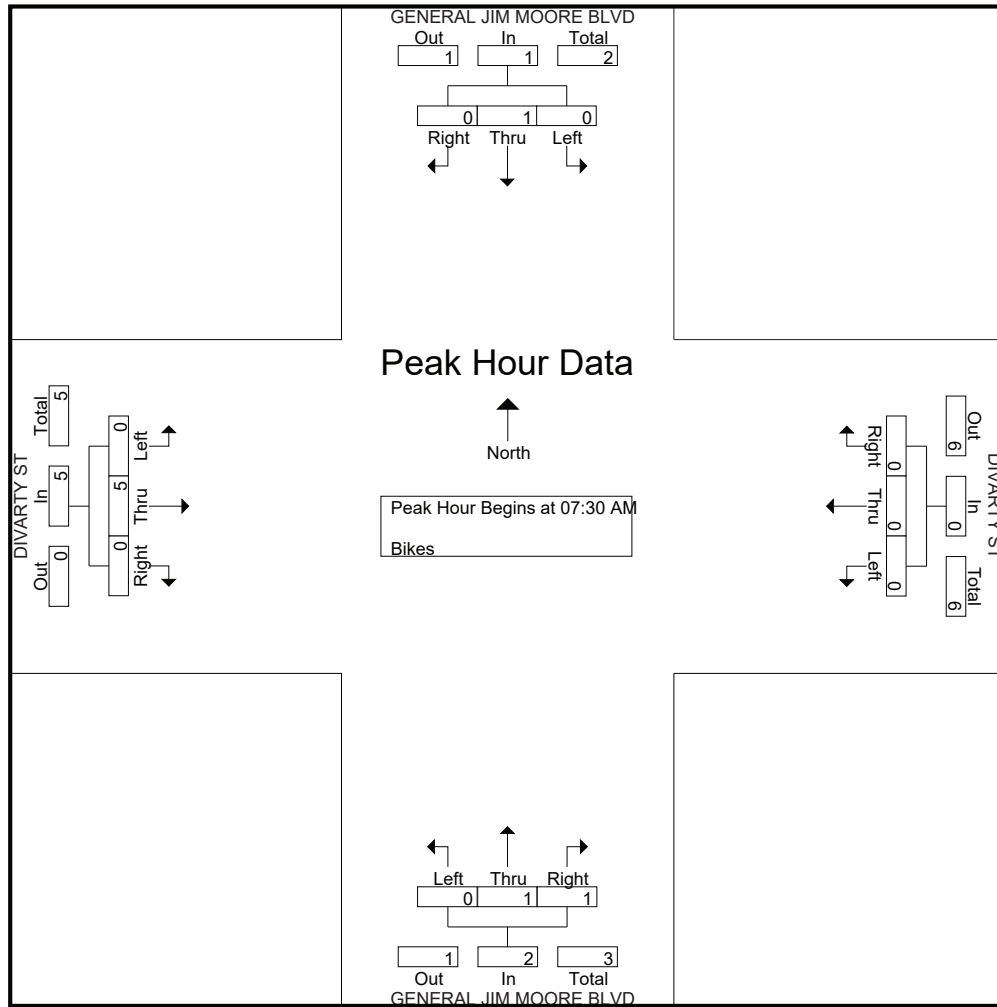
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

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 Page No : 2



Traffic Data Service

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File Name : 21PM FINAL
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Page No : 1

Groups Printed- Lights - Buses - Trucks

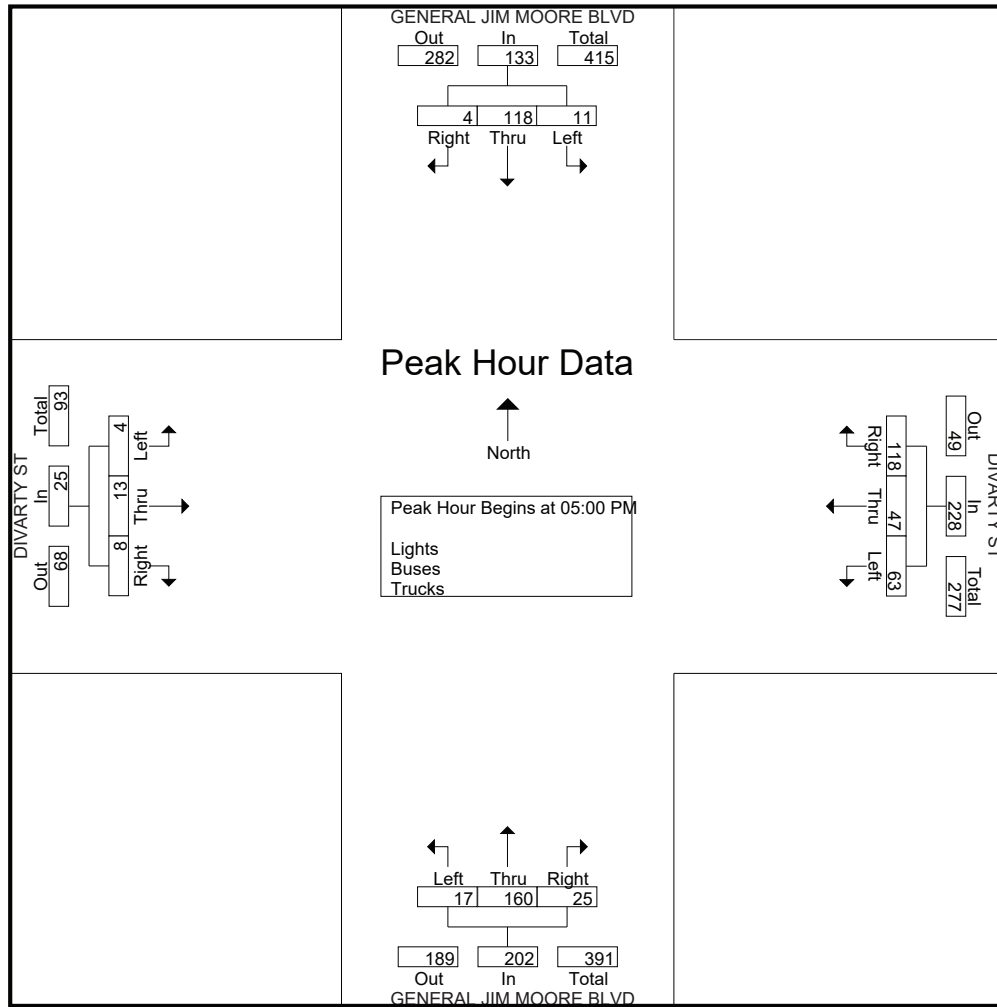
Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	25	3	3	32	25	10	16	0	51	5	37	7	0	49	7	7	4	1	19	151
04:15 PM	1	18	1	4	24	14	3	11	0	28	6	23	8	0	37	1	4	1	0	6	95
04:30 PM	3	23	1	2	29	17	7	11	1	36	3	27	9	1	40	2	5	0	1	8	113
04:45 PM	1	27	4	2	34	15	10	8	1	34	5	36	1	1	43	3	1	0	0	4	115
Total	6	93	9	11	119	71	30	46	2	149	19	123	25	2	169	13	17	5	2	37	474
05:00 PM	3	30	1	7	41	32	16	14	2	64	6	37	7	0	50	7	3	1	2	13	168
05:15 PM	0	32	2	0	34	24	2	12	0	38	8	44	1	1	54	0	2	1	0	3	129
05:30 PM	0	27	2	0	29	19	11	14	2	46	5	42	4	1	52	0	6	1	0	7	134
05:45 PM	1	29	6	4	40	43	18	23	2	86	6	37	5	2	50	1	2	1	1	5	181
Total	4	118	11	11	144	118	47	63	6	234	25	160	17	4	206	8	13	4	3	28	612
Grand Total	10	211	20	22	263	189	77	109	8	383	44	283	42	6	375	21	30	9	5	65	1086
Apprch %	3.8	80.2	7.6	8.4		49.3	20.1	28.5	2.1		11.7	75.5	11.2	1.6		32.3	46.2	13.8	7.7		
Total %	0.9	19.4	1.8	2	24.2	17.4	7.1	10	0.7	35.3	4.1	26.1	3.9	0.6	34.5	1.9	2.8	0.8	0.5	6	
Lights	10	210	20	22	262	185	77	106	8	376	44	281	41	6	372	21	30	9	5	65	1075
% Lights	100	99.5	100	100	99.6	97.9	100	97.2	100	98.2	100	99.3	97.6	100	99.2	100	100	100	100	100	99
Buses	0	0	0	0	0	4	0	3	0	7	0	2	1	0	3	0	0	0	0	0	10
% Buses	0	0	0	0	0	2.1	0	2.8	0	1.8	0	0.7	2.4	0	0.8	0	0	0	0	0	0.9
Trucks	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Trucks	0	0.5	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	3	30	1		34	32	16	14		62	6	37	7		50	7	3	1		11	157
05:15 PM	0	32	2		34	24	2	12		38	8	44	1		53	0	2	1		3	128
05:30 PM	0	27	2		29	19	11	14		44	5	42	4		51	0	6	1		7	131
05:45 PM	1	29	6		36	43	18	23		84	6	37	5		48	1	2	1		4	172
Total Volume	4	118	11		133	118	47	63		228	25	160	17		202	8	13	4		25	588
% App. Total	3	88.7	8.3			51.8	20.6	27.6			12.4	79.2	8.4			32	52	16			
PHF	.333	.922	.458		.924	.686	.653	.685		.679	.781	.909	.607		.953	.286	.542	1.00		.568	.855

Traffic Data Service

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Traffic Data Service

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File Name : 21PM FINAL
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 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	3
Total	1	0	0	0	1	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	0	0	0	5	5
Grand Total	1	1	0	0	2	0	2	0	0	2	0	2	0	0	2	0	0	1	0	1	0	0	0	0	7	7
Apprch %	50	50	0	0		0	100	0	0		0	100	0	0		0	0	100	0							
Total %	14.3	14.3	0	0	28.6	0	28.6	0	0	28.6	0	28.6	0	0	28.6	0	0	14.3	0	14.3						

Start Time	GENERAL JIM MOORE BLVD Southbound					DIVARTY ST Westbound					GENERAL JIM MOORE BLVD Northbound					DIVARTY ST Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	3
Total Volume	1	0	0	0	1	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	0	0	0	5	5
% App. Total	100	0	0	0		0	100	0	0		0	100	0	0		0	0	100	0							
PHF	.250	.000	.000	.000	.250	.000	.250	.000	.000	.250	.000	.250	.000	.000	.250	.000	.000	.250	.000	.250					.417	

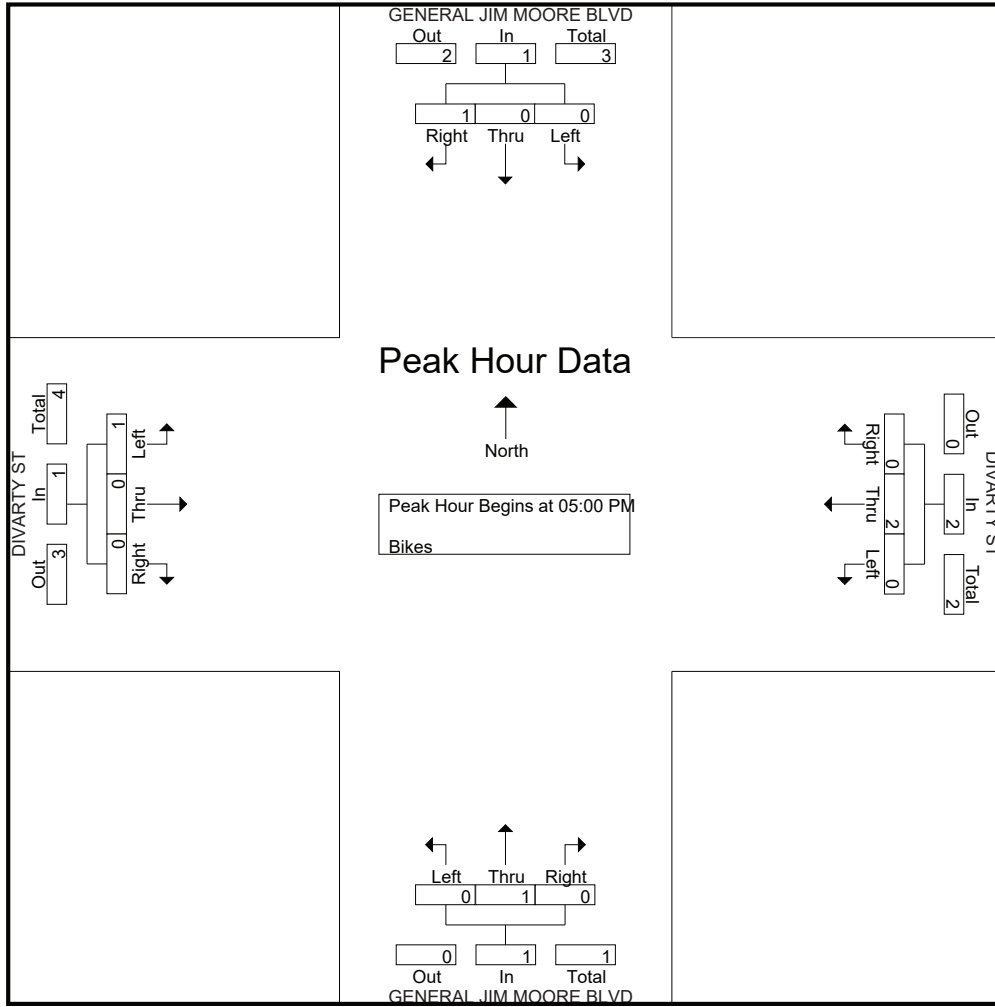
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

Traffic Data Service

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 Page No : 2



Traffic Data Service

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File Name : 22AM FINAL
 Site Code : 00000022
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

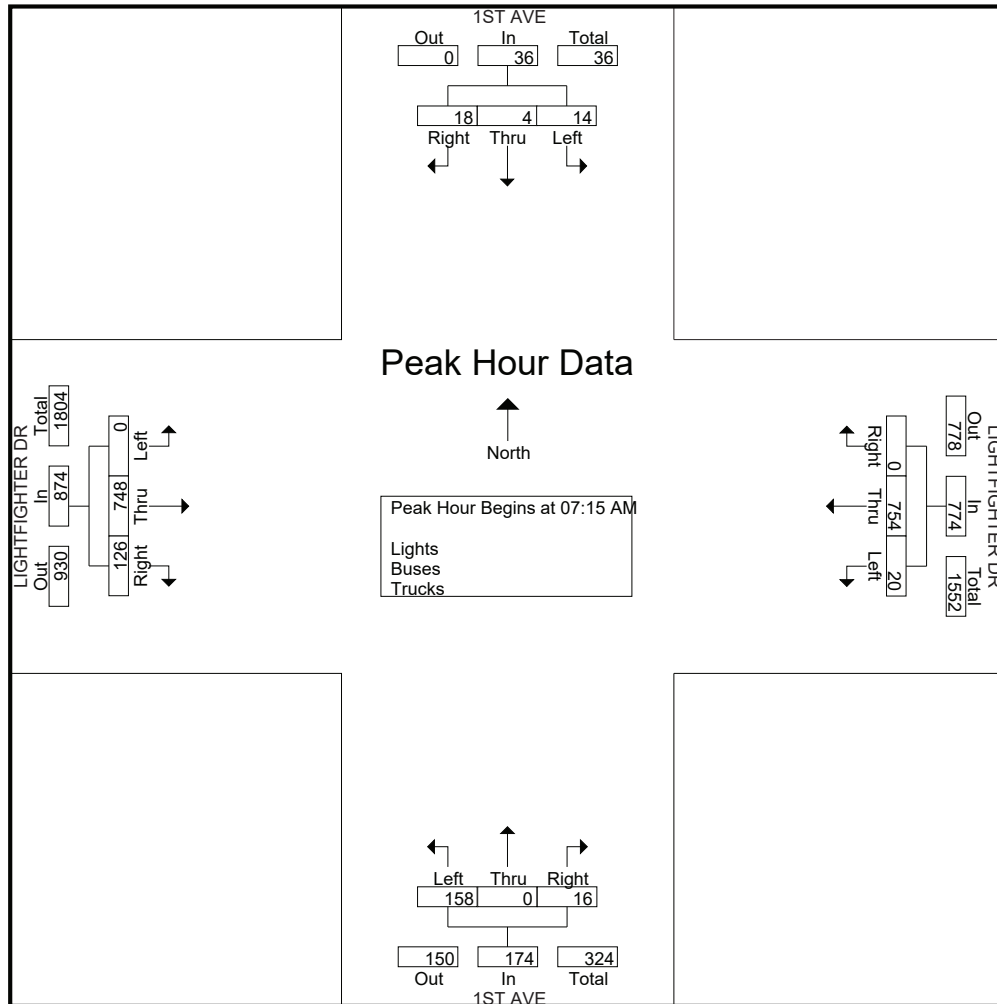
Start Time	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	2	0	0	0	2	0	126	1	0	127	0	0	53	0	53	12	107	0	0	119	301
07:15 AM	4	1	0	0	5	0	160	7	0	167	0	0	44	0	44	22	160	0	0	182	398
07:30 AM	5	0	1	0	6	0	270	3	0	273	1	0	43	0	44	31	199	0	0	230	553
07:45 AM	5	2	3	0	10	0	182	1	0	183	10	0	35	0	45	44	233	0	0	277	515
Total	16	3	4	0	23	0	738	12	0	750	11	0	175	0	186	109	699	0	0	808	1767
08:00 AM	4	1	10	0	15	0	142	9	0	151	5	0	36	0	41	29	156	0	0	185	392
08:15 AM	4	0	0	0	4	0	99	8	0	107	7	0	28	0	35	40	146	0	0	186	332
08:30 AM	0	0	0	0	0	0	70	2	0	72	0	0	21	0	21	54	137	1	0	192	285
08:45 AM	3	0	0	0	3	0	72	3	0	75	1	0	20	0	21	37	149	1	0	187	286
Total	11	1	10	0	22	0	383	22	0	405	13	0	105	0	118	160	588	2	0	750	1295
Grand Total	27	4	14	0	45	0	1121	34	0	1155	24	0	280	0	304	269	1287	2	0	1558	3062
Apprch %	60	8.9	31.1	0		0	97.1	2.9	0		7.9	0	92.1	0		17.3	82.6	0.1	0		
Total %	0.9	0.1	0.5	0	1.5	0	36.6	1.1	0	37.7	0.8	0	9.1	0	9.9	8.8	42	0.1	0	50.9	
Lights	26	3	14	0	43	0	1093	34	0	1127	23	0	276	0	299	257	1256	2	0	1515	2984
% Lights	96.3	75	100	0	95.6	0	97.5	100	0	97.6	95.8	0	98.6	0	98.4	95.5	97.6	100	0	97.2	97.5
Buses	0	1	0	0	1	0	10	0	0	10	0	0	2	0	2	8	12	0	0	20	33
% Buses	0	25	0	0	2.2	0	0.9	0	0	0.9	0	0	0.7	0	0.7	3	0.9	0	0	1.3	1.1
Trucks	1	0	0	0	1	0	18	0	0	18	1	0	2	0	3	4	19	0	0	23	45
% Trucks	3.7	0	0	0	2.2	0	1.6	0	0	1.6	4.2	0	0.7	0	1	1.5	1.5	0	0	1.5	1.5

Start Time	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	1	0	5	0	160	7	167	0	0	44	44	22	160	0	182	398
07:30 AM	5	0	1	6	0	270	3	273	1	0	43	44	31	199	0	230	553
07:45 AM	5	2	3	10	0	182	1	183	10	0	35	45	44	233	0	277	515
08:00 AM	4	1	10	15	0	142	9	151	5	0	36	41	29	156	0	185	392
Total Volume	18	4	14	36	0	754	20	774	16	0	158	174	126	748	0	874	1858
% App. Total	50	11.1	38.9		0	97.4	2.6		9.2	0	90.8		14.4	85.6	0		
PHF	.900	.500	.350	.600	.000	.698	.556	.709	.400	.000	.898	.967	.716	.803	.000	.789	.840

Traffic Data Service

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 Page No : 2



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 Page No : 1

Groups Printed- Bikes

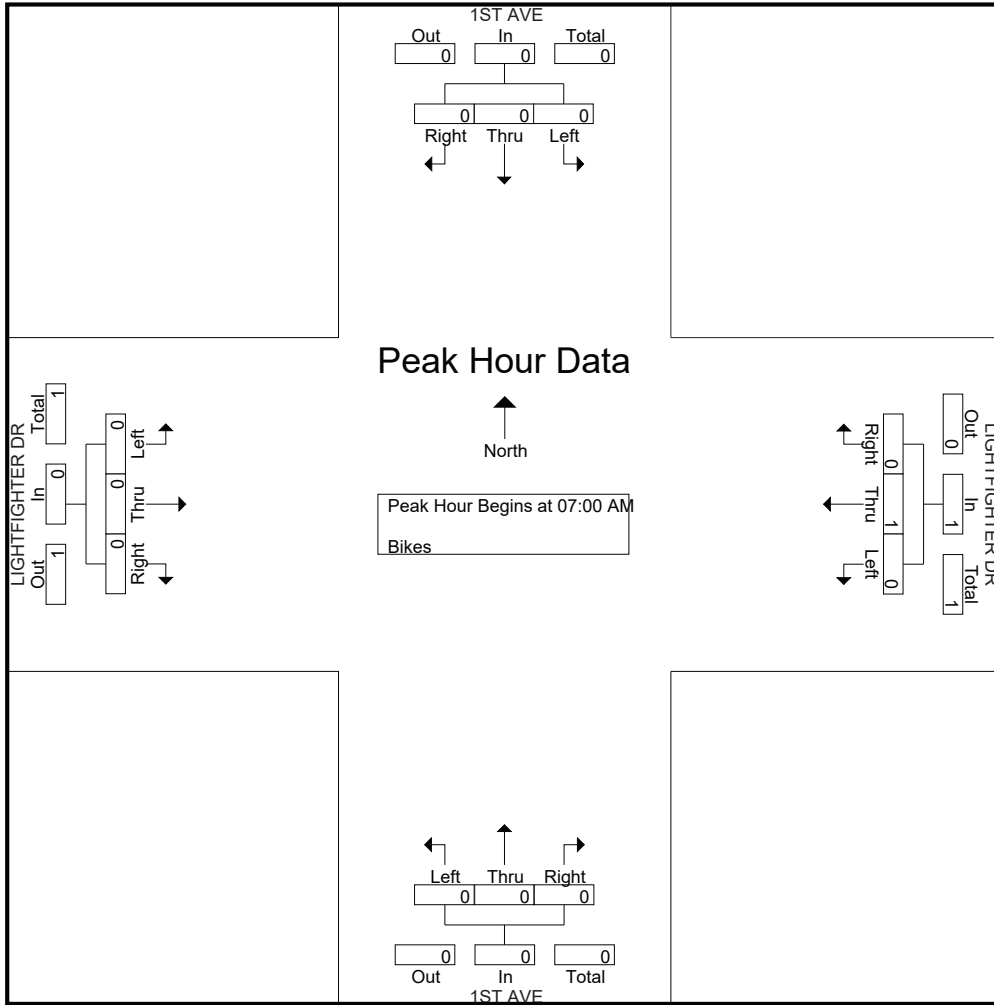
Start Time	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	100	0	0	100	0	0	0	0		0	0	0	0		

Start Time	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Traffic Data Service

San Jose, CA
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File Name : 22AM FINAL
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Page No : 2



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 Page No : 1

Groups Printed- Lights - Buses - Trucks

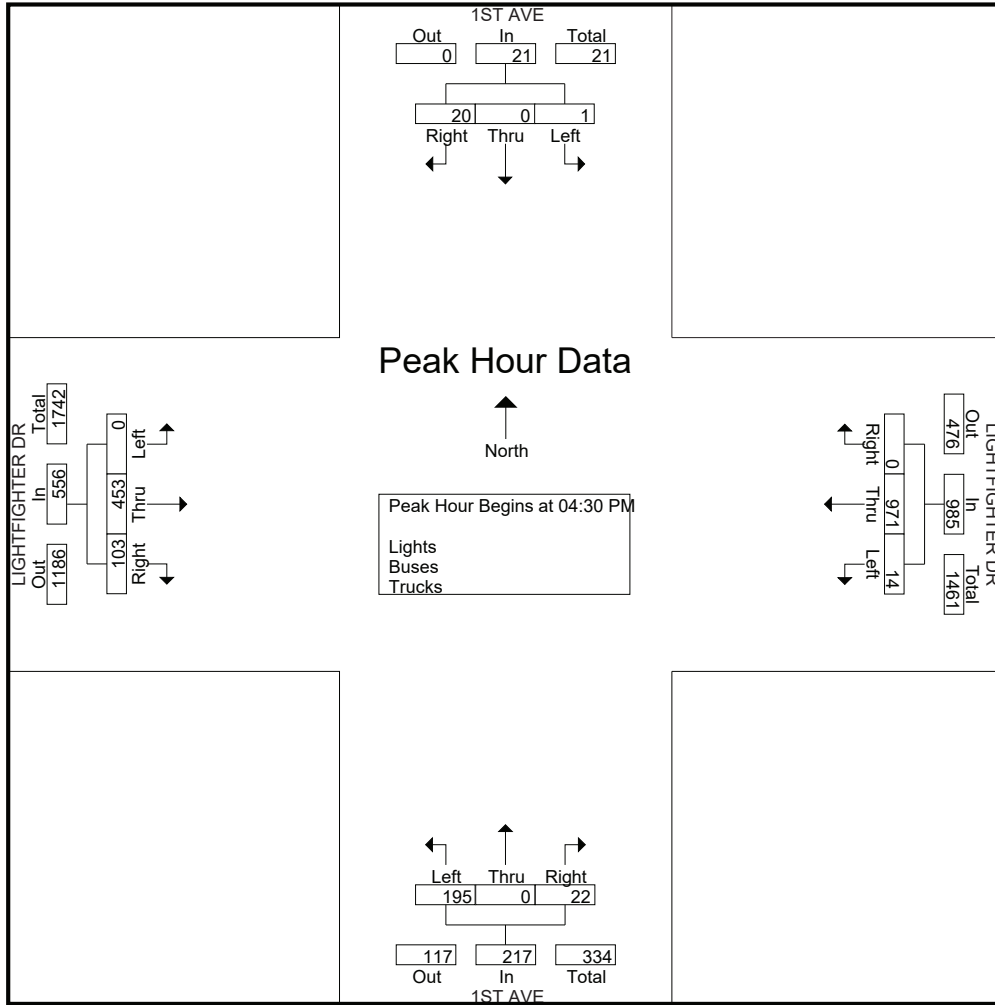
Start Time	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	6	0	0	0	6	0	204	5	0	209	6	0	55	0	61	33	86	0	0	119	395
04:15 PM	4	0	0	0	4	0	159	4	0	163	6	0	44	0	50	27	107	0	0	134	351
04:30 PM	4	0	0	0	4	0	222	1	0	223	4	0	53	0	57	32	103	0	0	135	419
04:45 PM	4	0	1	0	5	0	261	8	0	269	4	0	52	0	56	33	107	0	0	140	470
Total	18	0	1	0	19	0	846	18	0	864	20	0	204	0	224	125	403	0	0	528	1635
05:00 PM	12	0	0	0	12	0	241	3	0	244	4	0	55	0	59	16	132	0	0	148	463
05:15 PM	0	0	0	0	0	0	247	2	0	249	10	0	35	0	45	22	111	0	0	133	427
05:30 PM	8	0	0	0	8	0	208	4	0	212	4	0	41	0	45	21	122	0	0	143	408
05:45 PM	4	0	0	0	4	1	189	2	0	192	5	0	29	0	34	25	128	0	0	153	383
Total	24	0	0	0	24	1	885	11	0	897	23	0	160	0	183	84	493	0	0	577	1681
Grand Total	42	0	1	0	43	1	1731	29	0	1761	43	0	364	0	407	209	896	0	0	1105	3316
Apprch %	97.7	0	2.3	0		0.1	98.3	1.6	0		10.6	0	89.4	0		18.9	81.1	0	0		
Total %	1.3	0	0	0	1.3	0	52.2	0.9	0	53.1	1.3	0	11	0	12.3	6.3	27	0	0	33.3	
Lights	41	0	1	0	42	0	1718	27	0	1745	43	0	358	0	401	205	881	0	0	1086	3274
% Lights	97.6	0	100	0	97.7	0	99.2	93.1	0	99.1	100	0	98.4	0	98.5	98.1	98.3	0	0	98.3	98.7
Buses	0	0	0	0	0	0	5	2	0	7	0	0	4	0	4	4	10	0	0	14	25
% Buses	0	0	0	0	0	0	0.3	6.9	0	0.4	0	0	1.1	0	1	1.9	1.1	0	0	1.3	0.8
Trucks	1	0	0	0	1	1	8	0	0	9	0	0	2	0	2	0	5	0	0	5	17
% Trucks	2.4	0	0	0	2.3	100	0.5	0	0	0.5	0	0	0.5	0	0.5	0	0.6	0	0	0.5	0.5

Start Time	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	0	0	4	0	222	1	223	4	0	53	57	32	103	0	135	419
04:45 PM	4	0	1	5	0	261	8	269	4	0	52	56	33	107	0	140	470
05:00 PM	12	0	0	12	0	241	3	244	4	0	55	59	16	132	0	148	463
05:15 PM	0	0	0	0	0	247	2	249	10	0	35	45	22	111	0	133	427
Total Volume	20	0	1	21	0	971	14	985	22	0	195	217	103	453	0	556	1779
% App. Total	95.2	0	4.8		0	98.6	1.4		10.1	0	89.9		18.5	81.5	0		
PHF	.417	.000	.250	.438	.000	.930	.438	.915	.550	.000	.886	.919	.780	.858	.000	.939	.946

Traffic Data Service

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File Name : 22PM FINAL
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 Page No : 2



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File Name : 22PM FINAL
 Site Code : 00000022
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	1ST AVE Southbound					LIGHTFIGHTER DR Westbound					1ST AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

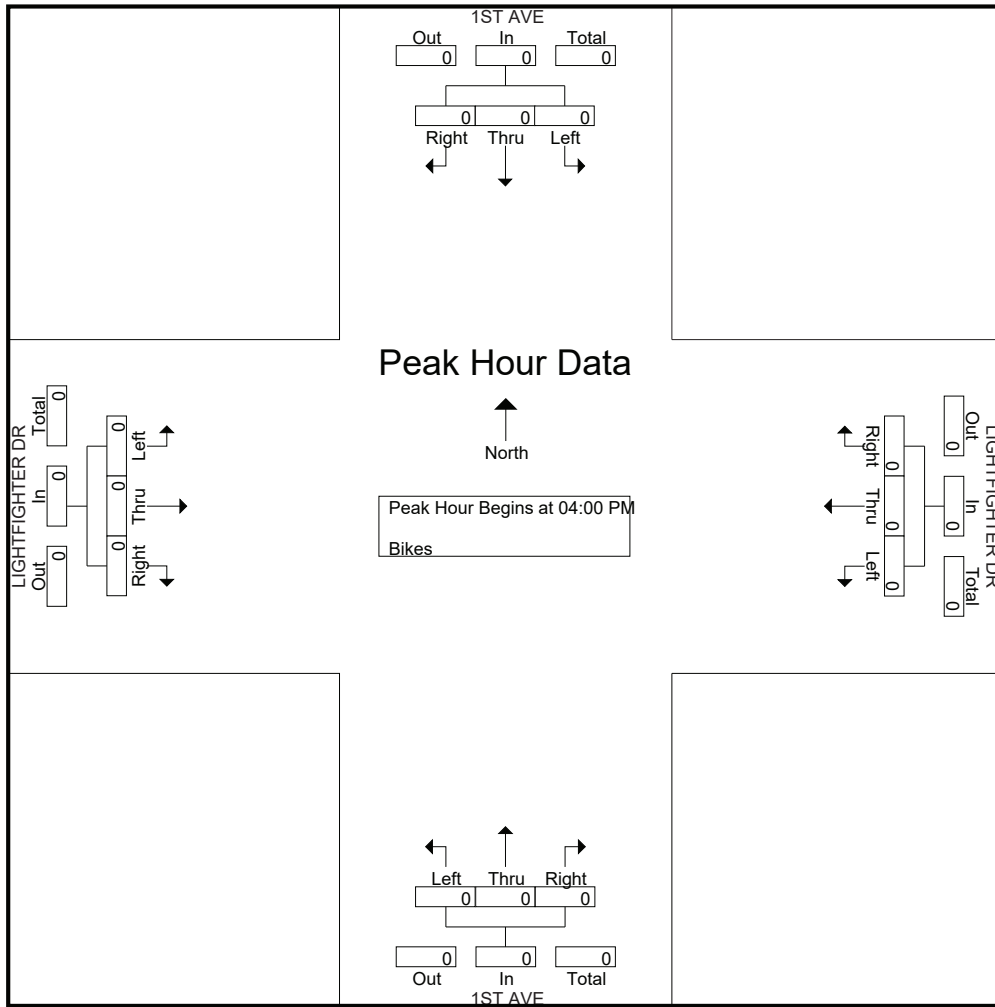
Start Time	1ST AVE Southbound				LIGHTFIGHTER DR Westbound				1ST AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

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Page No : 2



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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

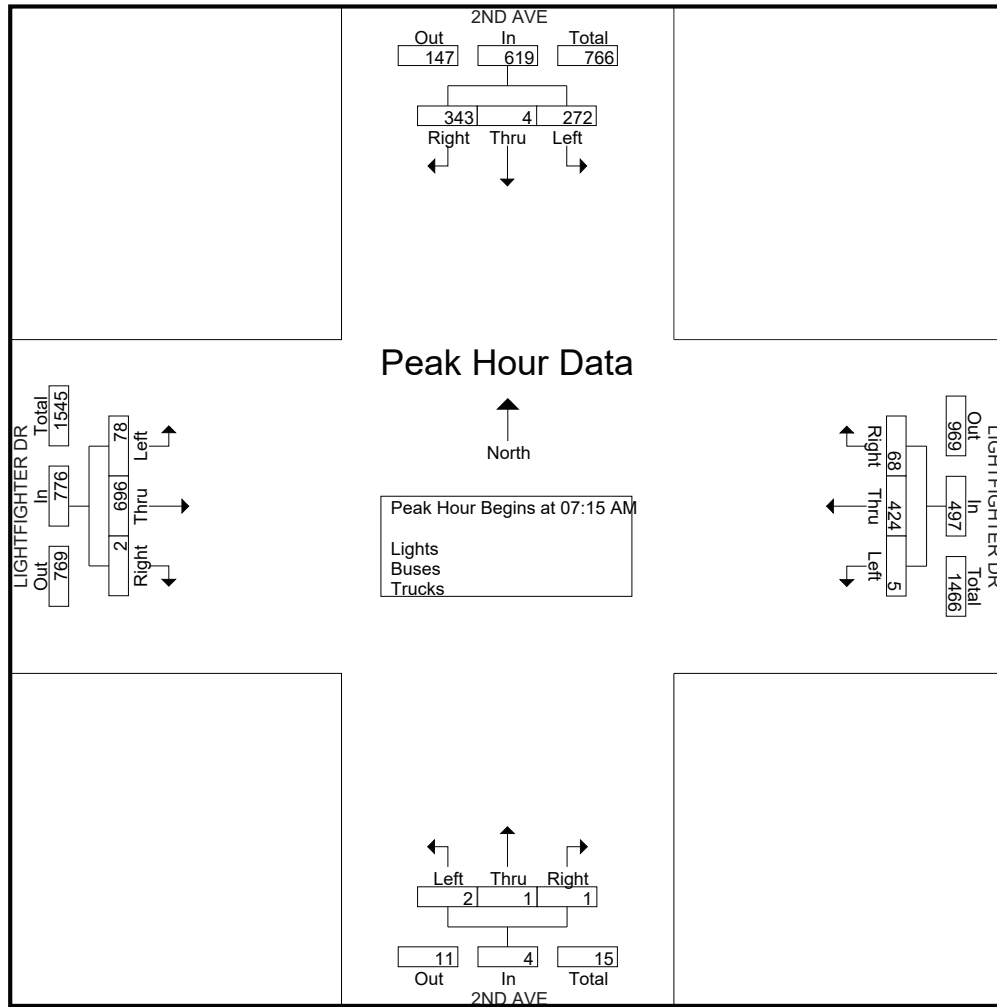
Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	32	1	19	0	52	5	103	0	0	108	0	1	0	0	1	0	96	6	0	102	263
07:15 AM	79	1	70	0	150	7	102	0	0	109	1	0	0	0	1	0	155	8	0	163	423
07:30 AM	121	1	64	0	186	14	135	3	0	152	0	0	0	0	0	1	174	14	0	189	527
07:45 AM	87	0	70	0	157	28	94	1	0	123	0	0	0	0	0	1	215	27	0	243	523
Total	319	3	223	0	545	54	434	4	0	492	1	1	0	0	2	2	640	55	0	697	1736
08:00 AM	56	2	68	0	126	19	93	1	0	113	0	1	2	0	3	0	152	29	0	181	423
08:15 AM	38	1	59	3	101	7	61	0	3	71	0	1	0	10	11	0	129	23	8	160	343
08:30 AM	21	0	32	0	53	8	50	0	1	59	2	0	1	0	3	0	121	13	0	134	249
08:45 AM	21	2	29	0	52	5	51	2	1	59	2	0	0	0	2	0	126	23	0	149	262
Total	136	5	188	3	332	39	255	3	5	302	4	2	3	10	19	0	528	88	8	624	1277
Grand Total	455	8	411	3	877	93	689	7	5	794	5	3	3	10	21	2	1168	143	8	1321	3013
Apprch %	51.9	0.9	46.9	0.3		11.7	86.8	0.9	0.6		23.8	14.3	14.3	47.6		0.2	88.4	10.8	0.6		
Total %	15.1	0.3	13.6	0.1	29.1	3.1	22.9	0.2	0.2	26.4	0.2	0.1	0.1	0.3	0.7	0.1	38.8	4.7	0.3	43.8	
Lights	450	8	403	3	864	88	665	7	3	763	4	3	3	10	20	2	1142	139	8	1291	2938
% Lights	98.9	100	98.1	100	98.5	94.6	96.5	100	60	96.1	80	100	100	100	95.2	100	97.8	97.2	100	97.7	97.5
Buses	2	0	4	0	6	2	8	0	0	10	0	0	0	0	0	0	11	1	0	12	28
% Buses	0.4	0	1	0	0.7	2.2	1.2	0	0	1.3	0	0	0	0	0	0	0.9	0.7	0	0.9	0.9
Trucks	3	0	4	0	7	3	16	0	2	21	1	0	0	0	1	0	15	3	0	18	47
% Trucks	0.7	0	1	0	0.8	3.2	2.3	0	40	2.6	20	0	0	0	4.8	0	1.3	2.1	0	1.4	1.6

Start Time	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	79	1	70	150	7	102	0	109	1	0	0	1	0	155	8	163	423
07:30 AM	121	1	64	186	14	135	3	152	0	0	0	0	1	174	14	189	527
07:45 AM	87	0	70	157	28	94	1	123	0	0	0	0	1	215	27	243	523
08:00 AM	56	2	68	126	19	93	1	113	0	1	2	3	0	152	29	181	423
Total Volume	343	4	272	619	68	424	5	497	1	1	2	4	2	696	78	776	1896
% App. Total	55.4	0.6	43.9		13.7	85.3	1		25	25	50		0.3	89.7	10.1		
PHF	.709	.500	.971	.832	.607	.785	.417	.817	.250	.250	.250	.333	.500	.809	.672	.798	.899

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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 2



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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

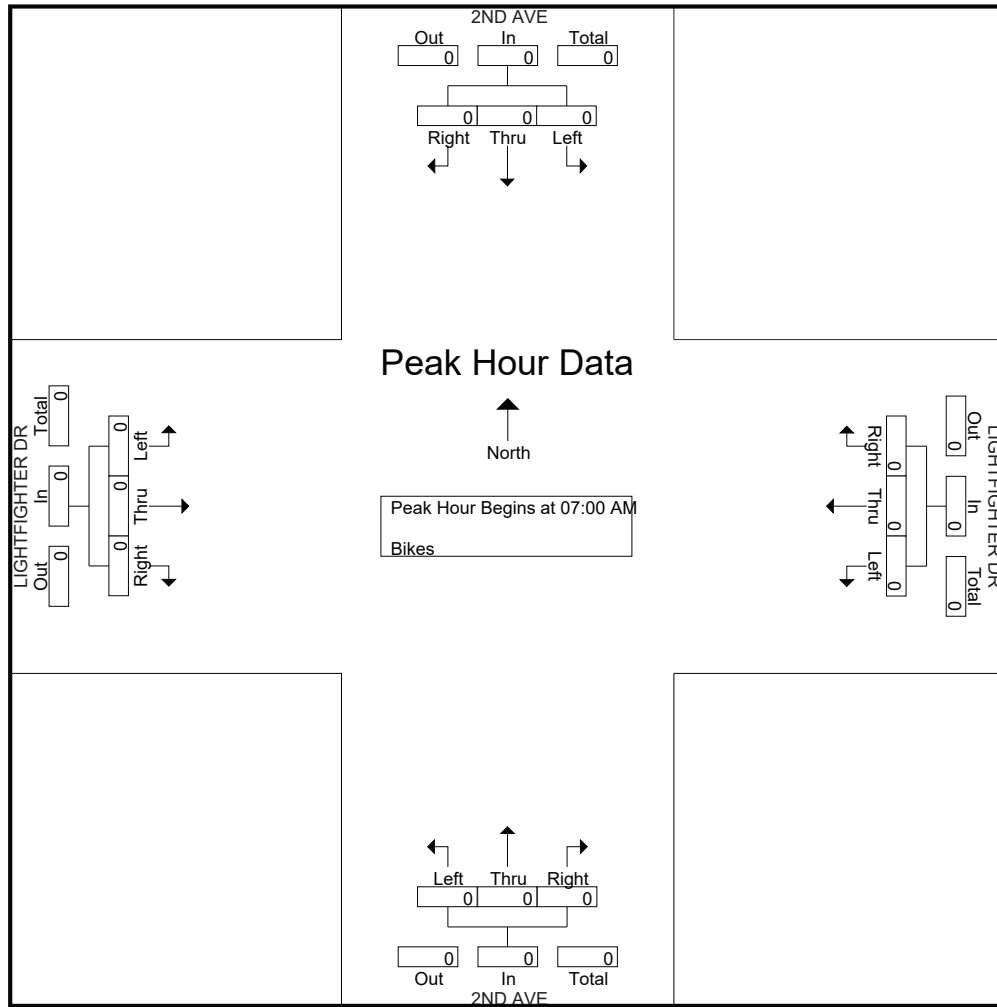
Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

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Start Date : 4/27/2017
Page No : 2



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File Name : 23PM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

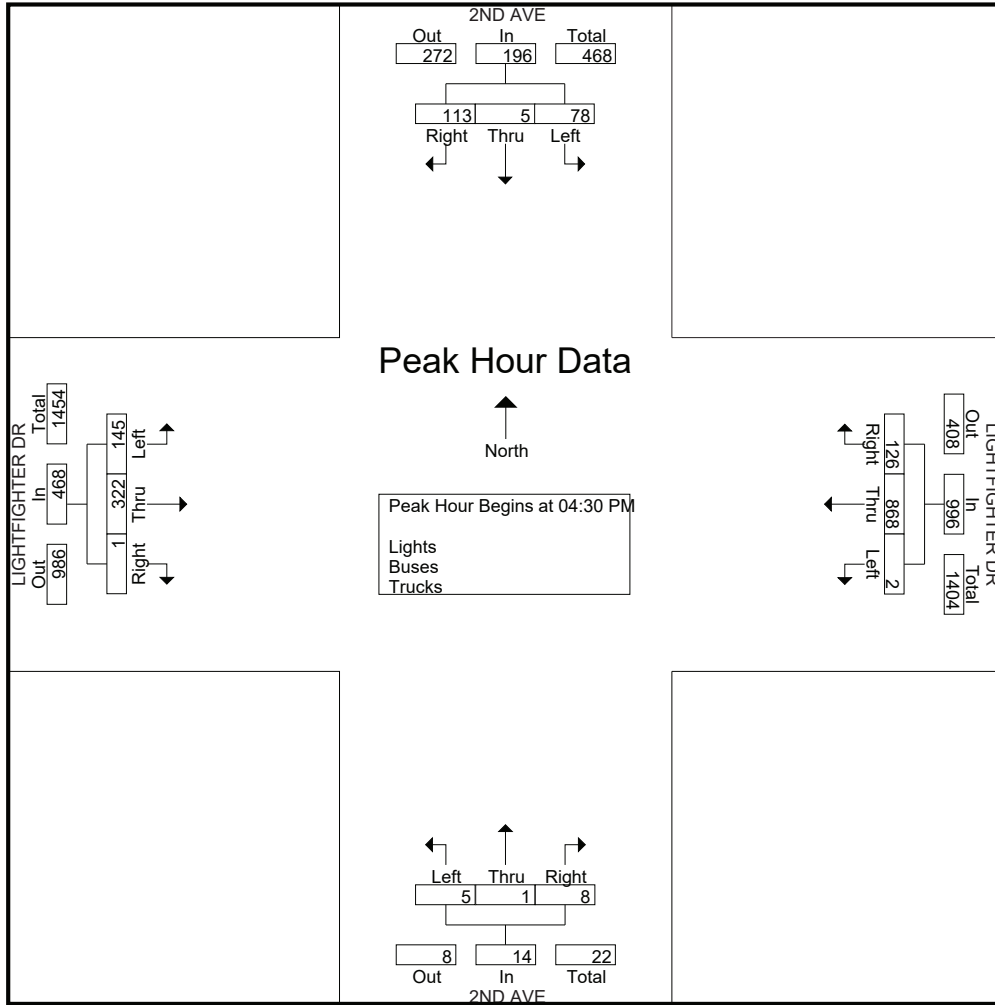
Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	21	0	16	0	37	16	188	1	0	205	2	1	0	4	7	0	80	16	2	98	347
04:15 PM	16	0	25	0	41	17	147	0	0	164	2	0	4	0	6	1	79	33	0	113	324
04:30 PM	21	1	20	0	42	24	212	0	0	236	3	1	2	0	6	0	67	40	0	107	391
04:45 PM	21	3	27	0	51	30	238	1	0	269	3	0	1	1	5	1	79	30	2	112	437
Total	79	4	88	0	171	87	785	2	0	874	10	2	7	5	24	2	305	119	4	430	1499
05:00 PM	43	0	11	0	54	33	192	0	0	225	1	0	0	0	1	0	86	42	0	128	408
05:15 PM	28	1	20	0	49	39	226	1	0	266	1	0	2	1	4	0	90	33	2	125	444
05:30 PM	46	0	21	0	67	32	157	0	0	189	0	1	1	0	2	0	101	32	0	133	391
05:45 PM	38	0	27	0	65	31	148	0	1	180	0	1	3	0	4	0	96	34	1	131	380
Total	155	1	79	0	235	135	723	1	1	860	2	2	6	1	11	0	373	141	3	517	1623
Grand Total	234	5	167	0	406	222	1508	3	1	1734	12	4	13	6	35	2	678	260	7	947	3122
Apprch %	57.6	1.2	41.1	0		12.8	87	0.2	0.1		34.3	11.4	37.1	17.1		0.2	71.6	27.5	0.7		
Total %	7.5	0.2	5.3	0	13	7.1	48.3	0.1	0	55.5	0.4	0.1	0.4	0.2	1.1	0.1	21.7	8.3	0.2	30.3	
Lights	231	5	165	0	401	220	1496	3	0	1719	12	4	13	6	35	2	665	256	7	930	3085
% Lights	98.7	100	98.8	0	98.8	99.1	99.2	100	0	99.1	100	100	100	100	100	100	98.1	98.5	100	98.2	98.8
Buses	2	0	2	0	4	1	4	0	0	5	0	0	0	0	0	0	9	1	0	10	19
% Buses	0.9	0	1.2	0	1	0.5	0.3	0	0	0.3	0	0	0	0	0	0	1.3	0.4	0	1.1	0.6
Trucks	1	0	0	0	1	1	8	0	1	10	0	0	0	0	0	0	4	3	0	7	18
% Trucks	0.4	0	0	0	0.2	0.5	0.5	0	100	0.6	0	0	0	0	0	0	0.6	1.2	0	0.7	0.6

Start Time	2ND AVE Southbound				LIGHTFIGHTER DR Westbound				2ND AVE Northbound				LIGHTFIGHTER DR Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	21	1	20	42	24	212	0	236	3	1	2	6	0	67	40	107	391
04:45 PM	21	3	27	51	30	238	1	269	3	0	1	4	1	79	30	110	434
05:00 PM	43	0	11	54	33	192	0	225	1	0	0	1	0	86	42	128	408
05:15 PM	28	1	20	49	39	226	1	266	1	0	2	3	0	90	33	123	441
Total Volume	113	5	78	196	126	868	2	996	8	1	5	14	1	322	145	468	1674
% App. Total	57.7	2.6	39.8		12.7	87.1	0.2		57.1	7.1	35.7		0.2	68.8	31		
PHF	.657	.417	.722	.907	.808	.912	.500	.926	.667	.250	.625	.583	.250	.894	.863	.914	.949

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File Name : 23PM FINAL
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 Start Date : 4/27/2017
 Page No : 2



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File Name : 23PM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

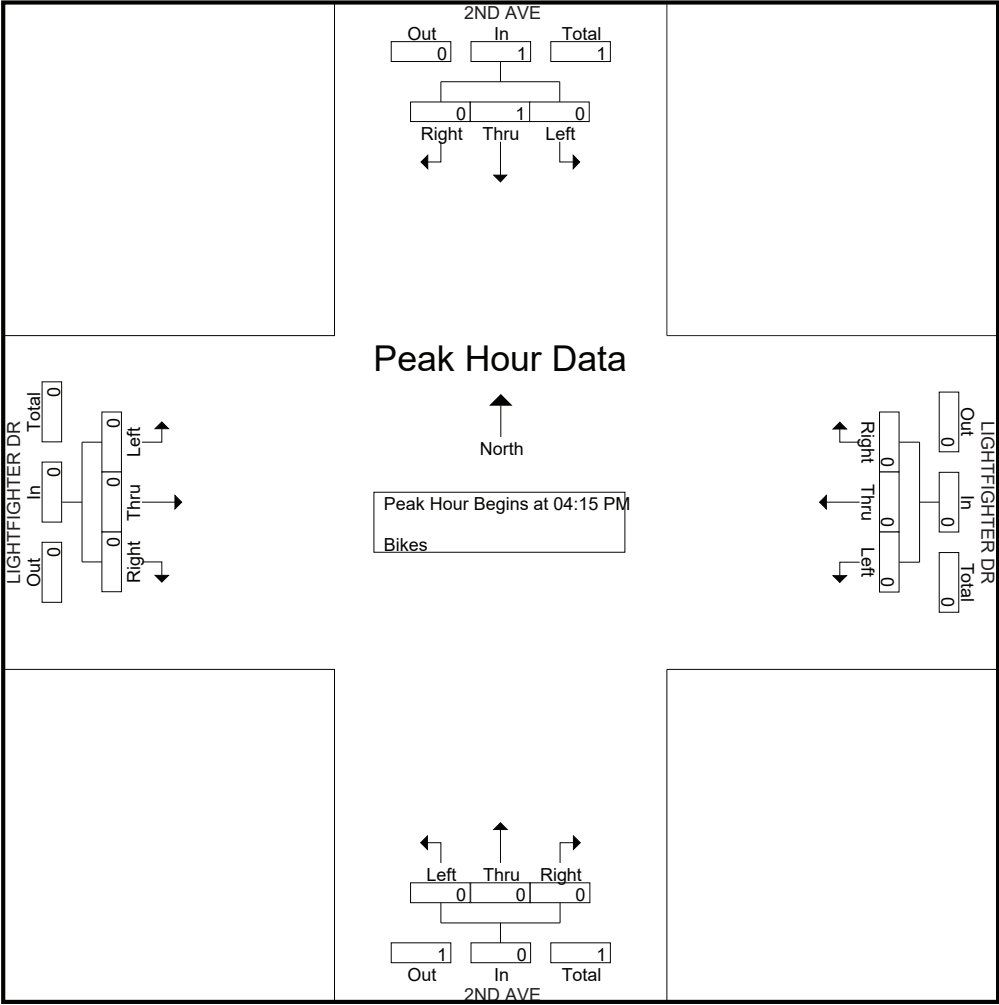
Start Time	2ND AVE Southbound					LIGHTFIGHTER DR Westbound					2ND AVE Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 23PM FINAL
 Site Code : 00000023
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 24AM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	6	11	0	0	17	0	71	9	0	80	0	3	32	0	35	92	19	10	0	121	253
07:15 AM	15	43	2	0	60	1	59	5	0	65	0	14	42	0	56	189	27	9	0	225	406
07:30 AM	23	74	0	0	97	2	62	12	0	76	0	21	64	0	85	180	32	24	0	236	494
07:45 AM	11	33	0	2	46	1	39	4	2	46	2	27	67	0	96	188	36	52	1	277	465
Total	55	161	2	2	220	4	231	30	2	267	2	65	205	0	272	649	114	95	1	859	1618
08:00 AM	10	29	8	0	47	6	27	0	0	33	0	28	77	0	105	153	32	38	0	223	408
08:15 AM	5	26	1	0	32	2	21	2	0	25	1	28	42	0	71	128	29	32	0	189	317
08:30 AM	3	19	1	2	25	3	24	1	2	30	0	28	34	0	62	91	18	31	0	140	257
08:45 AM	16	15	2	3	36	5	14	5	1	25	1	26	28	0	55	92	27	39	0	158	274
Total	34	89	12	5	140	16	86	8	3	113	2	110	181	0	293	464	106	140	0	710	1256
Grand Total	89	250	14	7	360	20	317	38	5	380	4	175	386	0	565	1113	220	235	1	1569	2874
Apprch %	24.7	69.4	3.9	1.9		5.3	83.4	10	1.3		0.7	31	68.3	0		70.9	14	15	0.1		
Total %	3.1	8.7	0.5	0.2	12.5	0.7	11	1.3	0.2	13.2	0.1	6.1	13.4	0	19.7	38.7	7.7	8.2	0	54.6	
Lights	87	244	14	7	352	19	300	37	5	361	4	171	377	0	552	1086	213	233	1	1533	2798
% Lights	97.8	97.6	100	100	97.8	95	94.6	97.4	100	95	100	97.7	97.7	0	97.7	97.6	96.8	99.1	100	97.7	97.4
Buses	1	4	0	0	5	0	1	0	0	1	0	2	7	0	9	12	3	0	0	15	30
% Buses	1.1	1.6	0	0	1.4	0	0.3	0	0	0.3	0	1.1	1.8	0	1.6	1.1	1.4	0	0	1	1
Trucks	1	2	0	0	3	1	16	1	0	18	0	2	2	0	4	15	4	2	0	21	46
% Trucks	1.1	0.8	0	0	0.8	5	5	2.6	0	4.7	0	1.1	0.5	0	0.7	1.3	1.8	0.9	0	1.3	1.6

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	15	43	2	0	60	1	59	5	0	65	0	14	42	0	56	189	27	9	0	225	406
07:30 AM	23	74	0	0	97	2	62	12	0	76	0	21	64	0	85	180	32	24	0	236	494
07:45 AM	11	33	0	2	44	1	39	4	2	44	2	27	67	0	96	188	36	52	1	276	460
08:00 AM	10	29	8	0	47	6	27	0	0	33	0	28	77	0	105	153	32	38	0	223	408
Total Volume	59	179	10	2	248	10	187	21	2	218	2	90	250	0	342	710	127	123	1	960	1768
% App. Total	23.8	72.2	4	0.8		4.6	85.8	9.6	1.5		0.6	26.3	73.1	0		74	13.2	12.8	0.1		
PHF	.641	.605	.313	.2	.639	.417	.754	.438	.2	.717	.250	.804	.812	.0	.814	.939	.882	.591	.1	.870	.895

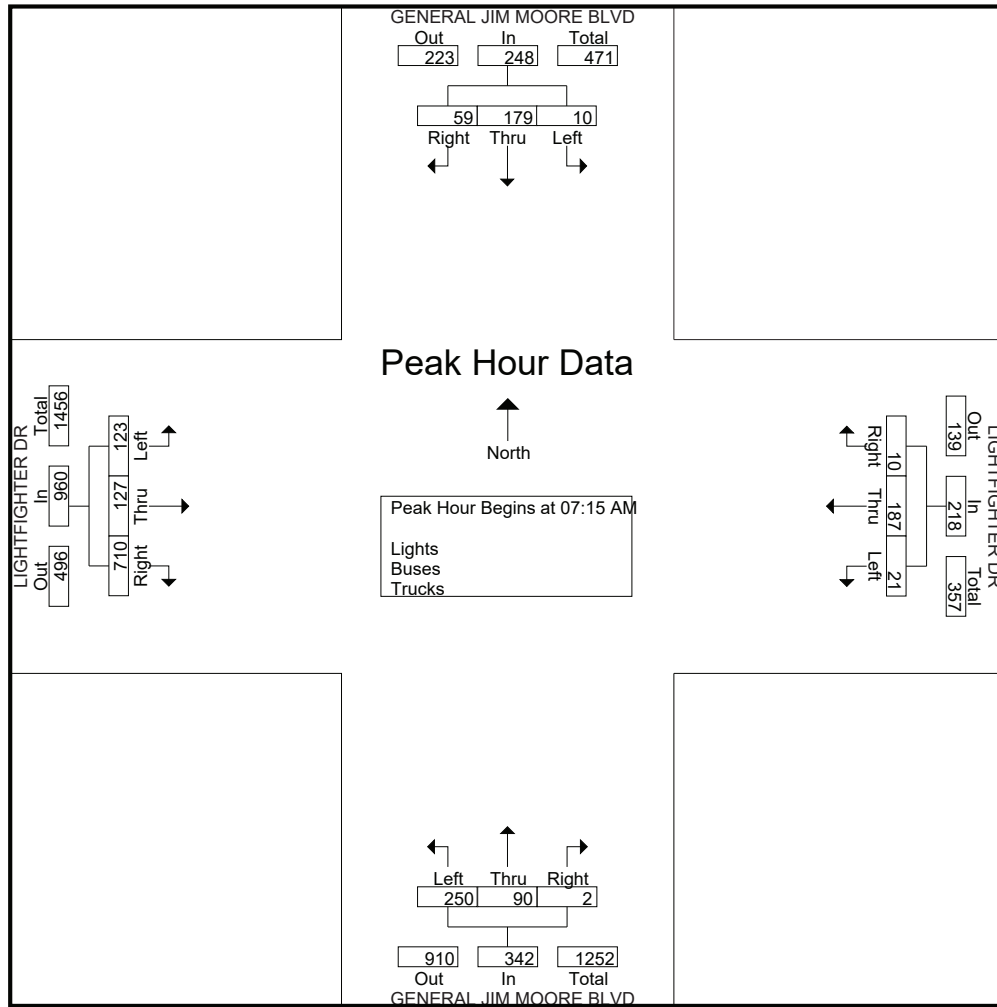
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

San Jose, CA
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File Name : 24AM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
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Traffic Data Service

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File Name : 24AM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	

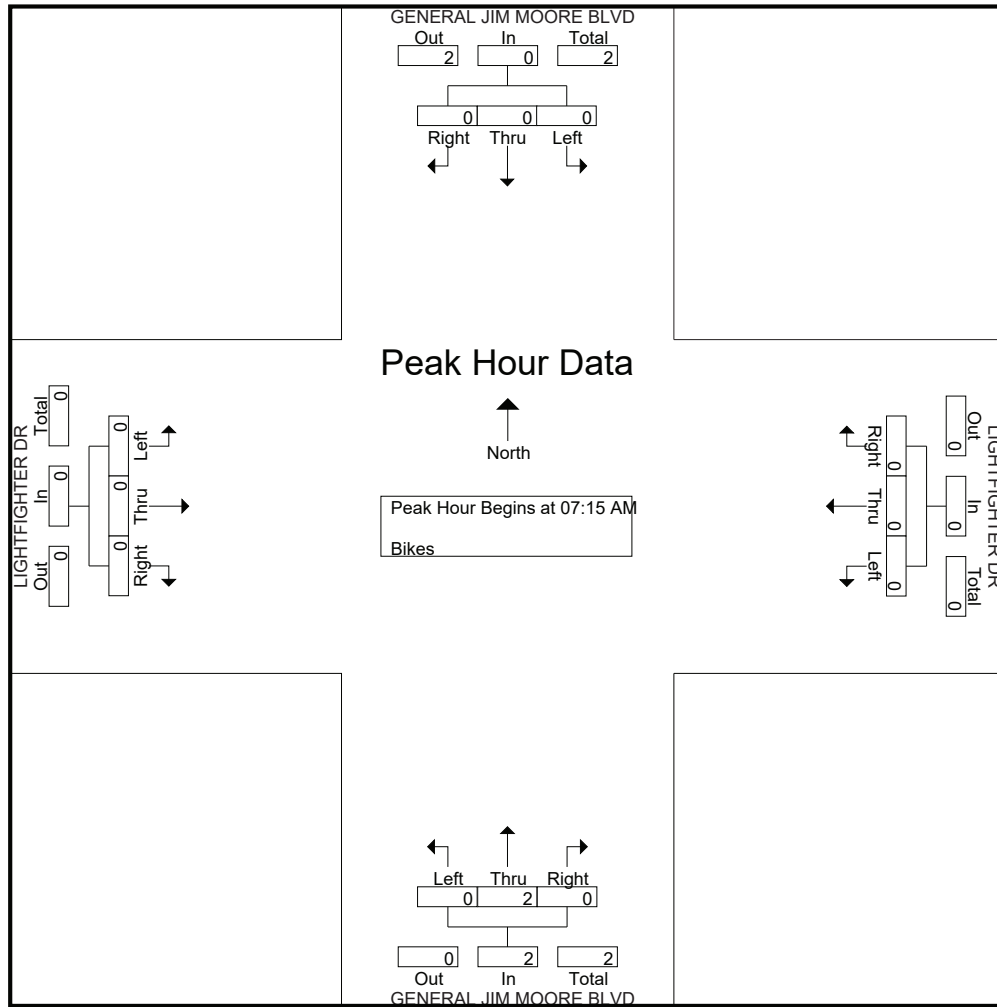
Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

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File Name : 24AM FINAL
Site Code : 00000024
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Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 24PM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

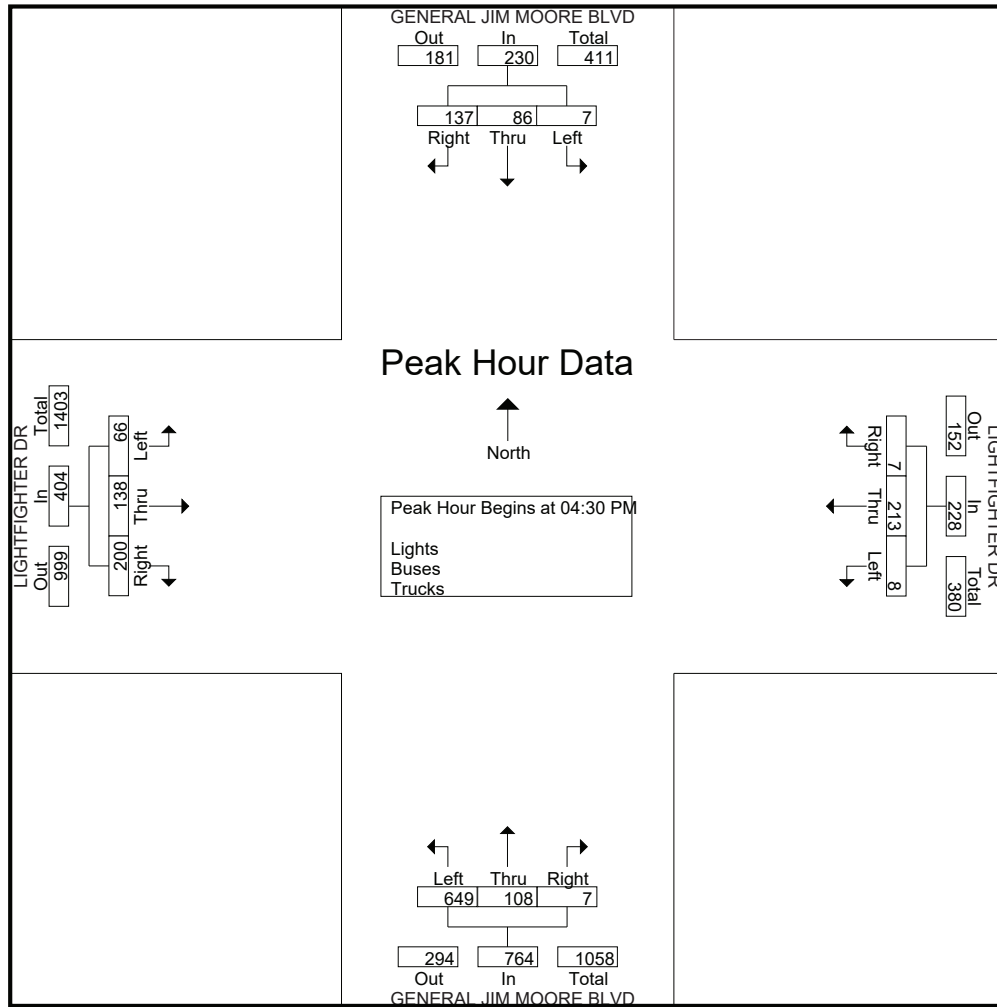
Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	44	24	8	0	76	5	36	0	0	41	3	33	106	1	143	60	22	15	0	97	357
04:15 PM	23	16	4	0	43	0	28	0	0	28	2	29	113	0	144	66	33	11	0	110	325
04:30 PM	33	26	2	0	61	3	50	4	0	57	2	21	163	0	186	53	28	13	0	94	398
04:45 PM	30	17	2	0	49	0	61	3	0	64	2	27	175	0	204	55	26	14	0	95	412
Total	130	83	16	0	229	8	175	7	0	190	9	110	557	1	677	234	109	53	0	396	1492
05:00 PM	37	23	1	0	61	4	37	0	0	41	1	36	151	0	188	45	42	17	0	104	394
05:15 PM	37	20	2	0	59	0	65	1	0	66	2	24	160	0	186	47	42	22	0	111	422
05:30 PM	37	13	2	0	52	3	19	0	0	22	1	29	127	0	157	51	45	26	1	123	354
05:45 PM	40	22	3	0	65	3	30	2	0	35	1	27	108	0	136	64	29	23	2	118	354
Total	151	78	8	0	237	10	151	3	0	164	5	116	546	0	667	207	158	88	3	456	1524
Grand Total	281	161	24	0	466	18	326	10	0	354	14	226	1103	1	1344	441	267	141	3	852	3016
Apprch %	60.3	34.5	5.2	0		5.1	92.1	2.8	0		1	16.8	82.1	0.1		51.8	31.3	16.5	0.4		
Total %	9.3	5.3	0.8	0	15.5	0.6	10.8	0.3	0	11.7	0.5	7.5	36.6	0	44.6	14.6	8.9	4.7	0.1	28.2	
Lights	279	159	23	0	461	18	325	10	0	353	14	223	1097	1	1335	429	265	140	0	834	2983
% Lights	99.3	98.8	95.8	0	98.9	100	99.7	100	0	99.7	100	98.7	99.5	100	99.3	97.3	99.3	99.3	0	97.9	98.9
Buses	1	2	0	0	3	0	0	0	0	0	0	3	3	0	6	8	2	1	0	11	20
% Buses	0.4	1.2	0	0	0.6	0	0	0	0	0	0	1.3	0.3	0	0.4	1.8	0.7	0.7	0	1.3	0.7
Trucks	1	0	1	0	2	0	1	0	0	1	0	0	3	0	3	4	0	0	3	7	13
% Trucks	0.4	0	4.2	0	0.4	0	0.3	0	0	0.3	0	0	0.3	0	0.2	0.9	0	0	100	0.8	0.4

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	33	26	2	61		3	50	4	57		2	21	163	186		53	28	13	94	398	
04:45 PM	30	17	2	49		0	61	3	64		2	27	175	204		55	26	14	95	412	
05:00 PM	37	23	1	61		4	37	0	41		1	36	151	188		45	42	17	104	394	
05:15 PM	37	20	2	59		0	65	1	66		2	24	160	186		47	42	22	111	422	
Total Volume	137	86	7	230		7	213	8	228		7	108	649	764		200	138	66	404	1626	
% App. Total	59.6	37.4	3			3.1	93.4	3.5			0.9	14.1	84.9			49.5	34.2	16.3			
PHF	.926	.827	.875	.943		.438	.819	.500	.864		.875	.750	.927	.936		.909	.821	.750	.910	.963	

Traffic Data Service

San Jose, CA
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File Name : 24PM FINAL
 Site Code : 00000024
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Traffic Data Service

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File Name : 24PM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Total	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	1	0	0	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	2
Grand Total	0	1	0	0	1	1	0	0	0	1	0	2	1	0	3	1	0	0	0	0	1	6
Apprch %	0	100	0	0		100	0	0	0		0	66.7	33.3	0		100	0	0	0			
Total %	0	16.7	0	0	16.7	16.7	0	0	0	16.7	0	33.3	16.7	0	50	16.7	0	0	0	16.7		

Start Time	GENERAL JIM MOORE BLVD Southbound					LIGHTFIGHTER DR Westbound					GENERAL JIM MOORE BLVD Northbound					LIGHTFIGHTER DR Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	1	1	2	1	0	0	0	0	1	4	4
% App. Total	0	100	0	0		0	0	0	0		0	50	50		100	0	0	0				
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.250	.250	.500	.250	.000	.000	.000	.250	.250	.500	.500

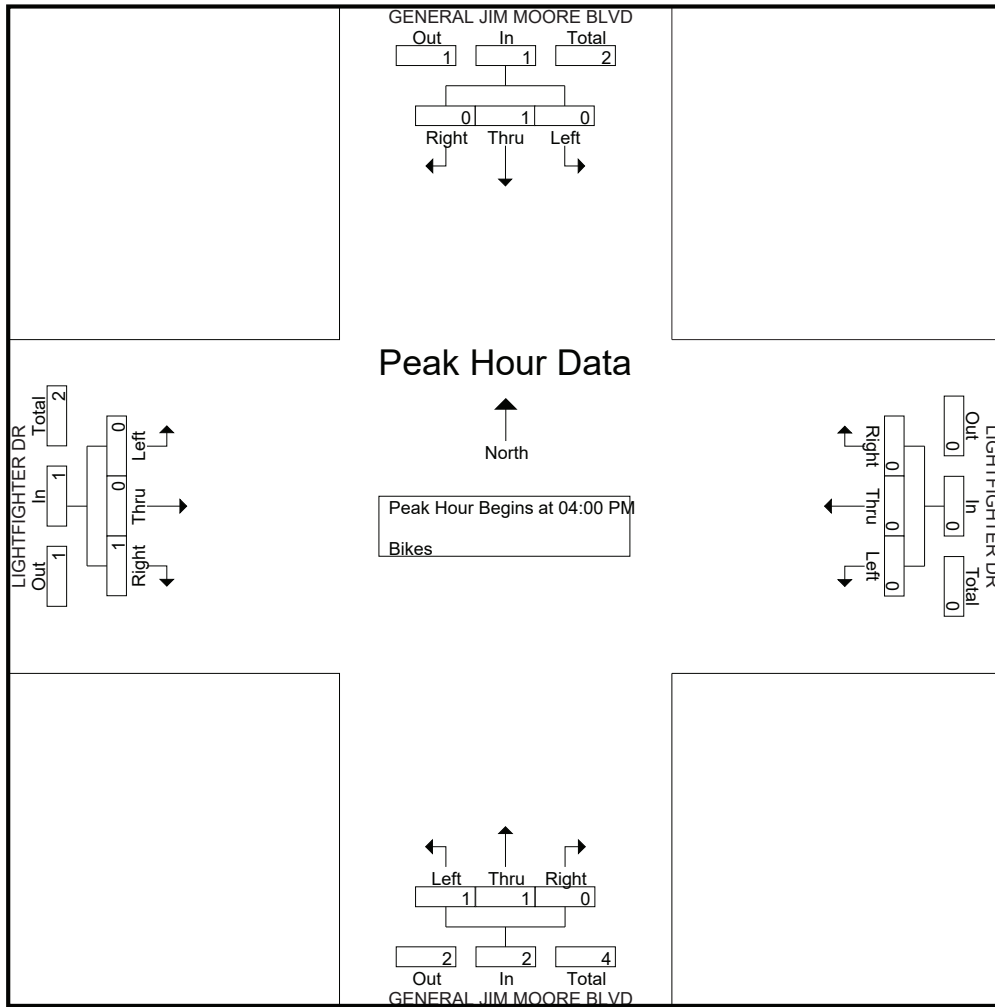
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 24PM FINAL
 Site Code : 00000024
 Start Date : 4/27/2017
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Traffic Data Service

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File Name : 25AM FINAL
 Site Code : 00000025
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	4	65	28	0	97	8	1	57	0	66	14	21	1	1	37	2	4	5	0	11	211
07:15 AM	7	180	39	0	226	7	5	107	0	119	23	58	3	0	84	10	9	3	0	22	451
07:30 AM	12	217	41	0	270	9	9	107	0	125	45	92	10	0	147	29	29	2	0	60	602
07:45 AM	16	176	42	0	234	16	14	92	0	122	65	78	22	0	165	31	41	9	0	81	602
Total	39	638	150	0	827	40	29	363	0	432	147	249	36	1	433	72	83	19	0	174	1866
08:00 AM	11	144	40	0	195	14	3	55	0	72	45	89	12	1	147	5	15	8	0	28	442
08:15 AM	12	134	26	0	172	9	2	44	0	55	24	65	5	1	95	13	14	4	0	31	353
08:30 AM	6	96	28	0	130	17	4	46	0	67	12	46	8	0	66	23	22	4	0	49	312
08:45 AM	9	69	29	0	107	5	2	37	0	44	27	56	8	1	92	8	21	3	0	32	275
Total	38	443	123	0	604	45	11	182	0	238	108	256	33	3	400	49	72	19	0	140	1382
Grand Total	77	1081	273	0	1431	85	40	545	0	670	255	505	69	4	833	121	155	38	0	314	3248
Apprch %	5.4	75.5	19.1	0		12.7	6	81.3	0		30.6	60.6	8.3	0.5		38.5	49.4	12.1	0		
Total %	2.4	33.3	8.4	0	44.1	2.6	1.2	16.8	0	20.6	7.9	15.5	2.1	0.1	25.6	3.7	4.8	1.2	0	9.7	
Lights	73	1060	265	0	1398	79	39	539	0	657	250	504	67	4	825	117	147	34	0	298	3178
% Lights	94.8	98.1	97.1	0	97.7	92.9	97.5	98.9	0	98.1	98	99.8	97.1	100	99	96.7	94.8	89.5	0	94.9	97.8
Buses	2	6	8	0	16	2	1	3	0	6	2	0	0	0	2	3	7	4	0	14	38
% Buses	2.6	0.6	2.9	0	1.1	2.4	2.5	0.6	0	0.9	0.8	0	0	0	0.2	2.5	4.5	10.5	0	4.5	1.2
Trucks	2	15	0	0	17	4	0	3	0	7	3	1	2	0	6	1	1	0	0	2	32
% Trucks	2.6	1.4	0	0	1.2	4.7	0	0.6	0	1	1.2	0.2	2.9	0	0.7	0.8	0.6	0	0	0.6	1

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	7	180	39	0	226	7	5	107	0	119	23	58	3	0	84	10	9	3	0	22	451
07:30 AM	12	217	41	0	270	9	9	107	0	125	45	92	10	0	147	29	29	2	0	60	602
07:45 AM	16	176	42	0	234	16	14	92	0	122	65	78	22	0	165	31	41	9	0	81	602
08:00 AM	11	144	40	0	195	14	3	55	0	72	45	89	12	1	146	5	15	8	0	28	441
Total Volume	46	717	162	0	925	46	31	361	0	438	178	317	47	1	542	75	94	22	0	191	2096
% App. Total	5	77.5	17.5	0		10.5	7.1	82.4	0		32.8	58.5	8.7	0		39.3	49.2	11.5	0		
PHF	.719	.826	.964	0	.856	.719	.554	.843	0	.876	.685	.861	.534	0	.821	.605	.573	.611	0	.590	.870

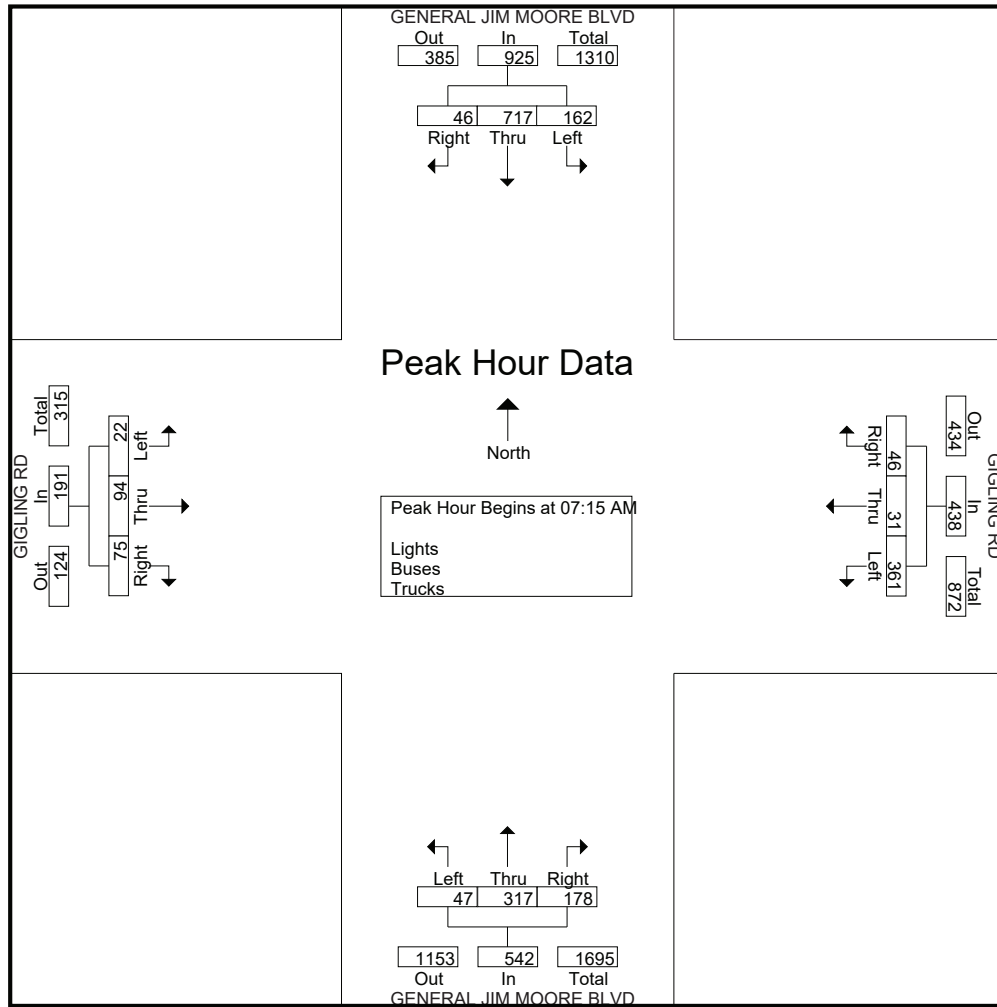
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

San Jose, CA
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File Name : 25AM FINAL
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 Page No : 2



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File Name : 25AM FINAL
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 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	3
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	100	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	66.7	0	0	66.7	0	33.3	0	0	33.3	0	33.3	0	0	33.3	

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500		

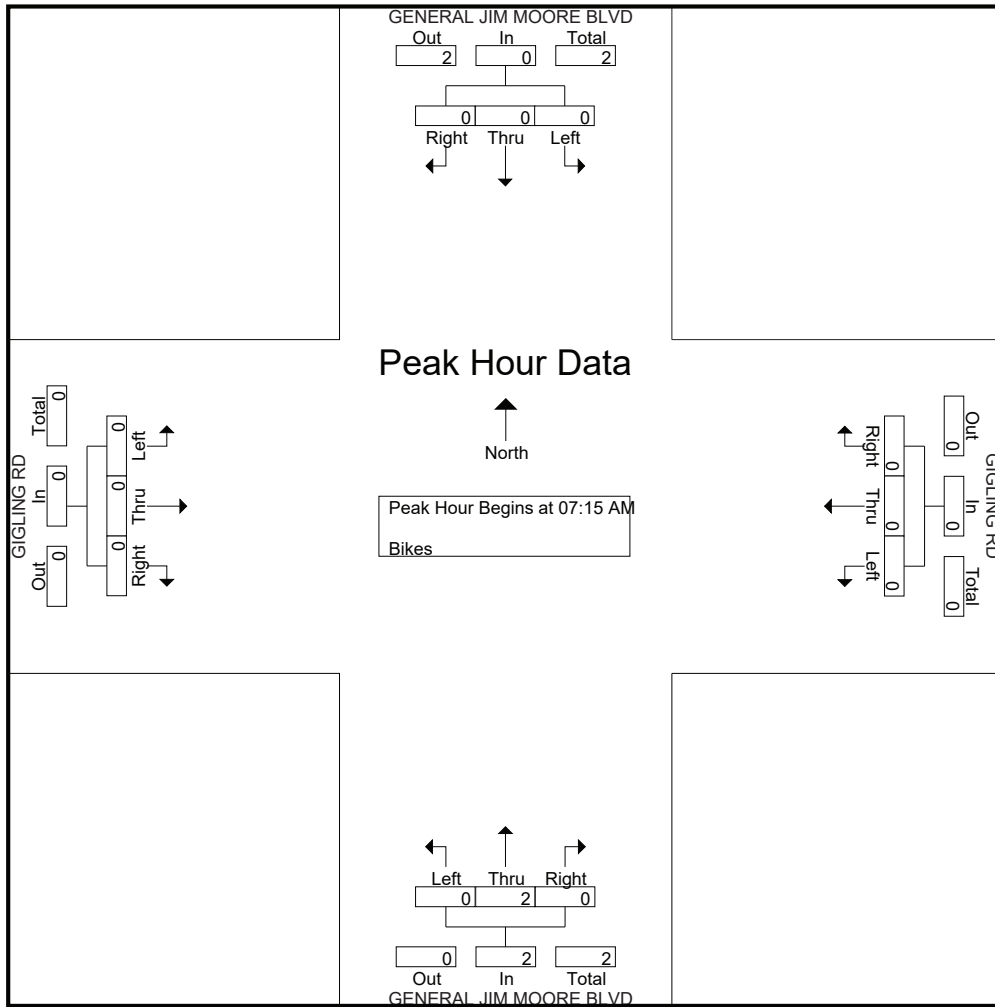
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

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Groups Printed- Lights - Buses - Trucks

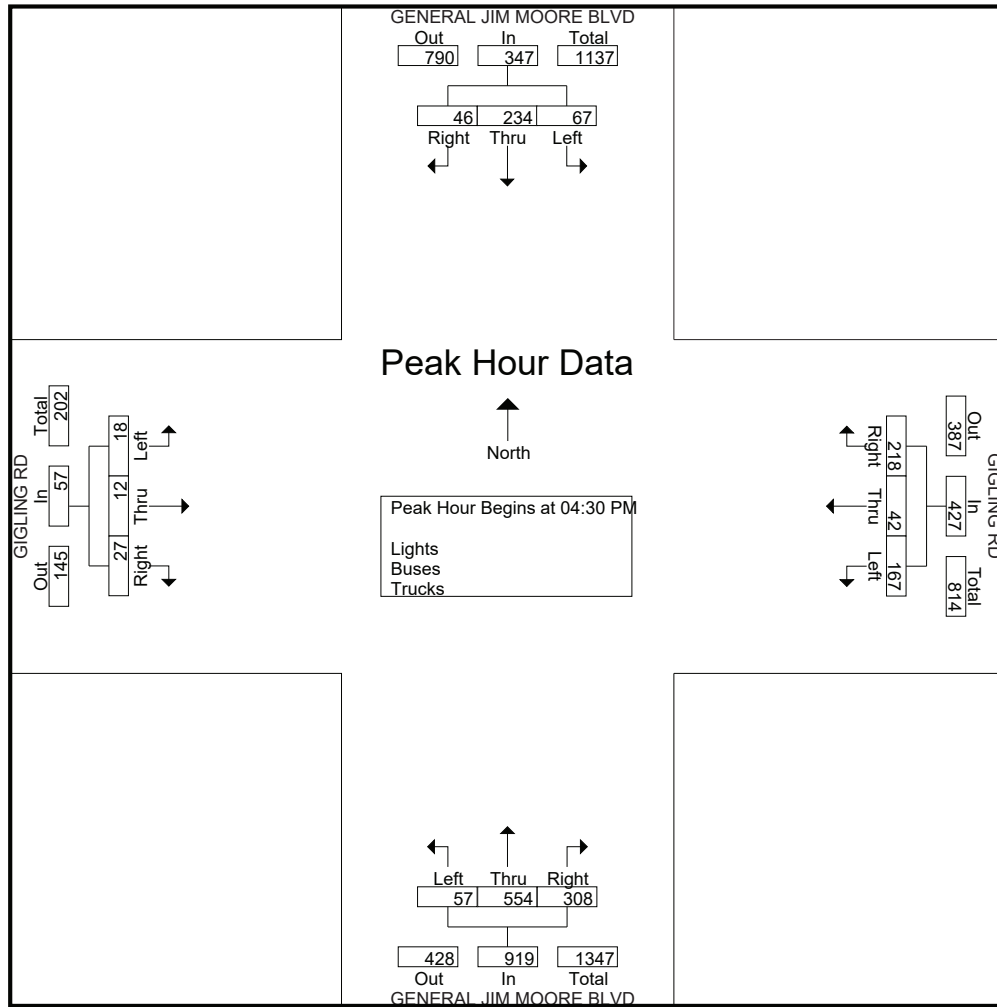
Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	10	53	18	0	81	43	18	26	0	87	44	88	16	0	148	10	8	5	0	23	339
04:15 PM	16	61	19	2	98	38	14	39	0	91	64	97	12	0	173	10	5	7	1	23	385
04:30 PM	13	61	13	0	87	68	8	41	1	118	56	138	10	0	204	3	3	3	0	9	418
04:45 PM	17	62	21	0	100	67	16	55	0	138	79	133	18	0	230	11	7	6	1	25	493
Total	56	237	71	2	366	216	56	161	1	434	243	456	56	0	755	34	23	21	2	80	1635
05:00 PM	9	53	15	0	77	48	6	37	0	91	84	143	13	2	242	7	2	2	1	12	422
05:15 PM	7	58	18	0	83	35	12	34	0	81	89	140	16	0	245	6	0	7	0	13	422
05:30 PM	10	52	23	0	85	31	3	17	0	51	75	120	7	0	202	7	3	5	0	15	353
05:45 PM	13	58	17	0	88	28	1	19	0	48	57	109	10	0	176	5	1	6	0	12	324
Total	39	221	73	0	333	142	22	107	0	271	305	512	46	2	865	25	6	20	1	52	1521
Grand Total	95	458	144	2	699	358	78	268	1	705	548	968	102	2	1620	59	29	41	3	132	3156
Apprch %	13.6	65.5	20.6	0.3		50.8	11.1	38	0.1		33.8	59.8	6.3	0.1		44.7	22	31.1	2.3		
Total %	3	14.5	4.6	0.1	22.1	11.3	2.5	8.5	0	22.3	17.4	30.7	3.2	0.1	51.3	1.9	0.9	1.3	0.1	4.2	
Lights	93	453	137	2	685	353	76	267	1	697	532	966	102	2	1602	58	27	38	3	126	3110
% Lights	97.9	98.9	95.1	100	98	98.6	97.4	99.6	100	98.9	97.1	99.8	100	100	98.9	98.3	93.1	92.7	100	95.5	98.5
Buses	2	3	5	0	10	4	2	1	0	7	6	0	0	0	6	1	2	2	0	5	28
% Buses	2.1	0.7	3.5	0	1.4	1.1	2.6	0.4	0	1	1.1	0	0	0	0.4	1.7	6.9	4.9	0	3.8	0.9
Trucks	0	2	2	0	4	1	0	0	0	1	10	2	0	0	12	0	0	1	0	1	18
% Trucks	0	0.4	1.4	0	0.6	0.3	0	0	0	0.1	1.8	0.2	0	0	0.7	0	0	2.4	0	0.8	0.6

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	13	61	13		87	68	8	41		117	56	138	10		204	3	3	3		9	417
04:45 PM	17	62	21		100	67	16	55		138	79	133	18		230	11	7	6		24	492
05:00 PM	9	53	15		77	48	6	37		91	84	143	13		240	7	2	2		11	419
05:15 PM	7	58	18		83	35	12	34		81	89	140	16		245	6	0	7		13	422
Total Volume	46	234	67		347	218	42	167		427	308	554	57		919	27	12	18		57	1750
% App. Total	13.3	67.4	19.3			51.1	9.8	39.1			33.5	60.3	6.2			47.4	21.1	31.6			
PHF	.676	.944	.798		.868	.801	.656	.759		.774	.865	.969	.792		.938	.614	.429	.643		.594	.889

Traffic Data Service

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File Name : 25PM FINAL
 Site Code : 00000025
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	4	
Apprch %	0	0	0	0		50	0	50	0		0	0	0	0		0	50	50	0							
Total %	0	0	0	0		25	0	25	0	50	0	0	0	0		0	25	25	0	50						

Start Time	GENERAL JIM MOORE BLVD Southbound					GIGLING RD Westbound					GENERAL JIM MOORE BLVD Northbound					GIGLING RD Eastbound					Int. Total				
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total					
04:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	3
% App. Total	0	0	0	0		50	0	50	0		0	0	0	0		0	0	100	0						
PHF	.000	.000	.000	.000		.250	.000	.250	.500		.000	.000	.000	.000		.000	.000	.250	.250						.375

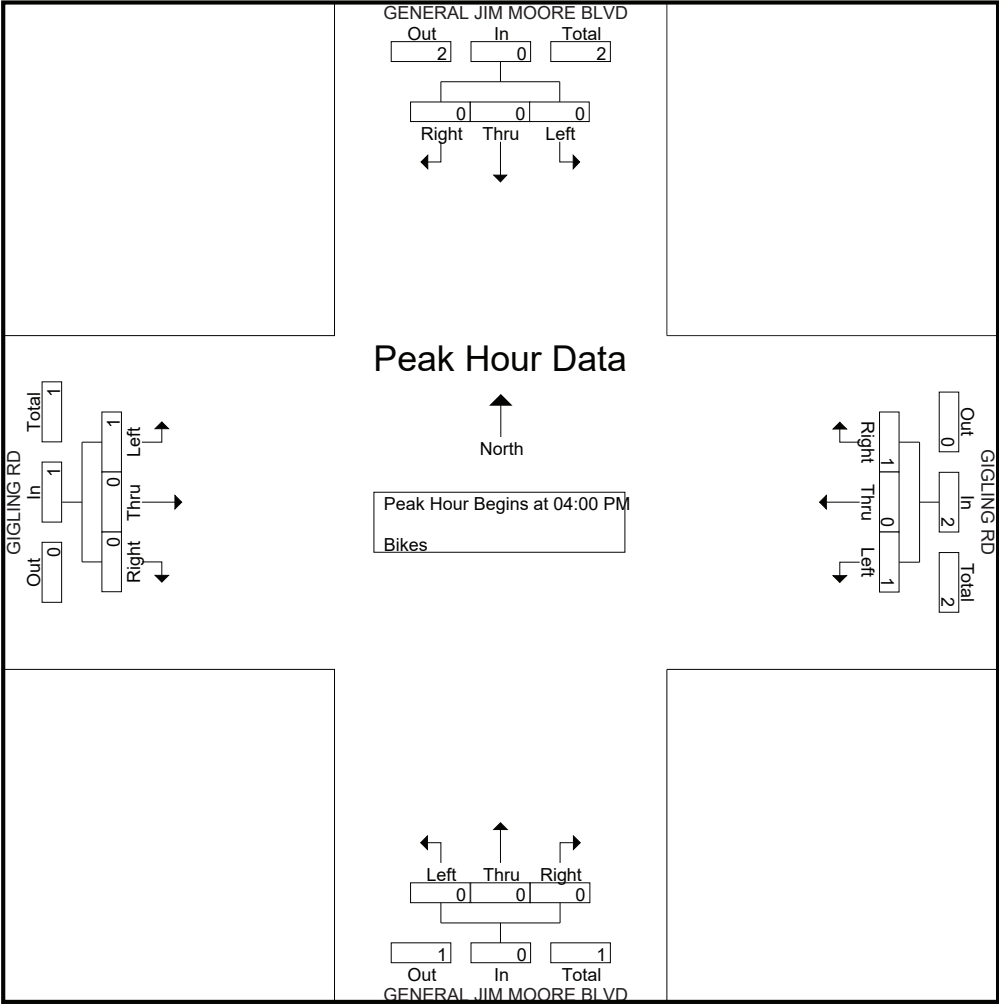
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 25PM FINAL
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Traffic Data Service

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File Name : 26AM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	CA-1 NB ON-RAMP Southbound					LIGHTFIGHTER DR Westbound					CA-1 NB OFF-RAMP Northbound					CA-1 SB RAMPS Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	17	166	0	0	183	40	0	0	0	40	0	83	0	0	83	306
07:15 AM	0	0	0	0	0	32	180	0	0	212	85	0	0	0	85	0	104	0	0	104	401
07:30 AM	0	0	0	0	0	59	261	0	0	320	124	0	0	0	124	0	107	0	0	107	551
07:45 AM	0	0	0	0	0	40	181	0	0	221	150	0	0	0	150	0	119	0	0	119	490
Total	0	0	0	0	0	148	788	0	0	936	399	0	0	0	399	0	413	0	0	413	1748
08:00 AM	0	0	0	0	0	66	117	0	0	183	101	0	0	0	101	0	101	0	0	101	385
08:15 AM	0	0	0	0	0	49	82	0	0	131	109	0	0	0	109	0	70	0	0	70	310
08:30 AM	0	0	0	0	0	24	68	0	0	92	86	0	0	0	86	0	112	0	0	112	290
08:45 AM	0	0	0	0	0	32	62	0	0	94	101	0	0	0	101	0	83	0	0	83	278
Total	0	0	0	0	0	171	329	0	0	500	397	0	0	0	397	0	366	0	0	366	1263
Grand Total	0	0	0	0	0	319	1117	0	0	1436	796	0	0	0	796	0	779	0	0	779	3011
Apprch %	0	0	0	0	0	22.2	77.8	0	0		100	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	10.6	37.1	0	0	47.7	26.4	0	0	0	26.4	0	25.9	0	0	25.9	
Lights	0	0	0	0	0	309	1092	0	0	1401	772	0	0	0	772	0	757	0	0	757	2930
% Lights	0	0	0	0	0	96.9	97.8	0	0	97.6	97	0	0	0	97	0	97.2	0	0	97.2	97.3
Buses	0	0	0	0	0	4	7	0	0	11	15	0	0	0	15	0	6	0	0	6	32
% Buses	0	0	0	0	0	1.3	0.6	0	0	0.8	1.9	0	0	0	1.9	0	0.8	0	0	0.8	1.1
Trucks	0	0	0	0	0	6	18	0	0	24	9	0	0	0	9	0	16	0	0	16	49
% Trucks	0	0	0	0	0	1.9	1.6	0	0	1.7	1.1	0	0	0	1.1	0	2.1	0	0	2.1	1.6

Start Time	CA-1 NB ON-RAMP Southbound				LIGHTFIGHTER DR Westbound				CA-1 NB OFF-RAMP Northbound				CA-1 SB RAMPS Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	32	180	0	212	85	0	0	85	0	104	0	104	401
07:30 AM	0	0	0	0	59	261	0	320	124	0	0	124	0	107	0	107	551
07:45 AM	0	0	0	0	40	181	0	221	150	0	0	150	0	119	0	119	490
08:00 AM	0	0	0	0	66	117	0	183	101	0	0	101	0	101	0	101	385
Total Volume	0	0	0	0	197	739	0	936	460	0	0	460	0	431	0	431	1827
% App. Total	0	0	0	0	21	79	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.746	.708	.000	.731	.767	.000	.000	.767	.000	.905	.000	.905	.829

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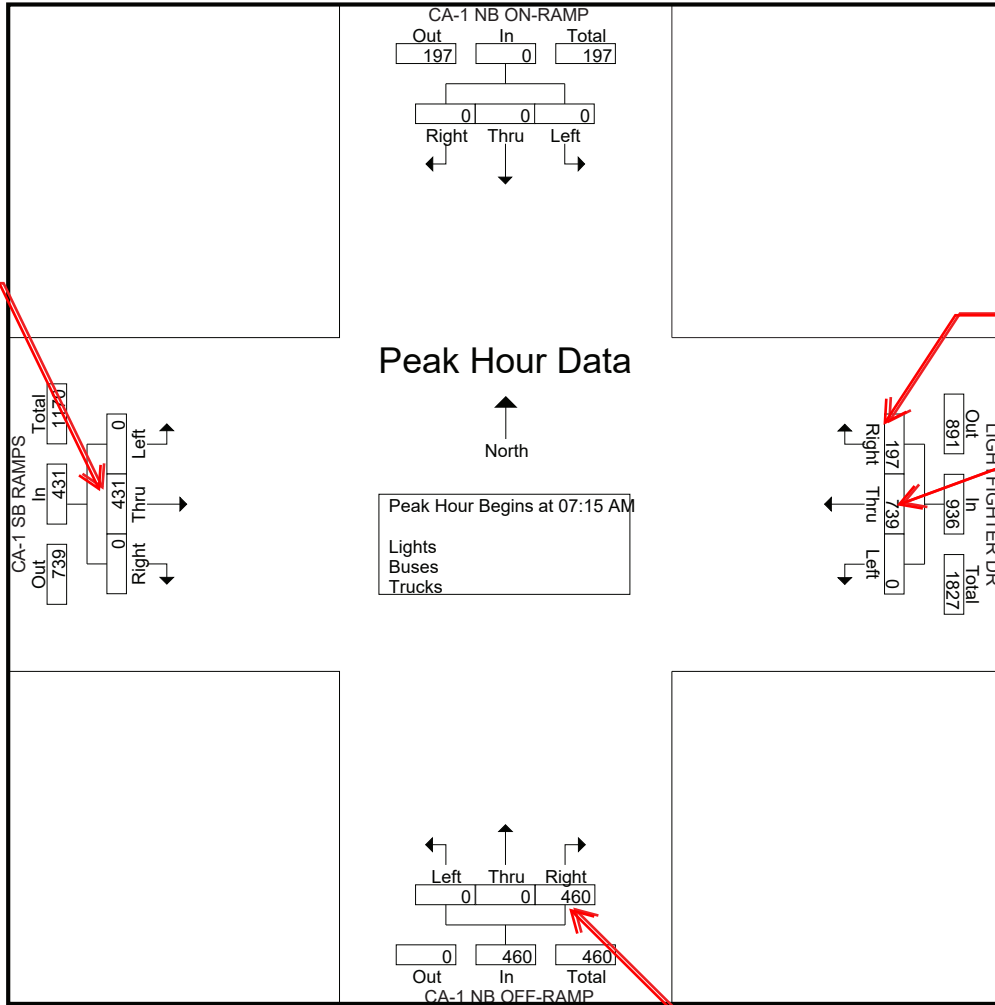
File Name : 26AM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 2

sb off-ramp

mb on-ramp

sb on ramp

mb-off ramp



Traffic Data Service

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File Name : 26AM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

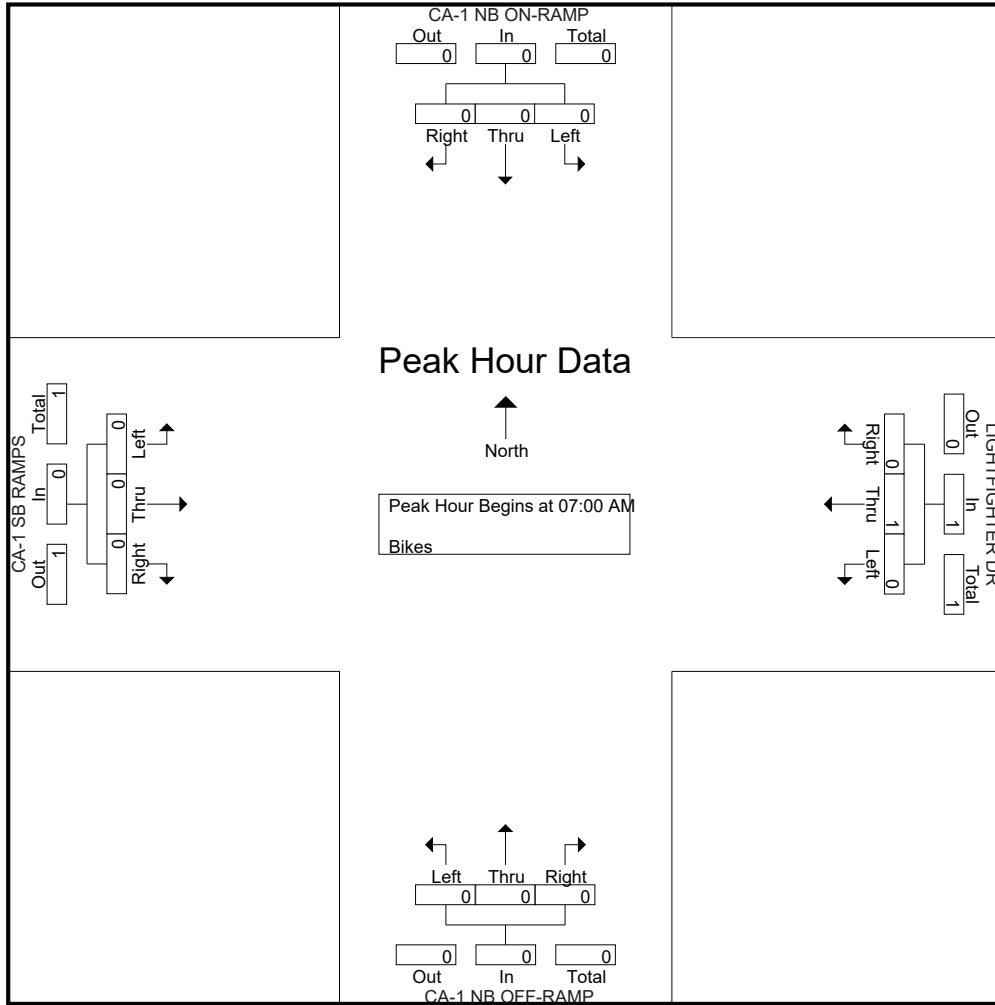
Start Time	CA-1 NB ON-RAMP Southbound					LIGHTFIGHTER DR Westbound					CA-1 NB OFF-RAMP Northbound					CA-1 SB RAMPS Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0		0	50	0	0	50	0	0	0	0		0	50	0	0	50	

Start Time	CA-1 NB ON-RAMP Southbound				LIGHTFIGHTER DR Westbound				CA-1 NB OFF-RAMP Northbound				CA-1 SB RAMPS Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

Traffic Data Service

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File Name : 26AM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 26PM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Lights - Buses - Trucks

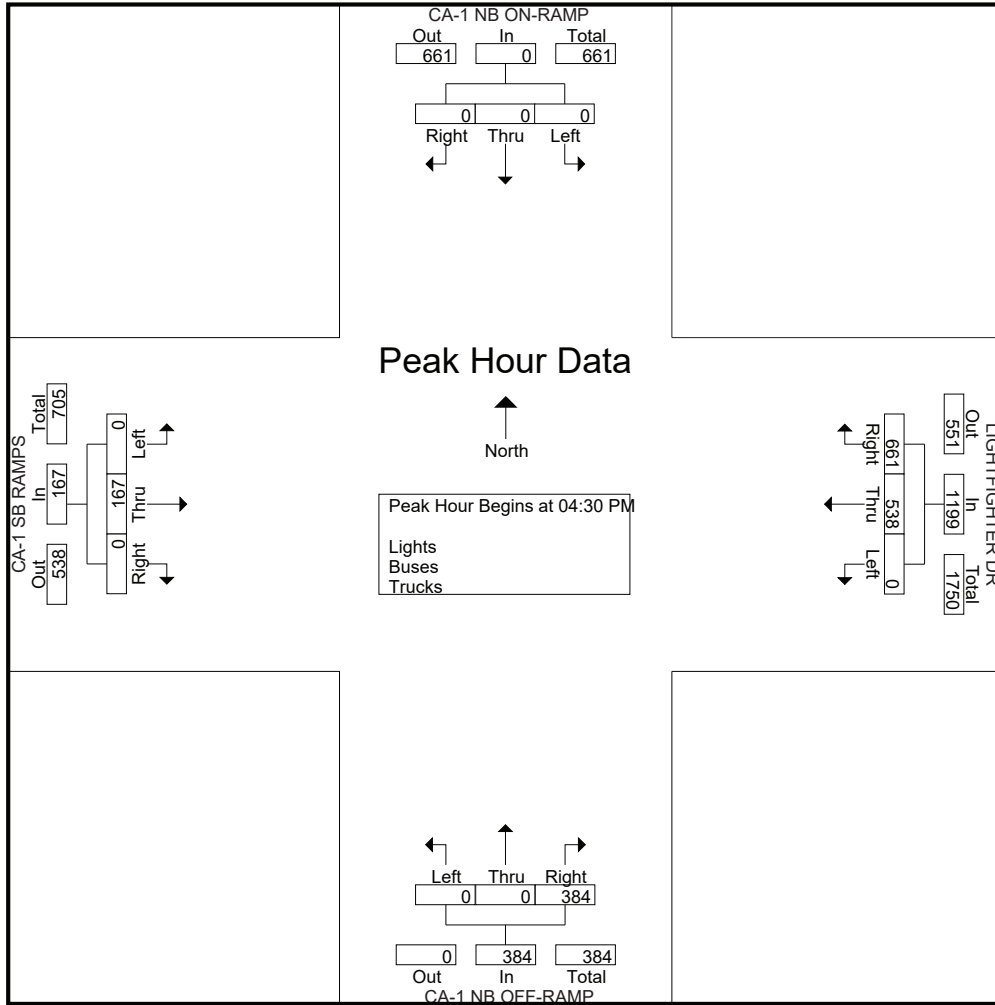
Start Time	CA-1 NB ON-RAMP Southbound					LIGHTFIGHTER DR Westbound					CA-1 NB OFF-RAMP Northbound					CA-1 SB RAMPS Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	137	126	0	0	263	86	0	0	0	86	0	33	0	0	33	382
04:15 PM	0	0	0	0	0	107	99	0	0	206	97	0	0	0	97	0	41	0	0	41	344
04:30 PM	0	0	0	0	0	155	135	0	0	290	87	0	0	0	87	0	48	0	0	48	425
04:45 PM	0	0	0	0	0	166	155	0	0	321	101	0	0	0	101	0	44	0	0	44	466
Total	0	0	0	0	0	565	515	0	0	1080	371	0	0	0	371	0	166	0	0	166	1617
05:00 PM	0	0	0	0	0	172	131	0	0	303	98	0	0	0	98	0	41	0	0	41	442
05:15 PM	0	0	0	0	0	168	117	0	0	285	98	0	0	0	98	0	34	0	0	34	417
05:30 PM	0	0	0	0	0	121	133	0	0	254	113	0	0	0	113	0	36	0	0	36	403
05:45 PM	0	0	0	0	0	112	111	0	0	223	103	0	0	0	103	0	53	0	0	53	379
Total	0	0	0	0	0	573	492	0	0	1065	412	0	0	0	412	0	164	0	0	164	1641
Grand Total	0	0	0	0	0	1138	1007	0	0	2145	783	0	0	0	783	0	330	0	0	330	3258
Apprch %	0	0	0	0	0	53.1	46.9	0	0		100	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	34.9	30.9	0	0	65.8	24	0	0	0	24	0	10.1	0	0	10.1	
Lights	0	0	0	0	0	1126	1001	0	0	2127	771	0	0	0	771	0	323	0	0	323	3221
% Lights	0	0	0	0	0	98.9	99.4	0	0	99.2	98.5	0	0	0	98.5	0	97.9	0	0	97.9	98.9
Buses	0	0	0	0	0	2	4	0	0	6	9	0	0	0	9	0	4	0	0	4	19
% Buses	0	0	0	0	0	0.2	0.4	0	0	0.3	1.1	0	0	0	1.1	0	1.2	0	0	1.2	0.6
Trucks	0	0	0	0	0	10	2	0	0	12	3	0	0	0	3	0	3	0	0	3	18
% Trucks	0	0	0	0	0	0.9	0.2	0	0	0.6	0.4	0	0	0	0.4	0	0.9	0	0	0.9	0.6

Start Time	CA-1 NB ON-RAMP Southbound				LIGHTFIGHTER DR Westbound				CA-1 NB OFF-RAMP Northbound				CA-1 SB RAMPS Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	155	135	0	290	87	0	0	87	0	48	0	48	425
04:45 PM	0	0	0	0	166	155	0	321	101	0	0	101	0	44	0	44	466
05:00 PM	0	0	0	0	172	131	0	303	98	0	0	98	0	41	0	41	442
05:15 PM	0	0	0	0	168	117	0	285	98	0	0	98	0	34	0	34	417
Total Volume	0	0	0	0	661	538	0	1199	384	0	0	384	0	167	0	167	1750
% App. Total	0	0	0	0	55.1	44.9	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.961	.868	.000	.934	.950	.000	.000	.950	.000	.870	.000	.870	.939

Traffic Data Service

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File Name : 26PM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 2



Traffic Data Service

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File Name : 26PM FINAL
 Site Code : 00000026
 Start Date : 4/27/2017
 Page No : 1

Groups Printed- Bikes

Start Time	CA-1 NB ON-RAMP Southbound					LIGHTFIGHTER DR Westbound					CA-1 NB OFF-RAMP Northbound					CA-1 SB RAMPS Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

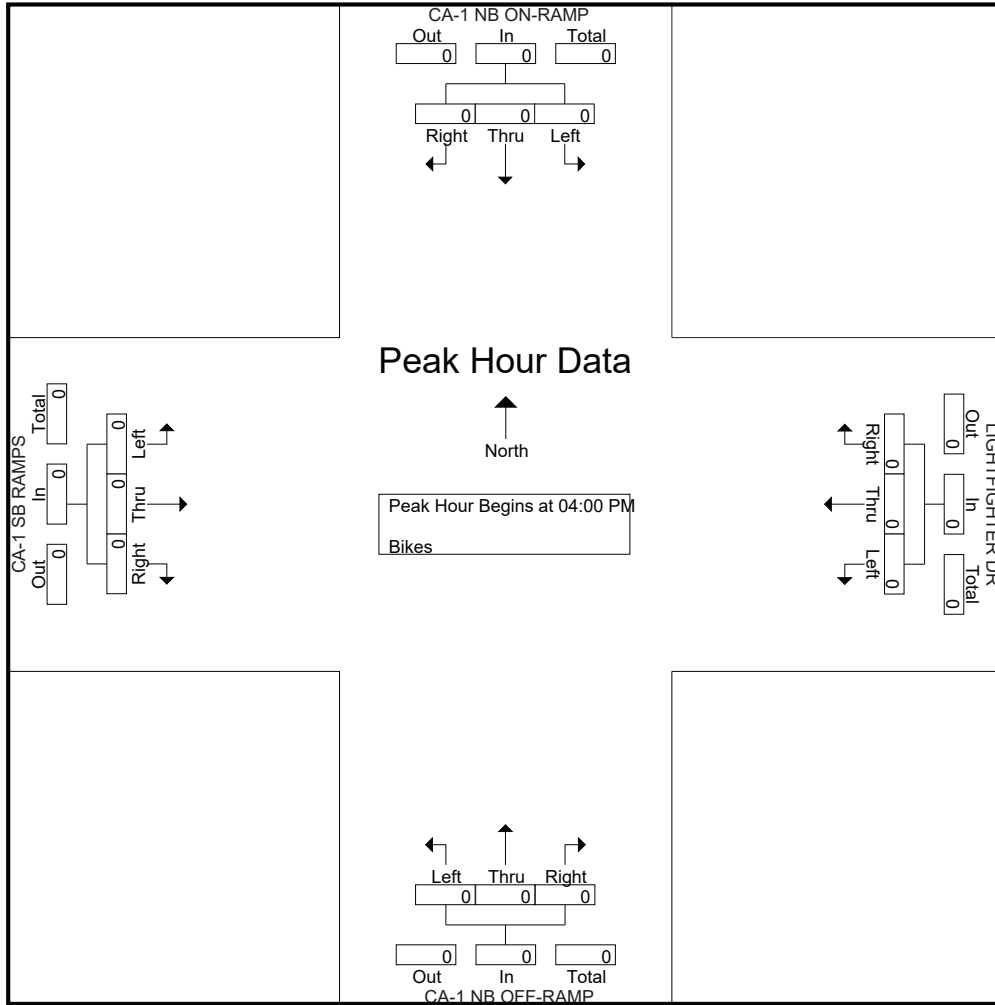
Start Time	CA-1 NB ON-RAMP Southbound				LIGHTFIGHTER DR Westbound				CA-1 NB OFF-RAMP Northbound				CA-1 SB RAMPS Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 26PM FINAL
Site Code : 00000026
Start Date : 4/27/2017
Page No : 2



Traffic Data Service

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File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

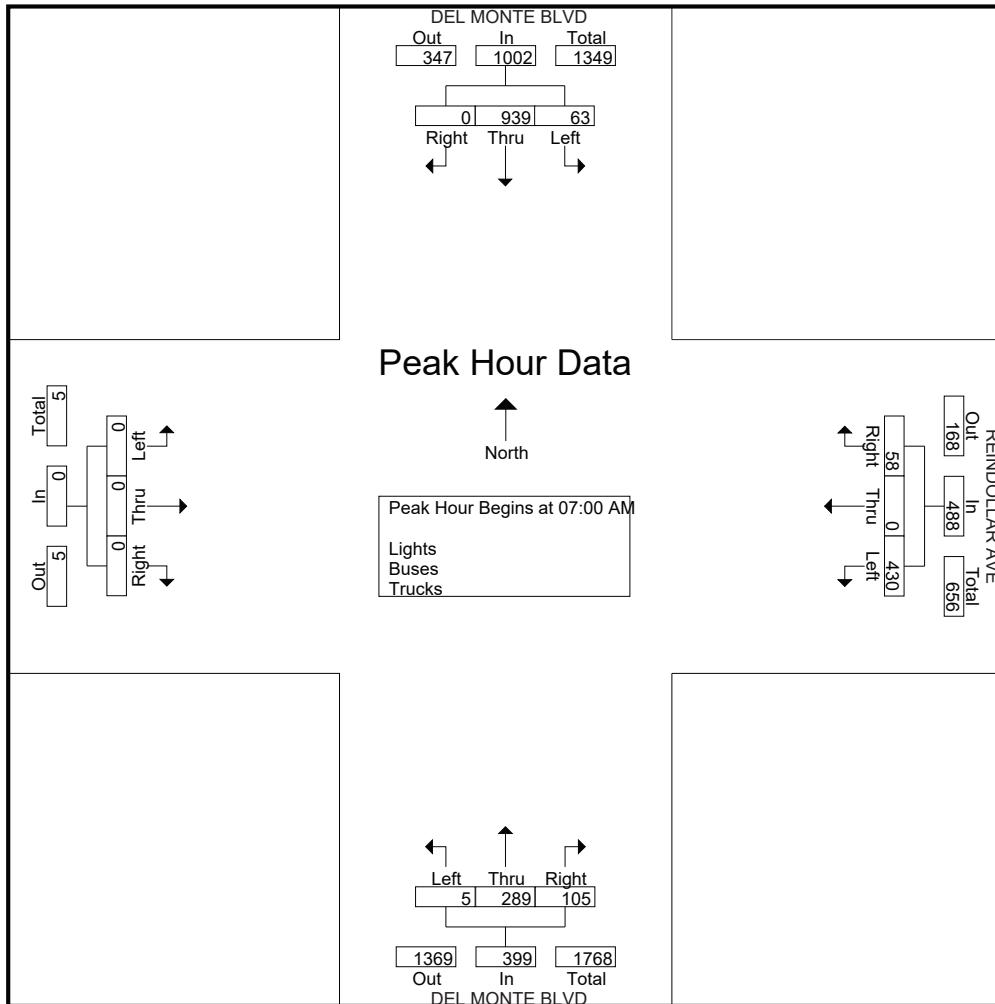
Start Time	DEL MONTE BLVD Southbound					REINDOLLAR AVE Westbound					DEL MONTE BLVD Northbound					Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	0	260	11	0	271	6	0	135	0	141	12	51	3	0	66	0	0	0	0	0	0	478
07:15 AM	0	293	16	4	313	9	0	135	2	146	24	55	1	0	80	0	0	0	0	0	0	539
07:30 AM	0	229	21	1	251	17	0	91	0	108	32	72	1	0	105	0	0	0	0	0	0	464
07:45 AM	0	157	15	3	175	26	0	69	0	95	37	111	0	0	148	0	0	0	0	0	0	418
Total	0	939	63	8	1010	58	0	430	2	490	105	289	5	0	399	0	0	0	0	0	0	1899
08:00 AM	0	161	15	2	178	14	0	76	1	91	50	105	2	0	157	0	0	0	0	0	0	426
08:15 AM	0	150	10	2	162	14	0	55	1	70	36	93	3	0	132	0	0	0	0	0	0	364
08:30 AM	0	194	16	1	211	18	0	73	0	91	27	84	2	0	113	0	0	0	0	0	0	415
08:45 AM	0	166	11	0	177	12	0	57	0	69	23	83	1	0	107	0	0	0	0	0	0	353
Total	0	671	52	5	728	58	0	261	2	321	136	365	8	0	509	0	0	0	0	0	0	1558
Grand Total	0	1610	115	13	1738	116	0	691	4	811	241	654	13	0	908	0	0	0	0	0	0	3457
Apprch %	0	92.6	6.6	0.7		14.3	0	85.2	0.5		26.5	72	1.4	0		0	0	0	0	0	0	
Total %	0	46.6	3.3	0.4	50.3	3.4	0	20	0.1	23.5	7	18.9	0.4	0	26.3	0	0	0	0	0	0	
Lights	0	1557	112	10	1679	112	0	683	4	799	234	633	13	0	880	0	0	0	0	0	0	3358
% Lights	0	96.7	97.4	76.9	96.6	96.6	0	98.8	100	98.5	97.1	96.8	100	0	96.9	0	0	0	0	0	0	97.1
Buses	0	18	1	0	19	1	0	3	0	4	5	10	0	0	15	0	0	0	0	0	0	38
% Buses	0	1.1	0.9	0	1.1	0.9	0	0.4	0	0.5	2.1	1.5	0	0	1.7	0	0	0	0	0	0	1.1
Trucks	0	35	2	3	40	3	0	5	0	8	2	11	0	0	13	0	0	0	0	0	0	61
% Trucks	0	2.2	1.7	23.1	2.3	2.6	0	0.7	0	1	0.8	1.7	0	0	1.4	0	0	0	0	0	0	1.8

Start Time	DEL MONTE BLVD Southbound				REINDOLLAR AVE Westbound				DEL MONTE BLVD Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	260	11	271	6	0	135	141	12	51	3	66	0	0	0	0	478
07:15 AM	0	293	16	309	9	0	135	144	24	55	1	80	0	0	0	0	533
07:30 AM	0	229	21	250	17	0	91	108	32	72	1	105	0	0	0	0	463
07:45 AM	0	157	15	172	26	0	69	95	37	111	0	148	0	0	0	0	415
Total Volume	0	939	63	1002	58	0	430	488	105	289	5	399	0	0	0	0	1899
% App. Total	0	93.7	6.3		11.9	0	88.1		26.3	72.4	1.3		0	0	0		
PHF	.000	.801	.750	.811	.558	.000	.796	.847	.709	.651	.417	.674	.000	.000	.000	.000	.886

Traffic Data Service

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File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	DEL MONTE BLVD Southbound					REINDOLLAR AVE Westbound					DEL MONTE BLVD Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	0	0	0	0	50	0	50	0	100	0	0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	50	0	50	0	100	0	0	0	0	0	0	0	0	0	0	

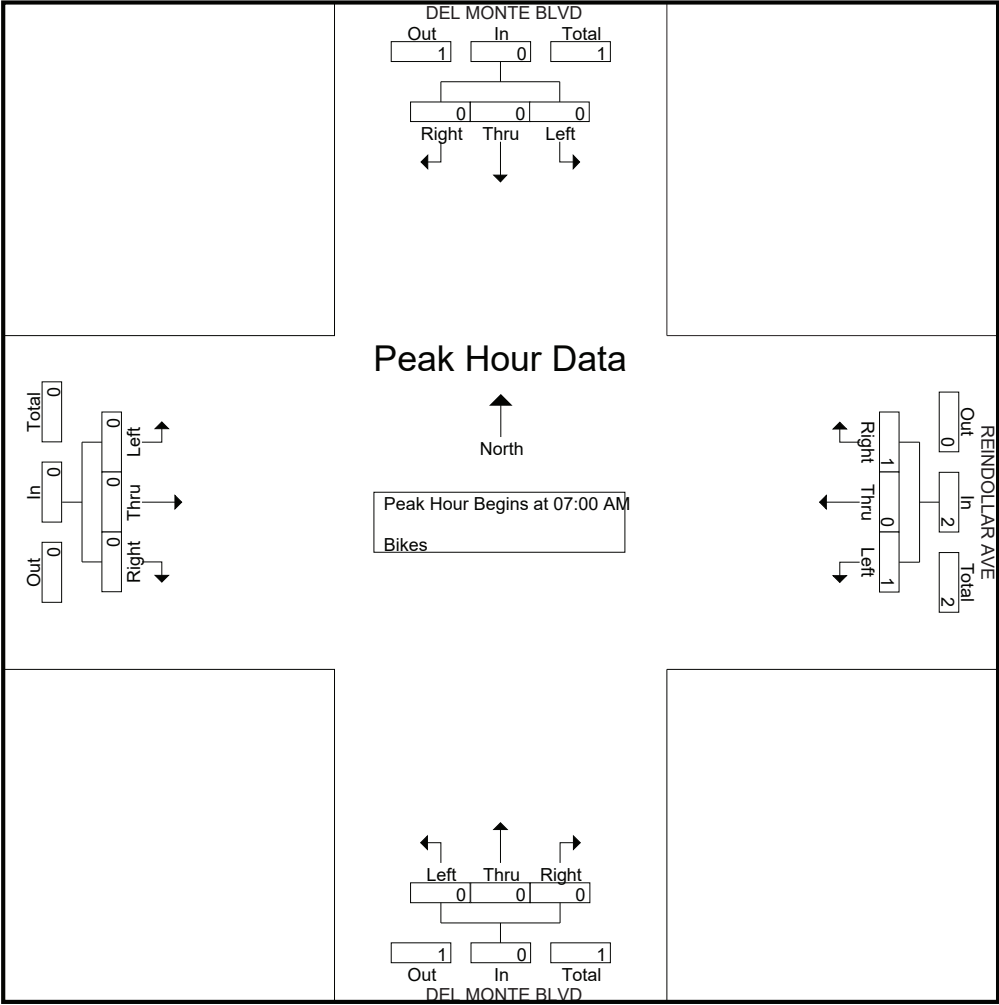
Start Time	DEL MONTE BLVD Southbound					REINDOLLAR AVE Westbound					DEL MONTE BLVD Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0	0	0	50	0	50	0	100	0	0	0	0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 1AM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 1PM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

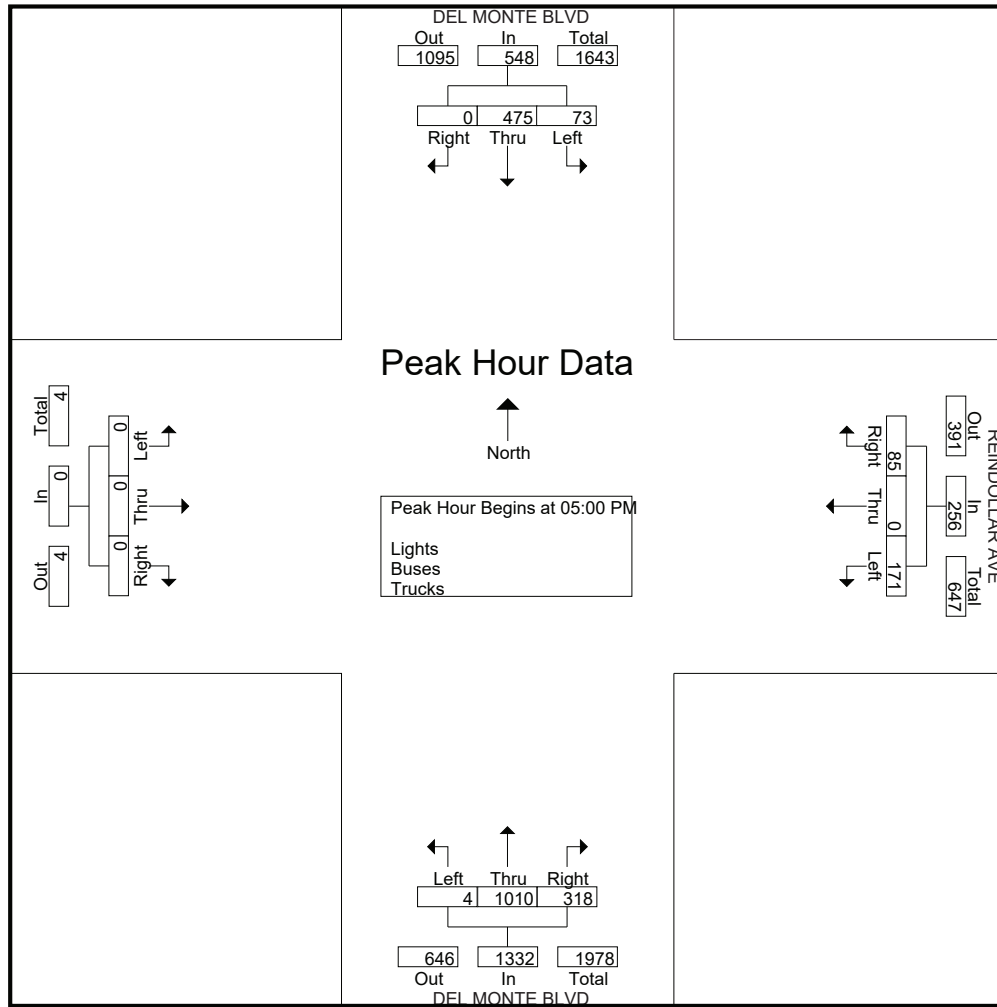
Start Time	DEL MONTE BLVD Southbound					REINDOLLAR AVE Westbound					DEL MONTE BLVD Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	123	4	3	130	28	0	41	1	70	74	212	0	0	286	0	0	0	0	0	486
04:15 PM	0	127	12	0	139	18	0	34	0	52	79	236	1	0	316	0	0	0	0	0	507
04:30 PM	0	103	10	2	115	13	0	37	1	51	57	229	1	0	287	0	0	0	0	0	453
04:45 PM	0	121	12	5	138	23	0	46	3	72	78	229	2	0	309	0	0	0	0	0	519
Total	0	474	38	10	522	82	0	158	5	245	288	906	4	0	1198	0	0	0	0	0	1965
05:00 PM	0	131	21	1	153	20	0	35	0	55	94	232	1	0	327	0	0	0	0	0	535
05:15 PM	0	96	11	4	111	25	0	40	0	65	78	240	2	0	320	0	0	0	0	0	496
05:30 PM	0	106	16	0	122	20	0	54	0	74	72	285	0	0	357	0	0	0	0	0	553
05:45 PM	0	142	25	3	170	20	0	42	0	62	74	253	1	0	328	0	0	0	0	0	560
Total	0	475	73	8	556	85	0	171	0	256	318	1010	4	0	1332	0	0	0	0	0	2144
Grand Total	0	949	111	18	1078	167	0	329	5	501	606	1916	8	0	2530	0	0	0	0	0	4109
Apprch %	0	88	10.3	1.7		33.3	0	65.7	1		24	75.7	0.3	0		0	0	0	0		
Total %	0	23.1	2.7	0.4	26.2	4.1	0	8	0.1	12.2	14.7	46.6	0.2	0	61.6	0	0	0	0	0	
Lights	0	938	110	18	1066	167	0	322	5	494	603	1896	8	0	2507	0	0	0	0	0	4067
% Lights	0	98.8	99.1	100	98.9	100	0	97.9	100	98.6	99.5	99	100	0	99.1	0	0	0	0	0	99
Buses	0	5	1	0	6	0	0	1	0	1	2	7	0	0	9	0	0	0	0	0	16
% Buses	0	0.5	0.9	0	0.6	0	0	0.3	0	0.2	0.3	0.4	0	0	0.4	0	0	0	0	0	0.4
Trucks	0	6	0	0	6	0	0	6	0	6	1	13	0	0	14	0	0	0	0	0	26
% Trucks	0	0.6	0	0	0.6	0	0	1.8	0	1.2	0.2	0.7	0	0	0.6	0	0	0	0	0	0.6

Start Time	DEL MONTE BLVD Southbound				REINDOLLAR AVE Westbound				DEL MONTE BLVD Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	131	21	152	20	0	35	55	94	232	1	327	0	0	0	0	534
05:15 PM	0	96	11	107	25	0	40	65	78	240	2	320	0	0	0	0	492
05:30 PM	0	106	16	122	20	0	54	74	72	285	0	357	0	0	0	0	553
05:45 PM	0	142	25	167	20	0	42	62	74	253	1	328	0	0	0	0	557
Total Volume	0	475	73	548	85	0	171	256	318	1010	4	1332	0	0	0	0	2136
% App. Total	0	86.7	13.3		33.2	0	66.8		23.9	75.8	0.3		0	0	0		
PHF	.000	.836	.730	.820	.850	.000	.792	.865	.846	.886	.500	.933	.000	.000	.000	.000	.959

Traffic Data Service

San Jose, CA
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File Name : 1PM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 1PM FINAL
 Site Code : 00000001
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	DEL MONTE BLVD Southbound					REINDOLLAR AVE Westbound					DEL MONTE BLVD Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

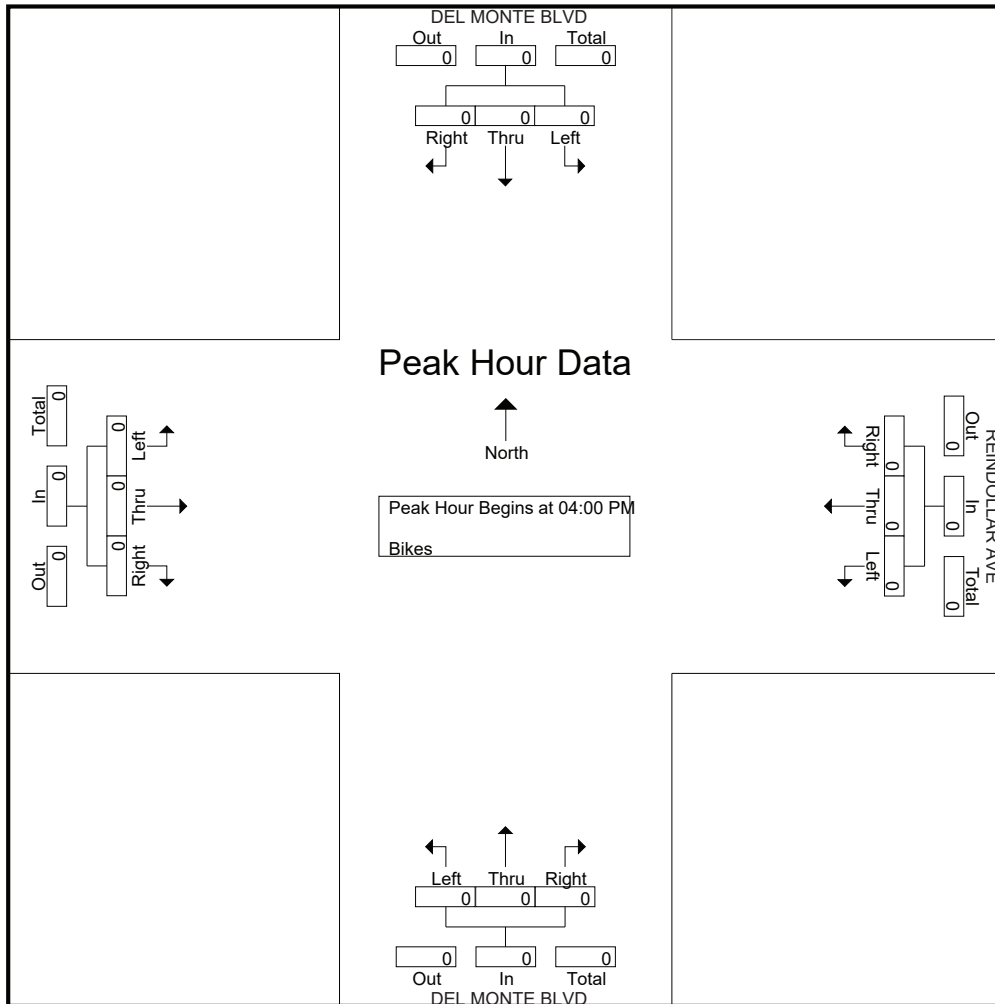
Start Time	DEL MONTE BLVD Southbound				REINDOLLAR AVE Westbound				DEL MONTE BLVD Northbound				Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 1PM FINAL
Site Code : 00000001
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

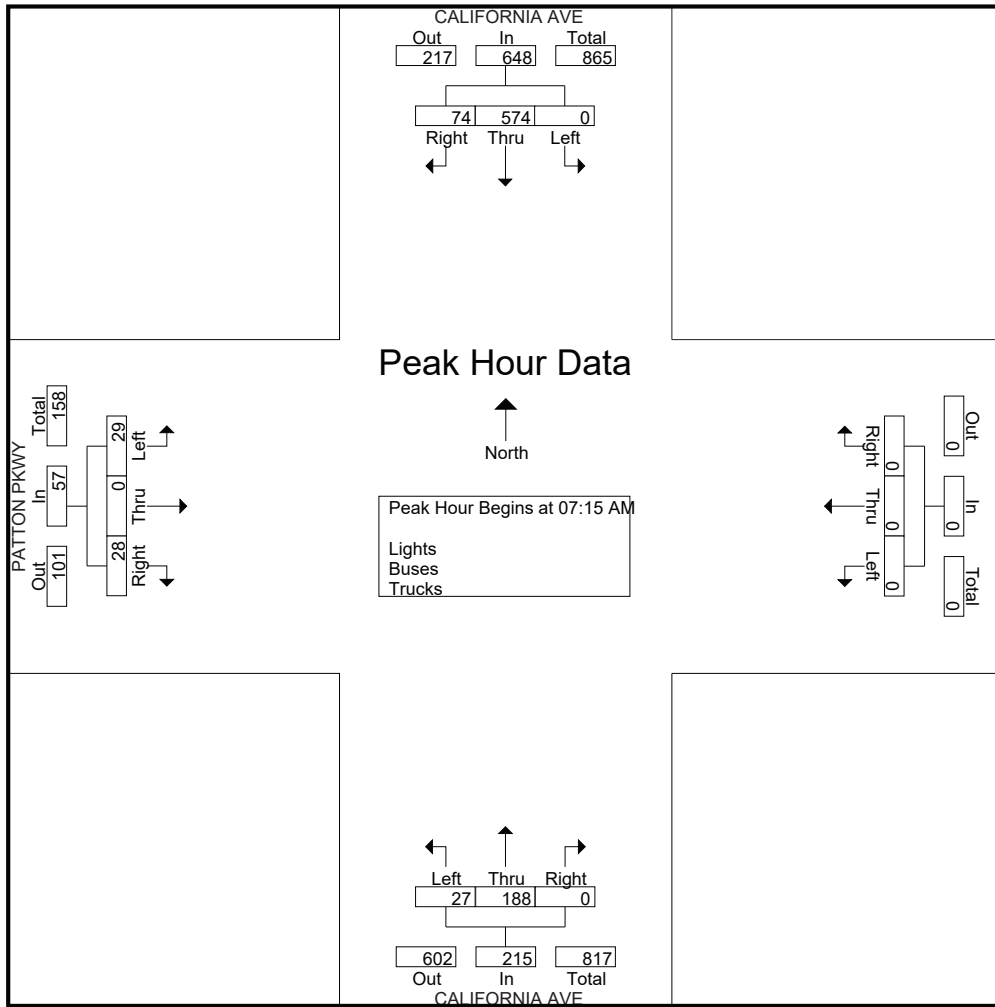
Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	2	107	0	0	109	0	0	0	0	0	0	11	2	0	13	0	0	1	1	2	124
07:15 AM	9	173	0	0	182	0	0	0	0	0	0	25	5	0	30	4	0	1	0	5	217
07:30 AM	48	153	0	0	201	0	0	0	0	0	0	47	12	0	59	10	0	8	2	20	280
07:45 AM	15	115	0	0	130	0	0	0	0	0	0	75	9	0	84	12	0	17	0	29	243
Total	74	548	0	0	622	0	0	0	0	0	0	158	28	0	186	26	0	27	3	56	864
08:00 AM	2	133	0	0	135	0	0	0	0	0	0	41	1	0	42	2	0	3	1	6	183
08:15 AM	0	78	0	0	78	0	0	0	0	0	0	45	1	0	46	2	0	0	3	5	129
08:30 AM	0	90	0	0	90	0	0	0	0	0	0	29	3	0	32	3	0	0	3	6	128
08:45 AM	1	68	0	0	69	0	0	0	0	0	0	24	0	0	24	6	0	0	1	7	100
Total	3	369	0	0	372	0	0	0	0	0	0	139	5	0	144	13	0	3	8	24	540
Grand Total	77	917	0	0	994	0	0	0	0	0	0	297	33	0	330	39	0	30	11	80	1404
Apprch %	7.7	92.3	0	0		0	0	0	0		0	90	10	0		48.8	0	37.5	13.8		
Total %	5.5	65.3	0	0	70.8	0	0	0	0	0	0	21.2	2.4	0	23.5	2.8	0	2.1	0.8	5.7	
Lights	76	897	0	0	973	0	0	0	0	0	0	275	32	0	307	37	0	30	11	78	1358
% Lights	98.7	97.8	0	0	97.9	0	0	0	0	0	0	92.6	97	0	93	94.9	0	100	100	97.5	96.7
Buses	1	3	0	0	4	0	0	0	0	0	0	6	1	0	7	1	0	0	0	1	12
% Buses	1.3	0.3	0	0	0.4	0	0	0	0	0	0	2	3	0	2.1	2.6	0	0	0	1.2	0.9
Trucks	0	17	0	0	17	0	0	0	0	0	0	16	0	0	16	1	0	0	0	1	34
% Trucks	0	1.9	0	0	1.7	0	0	0	0	0	0	5.4	0	0	4.8	2.6	0	0	0	1.2	2.4

Start Time	CALIFORNIA AVE Southbound				Westbound				CALIFORNIA AVE Northbound				PATTON PKWY Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	9	173	0	182	0	0	0	0	0	0	25	5	30	4	0	1	5	217
07:30 AM	48	153	0	201	0	0	0	0	0	0	47	12	59	10	0	8	18	278
07:45 AM	15	115	0	130	0	0	0	0	0	0	75	9	84	12	0	17	29	243
08:00 AM	2	133	0	135	0	0	0	0	0	0	41	1	42	2	0	3	5	182
Total Volume	74	574	0	648	0	0	0	0	0	0	188	27	215	28	0	29	57	920
% App. Total	11.4	88.6	0		0	0	0		0	0	87.4	12.6		49.1	0	50.9		
PHF	.385	.829	.000	.806	.000	.000	.000	.000	.000	.000	.627	.563	.640	.583	.000	.426	.491	.827

Traffic Data Service

San Jose, CA
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File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	

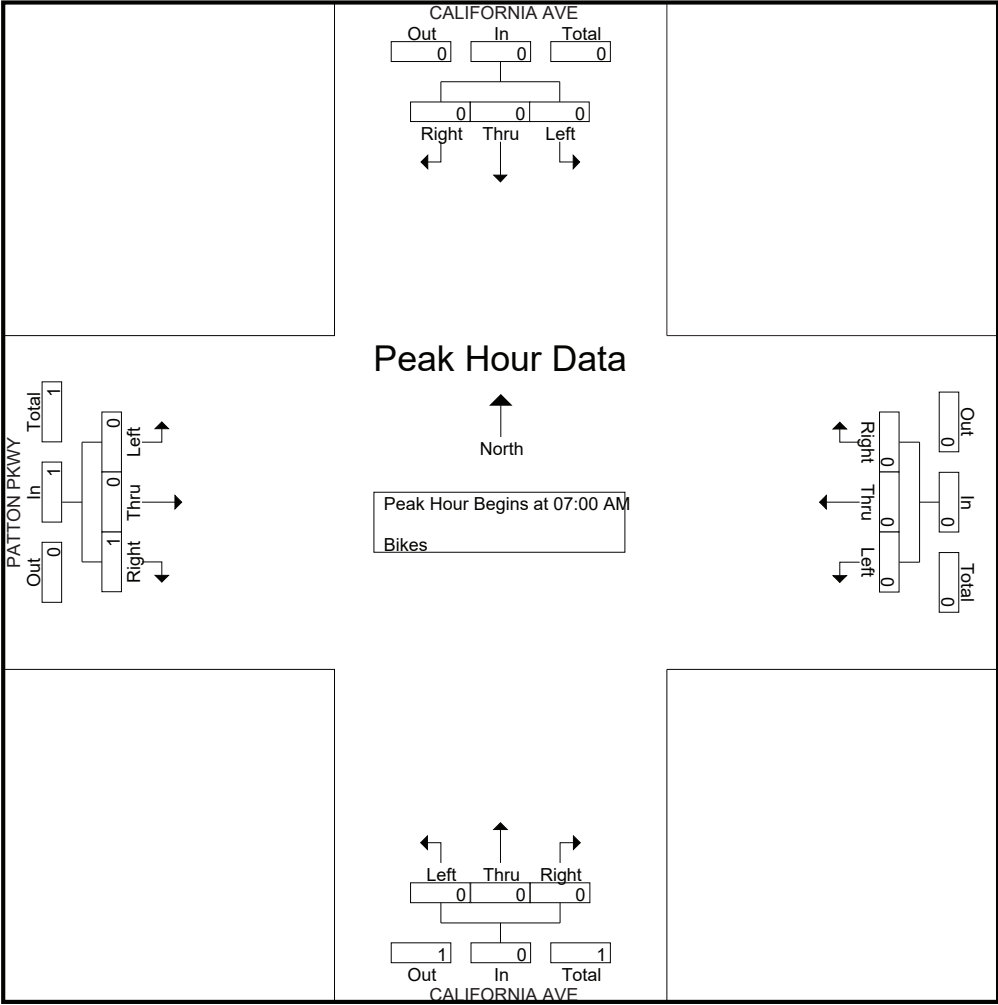
Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
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File Name : 2AM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

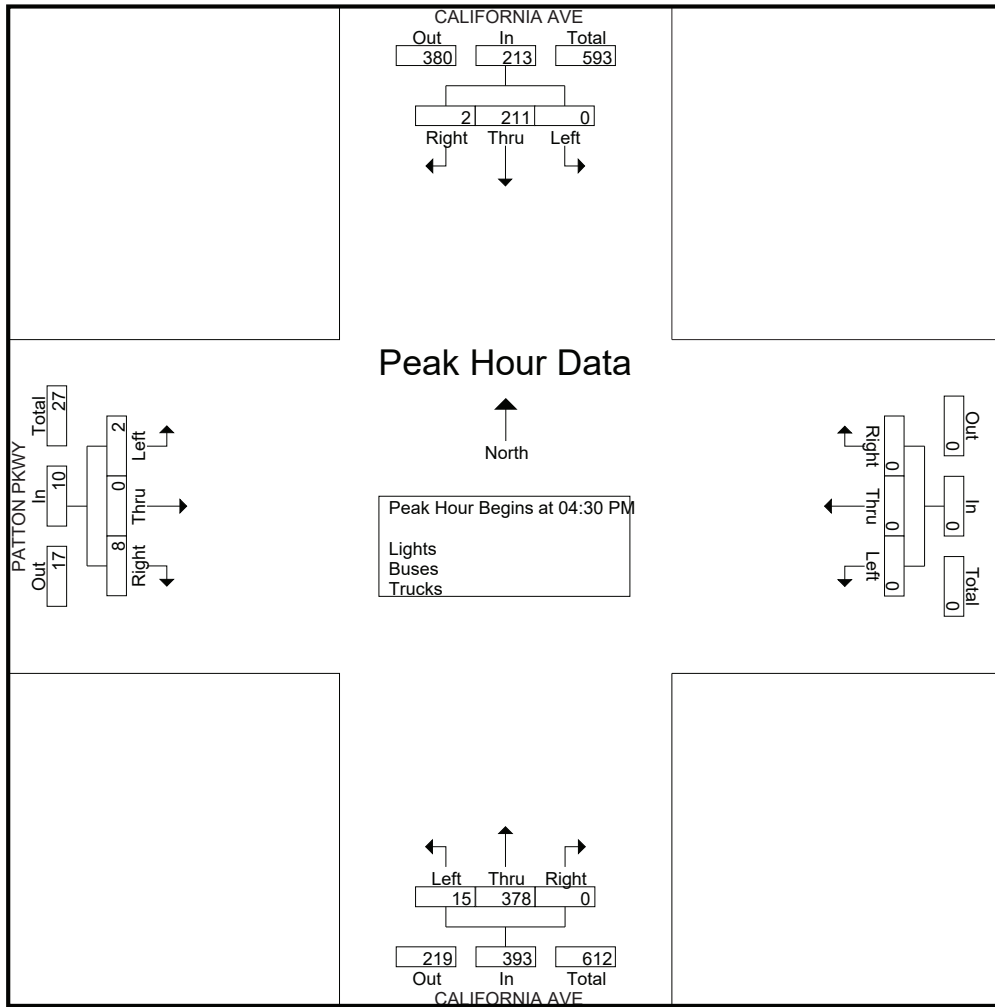
Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	5	35	0	0	40	0	0	0	0	0	0	81	3	0	84	6	0	3	0	9	133
04:15 PM	0	49	0	0	49	0	0	0	0	0	0	90	3	0	93	3	0	0	2	5	147
04:30 PM	0	50	0	0	50	0	0	0	0	0	0	92	2	0	94	1	0	0	0	1	145
04:45 PM	1	47	0	0	48	0	0	0	0	0	0	112	4	0	116	1	0	1	1	3	167
Total	6	181	0	0	187	0	0	0	0	0	0	375	12	0	387	11	0	4	3	18	592
05:00 PM	1	62	0	0	63	0	0	0	0	0	0	84	4	0	88	3	0	0	2	5	156
05:15 PM	0	52	0	0	52	0	0	0	0	0	0	90	5	0	95	3	0	1	0	4	151
05:30 PM	0	64	0	0	64	0	0	0	0	0	0	63	3	0	66	3	0	0	1	4	134
05:45 PM	0	67	0	0	67	0	0	0	0	0	0	79	2	0	81	1	0	0	2	3	151
Total	1	245	0	0	246	0	0	0	0	0	0	316	14	0	330	10	0	1	5	16	592
Grand Total	7	426	0	0	433	0	0	0	0	0	0	691	26	0	717	21	0	5	8	34	1184
Apprch %	1.6	98.4	0	0		0	0	0	0		0	96.4	3.6	0		61.8	0	14.7	23.5		
Total %	0.6	36	0	0	36.6	0	0	0	0	0	0	58.4	2.2	0	60.6	1.8	0	0.4	0.7	2.9	
Lights	7	419	0	0	426	0	0	0	0	0	0	685	26	0	711	21	0	5	8	34	1171
% Lights	100	98.4	0	0	98.4	0	0	0	0	0	0	99.1	100	0	99.2	100	0	100	100	100	98.9
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
% Buses	0	0.2	0	0	0.2	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0.2
Trucks	0	6	0	0	6	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	11
% Trucks	0	1.4	0	0	1.4	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0.9

Start Time	CALIFORNIA AVE Southbound				Westbound				CALIFORNIA AVE Northbound				PATTON PKWY Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	0	50	0	50	0	0	0	0	0	0	92	2	94	1	0	0	1	145
04:45 PM	1	47	0	48	0	0	0	0	0	0	112	4	116	1	0	1	2	166
05:00 PM	1	62	0	63	0	0	0	0	0	0	84	4	88	3	0	0	3	154
05:15 PM	0	52	0	52	0	0	0	0	0	0	90	5	95	3	0	1	4	151
Total Volume	2	211	0	213	0	0	0	0	0	0	378	15	393	8	0	2	10	616
% App. Total	0.9	99.1	0		0	0	0		0	0	96.2	3.8		80	0	20		
PHF	.500	.851	.000	.845	.000	.000	.000	.000	.000	.000	.844	.750	.847	.667	.000	.500	.625	.928

Traffic Data Service

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File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	4
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		50	0	50	0		
Total %	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	25	0	25	0	50	

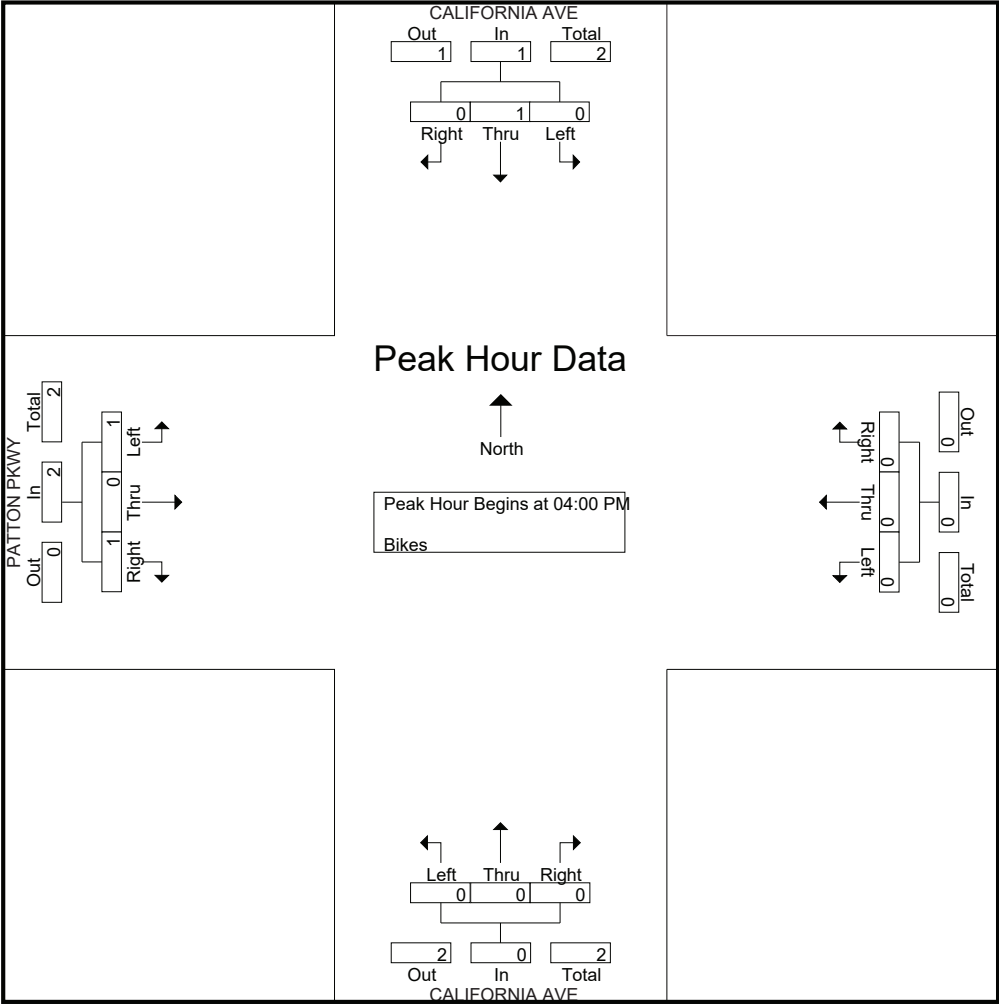
Start Time	CALIFORNIA AVE Southbound					Westbound					CALIFORNIA AVE Northbound					PATTON PKWY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	3
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		50	0	50	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.375

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 2PM FINAL
 Site Code : 00000002
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 3AM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

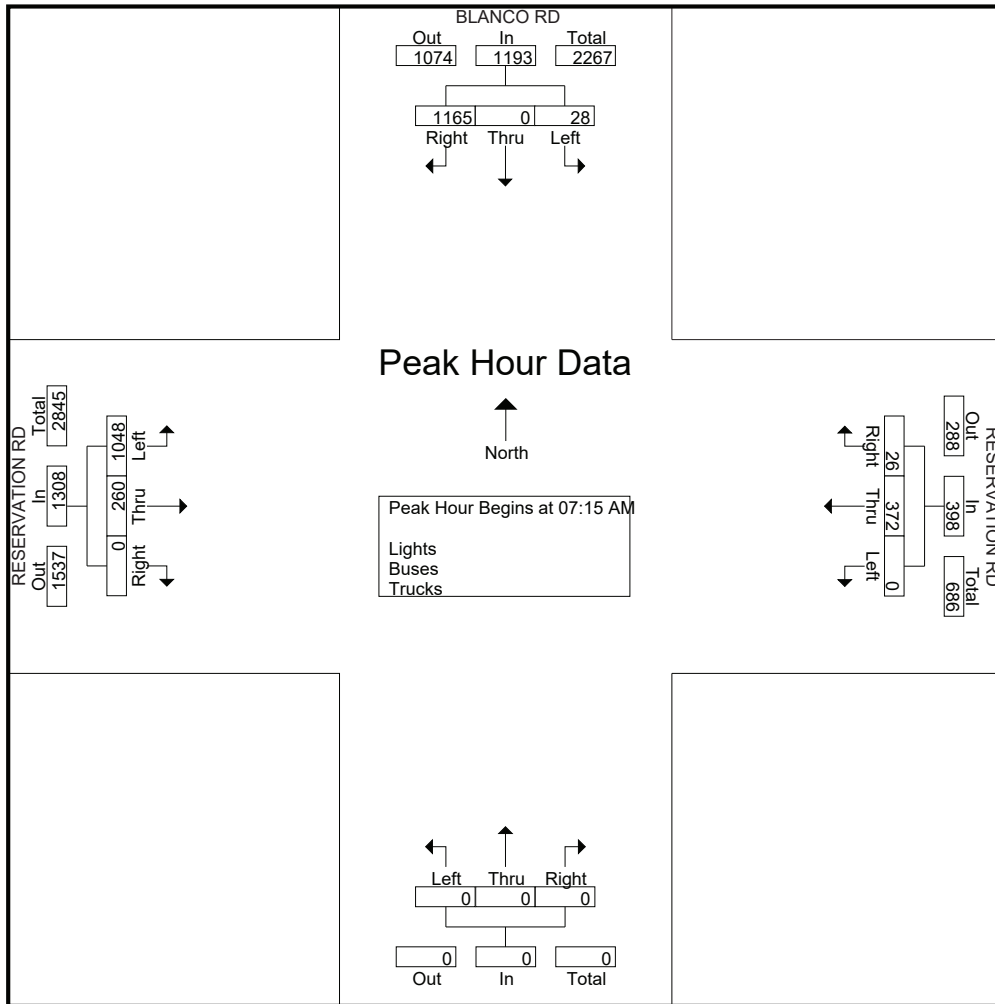
Start Time	BLANCO RD Southbound					RESERVATION RD Westbound					Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	312	0	6	0	318	11	89	0	0	100	0	0	0	0	0	0	52	139	0	191	609
07:15 AM	322	0	8	0	330	9	92	0	0	101	0	0	0	0	0	0	49	243	0	292	723
07:30 AM	294	0	6	0	300	8	111	0	0	119	0	0	0	0	0	0	68	293	0	361	780
07:45 AM	282	0	5	0	287	8	80	0	0	88	0	0	0	0	0	0	91	288	0	379	754
Total	1210	0	25	0	1235	36	372	0	0	408	0	0	0	0	0	0	260	963	0	1223	2866
08:00 AM	267	0	9	0	276	1	89	0	0	90	0	0	0	0	0	0	52	224	0	276	642
08:15 AM	274	0	7	0	281	11	90	0	0	101	0	0	0	0	0	0	58	172	0	230	612
08:30 AM	284	0	6	0	290	8	70	0	0	78	0	0	0	0	0	0	34	180	0	214	582
08:45 AM	230	0	3	0	233	5	65	0	0	70	0	0	0	0	0	0	54	154	0	208	511
Total	1055	0	25	0	1080	25	314	0	0	339	0	0	0	0	0	0	198	730	0	928	2347
Grand Total	2265	0	50	0	2315	61	686	0	0	747	0	0	0	0	0	0	458	1693	0	2151	5213
Apprch %	97.8	0	2.2	0		8.2	91.8	0	0		0	0	0	0	0	0	21.3	78.7	0		
Total %	43.4	0	1	0	44.4	1.2	13.2	0	0	14.3	0	0	0	0	0	0	8.8	32.5	0	41.3	
Lights	2202	0	43	0	2245	58	670	0	0	728	0	0	0	0	0	0	439	1658	0	2097	5070
% Lights	97.2	0	86	0	97	95.1	97.7	0	0	97.5	0	0	0	0	0	0	95.9	97.9	0	97.5	97.3
Buses	14	0	1	0	15	0	3	0	0	3	0	0	0	0	0	0	5	14	0	19	37
% Buses	0.6	0	2	0	0.6	0	0.4	0	0	0.4	0	0	0	0	0	0	1.1	0.8	0	0.9	0.7
Trucks	49	0	6	0	55	3	13	0	0	16	0	0	0	0	0	0	14	21	0	35	106
% Trucks	2.2	0	12	0	2.4	4.9	1.9	0	0	2.1	0	0	0	0	0	0	3.1	1.2	0	1.6	2

Start Time	BLANCO RD Southbound				RESERVATION RD Westbound				Northbound				RESERVATION RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	322	0	8	330	9	92	0	101	0	0	0	0	0	0	49	243	292	723
07:30 AM	294	0	6	300	8	111	0	119	0	0	0	0	0	0	68	293	361	780
07:45 AM	282	0	5	287	8	80	0	88	0	0	0	0	0	91	288	379	754	
08:00 AM	267	0	9	276	1	89	0	90	0	0	0	0	0	0	52	224	276	642
Total Volume	1165	0	28	1193	26	372	0	398	0	0	0	0	0	0	260	1048	1308	2899
% App. Total	97.7	0	2.3		6.5	93.5	0		0	0	0		0	19.9	80.1			
PHF	.905	.000	.778	.904	.722	.838	.000	.836	.000	.000	.000	.000	.000	.000	.714	.894	.863	.929

Traffic Data Service

San Jose, CA
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File Name : 3AM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 3AM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

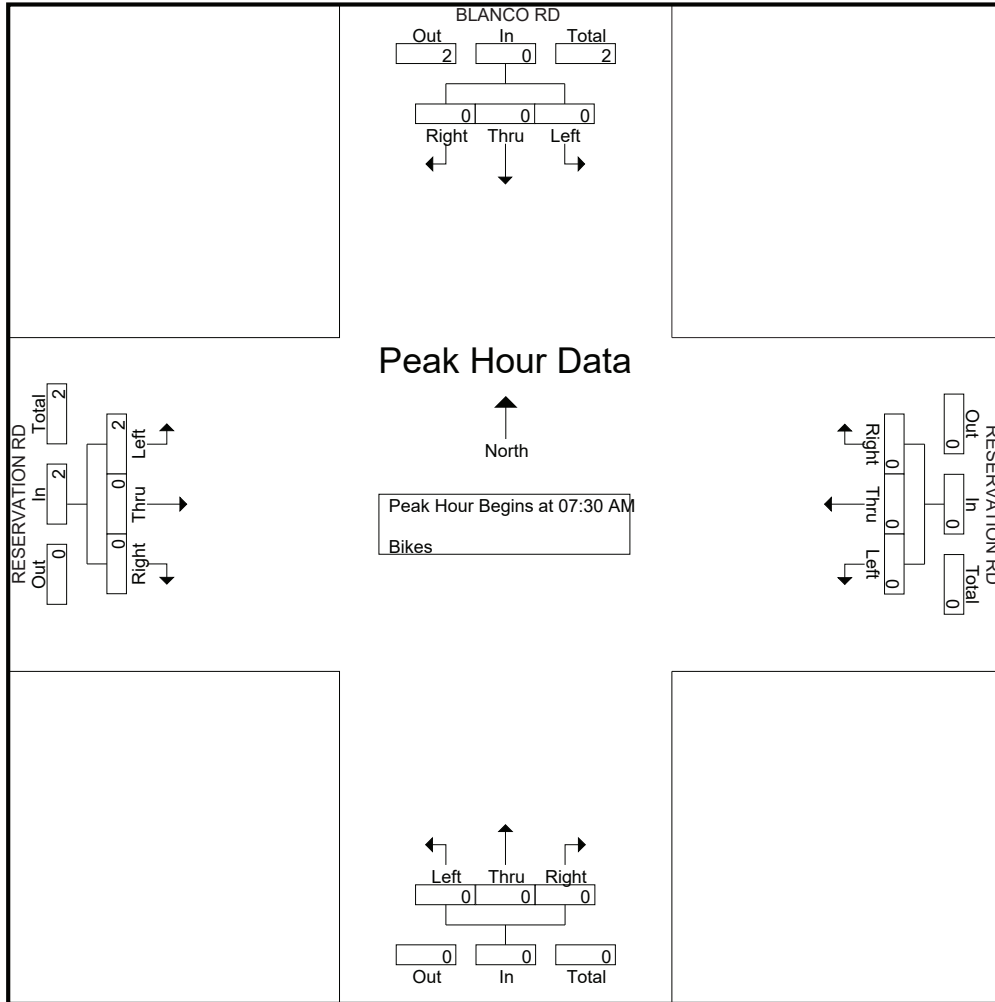
Start Time	BLANCO RD Southbound					RESERVATION RD Westbound					Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	100	

Start Time	BLANCO RD Southbound				RESERVATION RD Westbound				Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
% App. Total	0	0	0		0	0	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.500	.500

Traffic Data Service

San Jose, CA
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File Name : 3AM FINAL
Site Code : 00000003
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

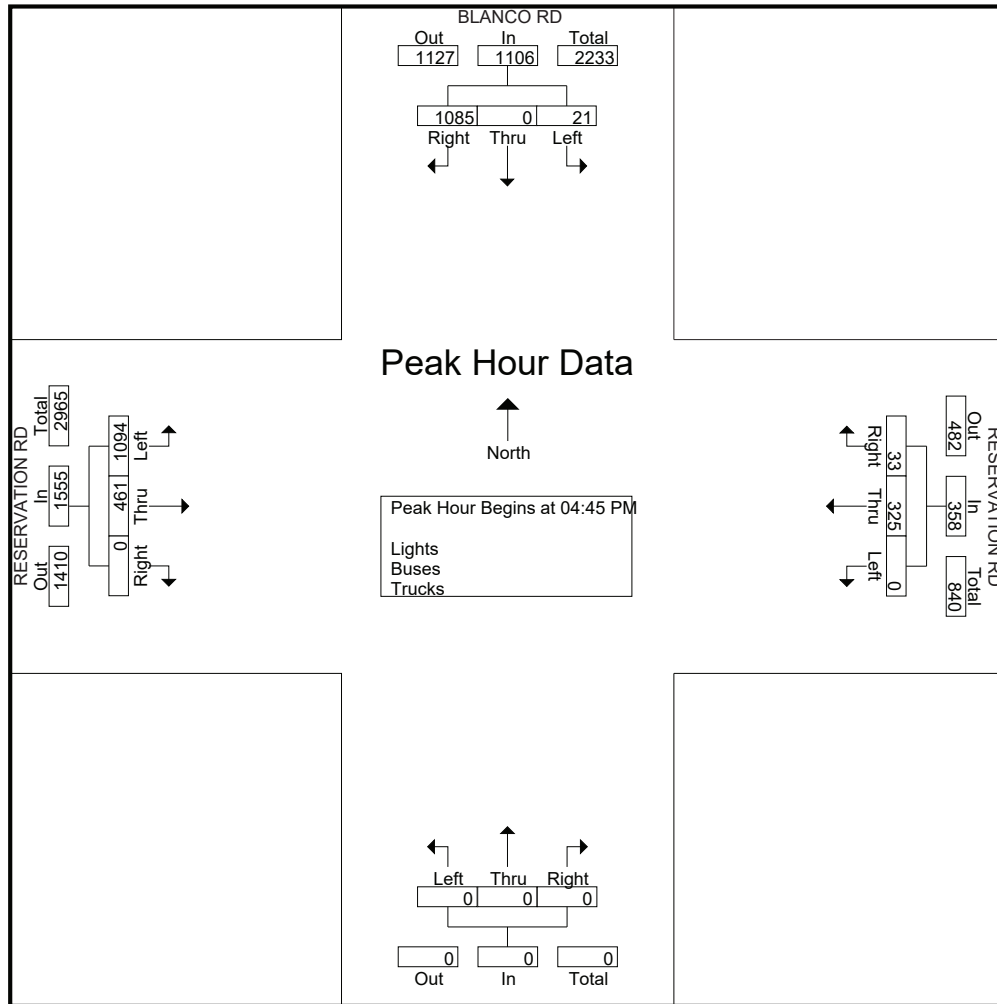
Start Time	BLANCO RD Southbound					RESERVATION RD Westbound					Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	224	0	9	0	233	8	57	0	0	65	0	0	0	0	0	0	106	308	0	414	712
04:15 PM	214	0	12	0	226	10	70	0	0	80	0	0	0	0	0	0	107	271	0	378	684
04:30 PM	236	0	3	0	239	7	82	0	0	89	0	0	0	0	0	0	117	282	0	399	727
04:45 PM	231	0	10	0	241	6	72	0	0	78	0	0	0	0	0	0	124	288	0	412	731
Total	905	0	34	0	939	31	281	0	0	312	0	0	0	0	0	0	454	1149	0	1603	2854
05:00 PM	249	0	6	0	255	10	73	0	0	83	0	0	0	0	0	0	124	251	0	375	713
05:15 PM	325	0	0	0	325	11	80	0	0	91	0	0	0	0	0	0	100	287	0	387	803
05:30 PM	280	0	5	0	285	6	100	0	0	106	0	0	0	0	0	0	113	268	0	381	772
05:45 PM	248	0	6	0	254	6	78	0	0	84	0	0	0	0	0	0	121	243	0	364	702
Total	1102	0	17	0	1119	33	331	0	0	364	0	0	0	0	0	0	458	1049	0	1507	2990
Grand Total	2007	0	51	0	2058	64	612	0	0	676	0	0	0	0	0	0	912	2198	0	3110	5844
Apprch %	97.5	0	2.5	0		9.5	90.5	0	0		0	0	0	0	0	0	29.3	70.7	0		
Total %	34.3	0	0.9	0	35.2	1.1	10.5	0	0	11.6	0	0	0	0	0	0	15.6	37.6	0	53.2	
Lights	1972	0	47	0	2019	63	598	0	0	661	0	0	0	0	0	0	897	2160	0	3057	5737
% Lights	98.3	0	92.2	0	98.1	98.4	97.7	0	0	97.8	0	0	0	0	0	0	98.4	98.3	0	98.3	98.2
Buses	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	4	17	0	21	34
% Buses	0.6	0	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0.4	0.8	0	0.7	0.6
Trucks	22	0	4	0	26	1	14	0	0	15	0	0	0	0	0	0	11	21	0	32	73
% Trucks	1.1	0	7.8	0	1.3	1.6	2.3	0	0	2.2	0	0	0	0	0	0	1.2	1	0	1	1.2

Start Time	BLANCO RD Southbound				RESERVATION RD Westbound				Northbound				RESERVATION RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
04:45 PM	231	0	10	241	6	72	0	78	0	0	0	0	0	0	124	288	412	731
05:00 PM	249	0	6	255	10	73	0	83	0	0	0	0	0	0	100	287	387	803
05:15 PM	325	0	0	325	11	80	0	91	0	0	0	0	0	0	113	268	381	772
05:30 PM	280	0	5	285	6	100	0	106	0	0	0	0	0	0	113	268	381	772
Total Volume	1085	0	21	1106	33	325	0	358	0	0	0	0	0	0	461	1094	1555	3019
% App. Total	98.1	0	1.9		9.2	90.8	0		0	0	0	0	0	0	29.6	70.4		
PHF	.835	.000	.525	.851	.750	.813	.000	.844	.000	.000	.000	.000	.000	.000	.929	.950	.944	.940

Traffic Data Service

San Jose, CA
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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 3PM FINAL
 Site Code : 00000003
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	BLANCO RD Southbound					RESERVATION RD Westbound					Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	100	

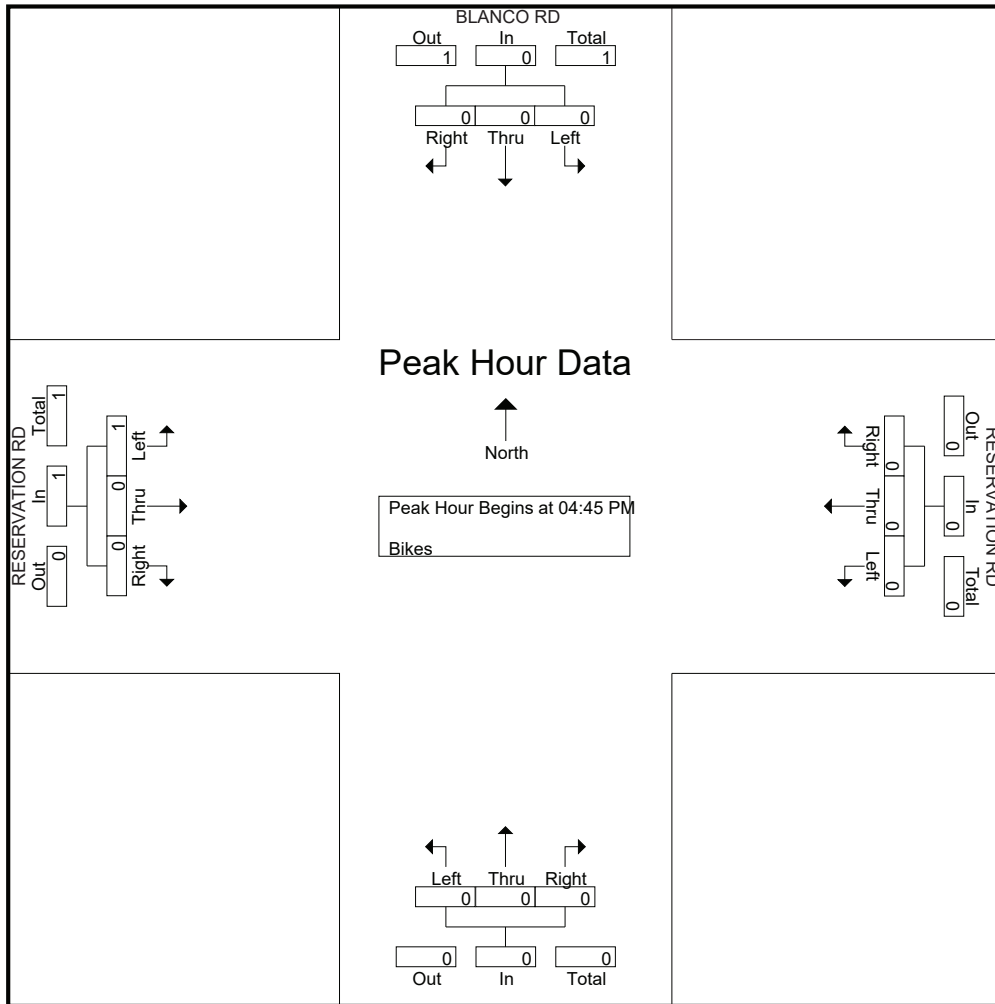
Start Time	BLANCO RD Southbound					RESERVATION RD Westbound					Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.250		.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

Traffic Data Service

San Jose, CA
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File Name : 3PM FINAL
Site Code : 00000003
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 4AM FINAL
 Site Code : 00000004
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

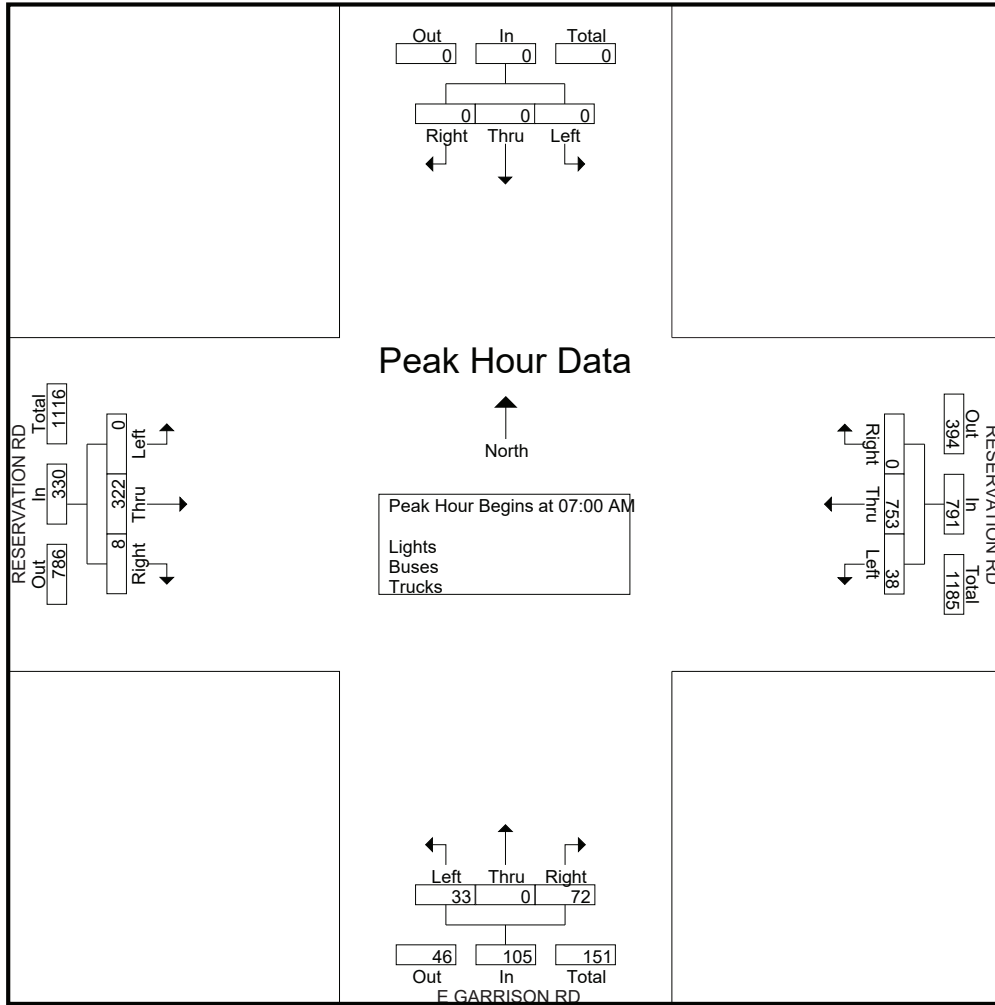
Start Time	Southbound					RESERVATION RD Westbound					E GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	187	11	0	198	15	0	4	0	19	3	59	0	0	62	279
07:15 AM	0	0	0	0	0	0	198	14	0	212	10	0	10	0	20	1	78	0	0	79	311
07:30 AM	0	0	0	0	0	0	209	6	0	215	24	0	14	0	38	1	92	0	0	93	346
07:45 AM	0	0	0	0	0	0	159	7	0	166	23	0	5	0	28	3	93	0	0	96	290
Total	0	0	0	0	0	0	753	38	0	791	72	0	33	0	105	8	322	0	0	330	1226
08:00 AM	0	0	0	0	0	0	146	4	0	150	17	0	4	2	23	4	66	0	2	72	245
08:15 AM	0	0	0	0	0	0	135	7	0	142	6	0	4	0	10	4	77	0	0	81	233
08:30 AM	0	0	0	0	0	0	116	5	0	121	9	0	3	0	12	2	39	0	0	41	174
08:45 AM	0	0	0	0	0	0	77	5	0	82	9	0	2	0	11	6	47	0	0	53	146
Total	0	0	0	0	0	0	474	21	0	495	41	0	13	2	56	16	229	0	2	247	798
Grand Total	0	0	0	0	0	0	1227	59	0	1286	113	0	46	2	161	24	551	0	2	577	2024
Apprch %	0	0	0	0	0	0	95.4	4.6	0		70.2	0	28.6	1.2		4.2	95.5	0	0.3		
Total %	0	0	0	0	0	0	60.6	2.9	0	63.5	5.6	0	2.3	0.1	8	1.2	27.2	0	0.1	28.5	
Lights	0	0	0	0	0	0	1206	51	0	1257	111	0	44	2	157	18	534	0	2	554	1968
% Lights	0	0	0	0	0	0	98.3	86.4	0	97.7	98.2	0	95.7	100	97.5	75	96.9	0	100	96	97.2
Buses	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	3	3	0	0	6	11
% Buses	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	12.5	0.5	0	0	1	0.5
Trucks	0	0	0	0	0	0	16	8	0	24	2	0	2	0	4	3	14	0	0	17	45
% Trucks	0	0	0	0	0	0	1.3	13.6	0	1.9	1.8	0	4.3	0	2.5	12.5	2.5	0	0	2.9	2.2

Start Time	Southbound				RESERVATION RD Westbound				E GARRISON RD Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	187	11	198	15	0	4	19	3	59	0	62	279
07:15 AM	0	0	0	0	0	198	14	212	10	0	10	20	1	78	0	79	311
07:30 AM	0	0	0	0	0	209	6	215	24	0	14	38	1	92	0	93	346
07:45 AM	0	0	0	0	0	159	7	166	23	0	5	28	3	93	0	96	290
Total Volume	0	0	0	0	0	753	38	791	72	0	33	105	8	322	0	330	1226
% App. Total	0	0	0	0	0	95.2	4.8		68.6	0	31.4		2.4	97.6	0		
PHF	.000	.000	.000	.000	.000	.901	.679	.920	.750	.000	.589	.691	.667	.866	.000	.859	.886

Traffic Data Service

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File Name : 4AM FINAL
 Site Code : 00000004
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 Page No : 2



Traffic Data Service

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File Name : 4AM FINAL
 Site Code : 00000004
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					RESERVATION RD Westbound					E GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

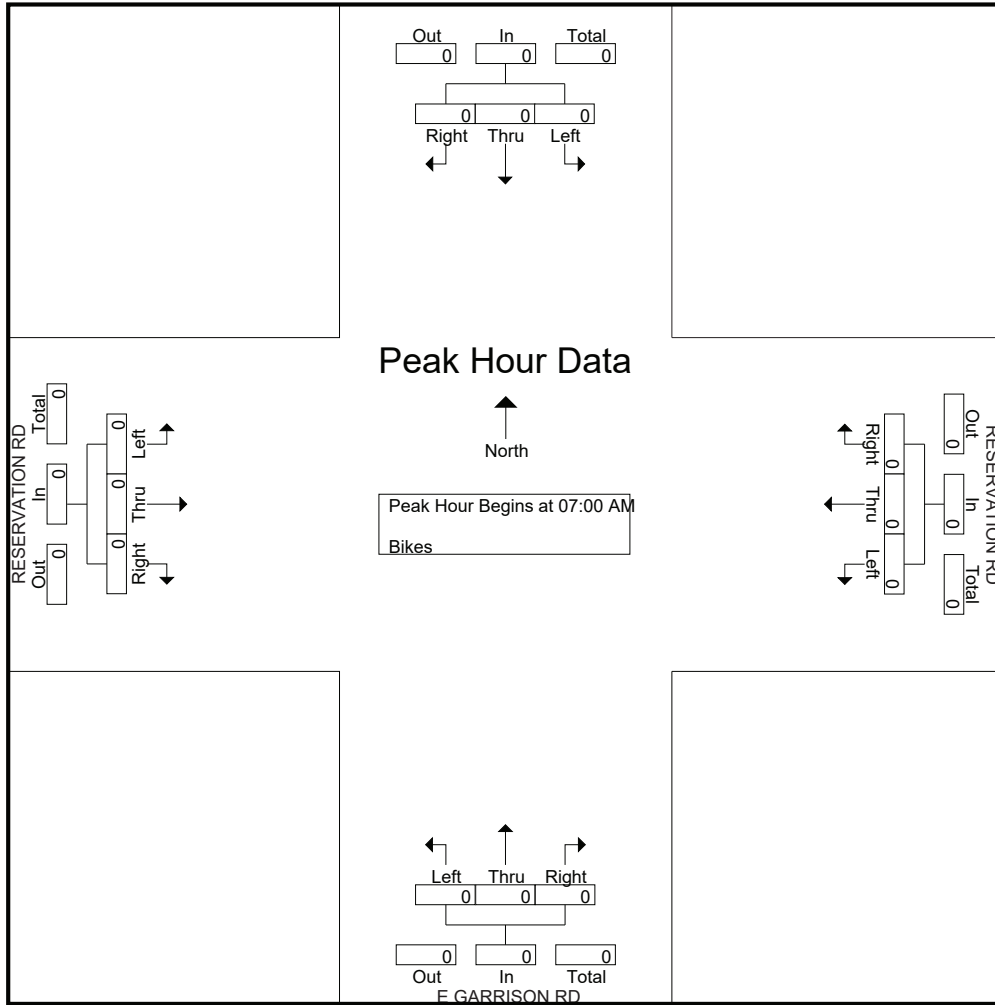
Start Time	Southbound					RESERVATION RD Westbound					E GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 4AM FINAL
Site Code : 00000004
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Page No : 2



Traffic Data Service

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File Name : 4PM FINAL
 Site Code : 00000004
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

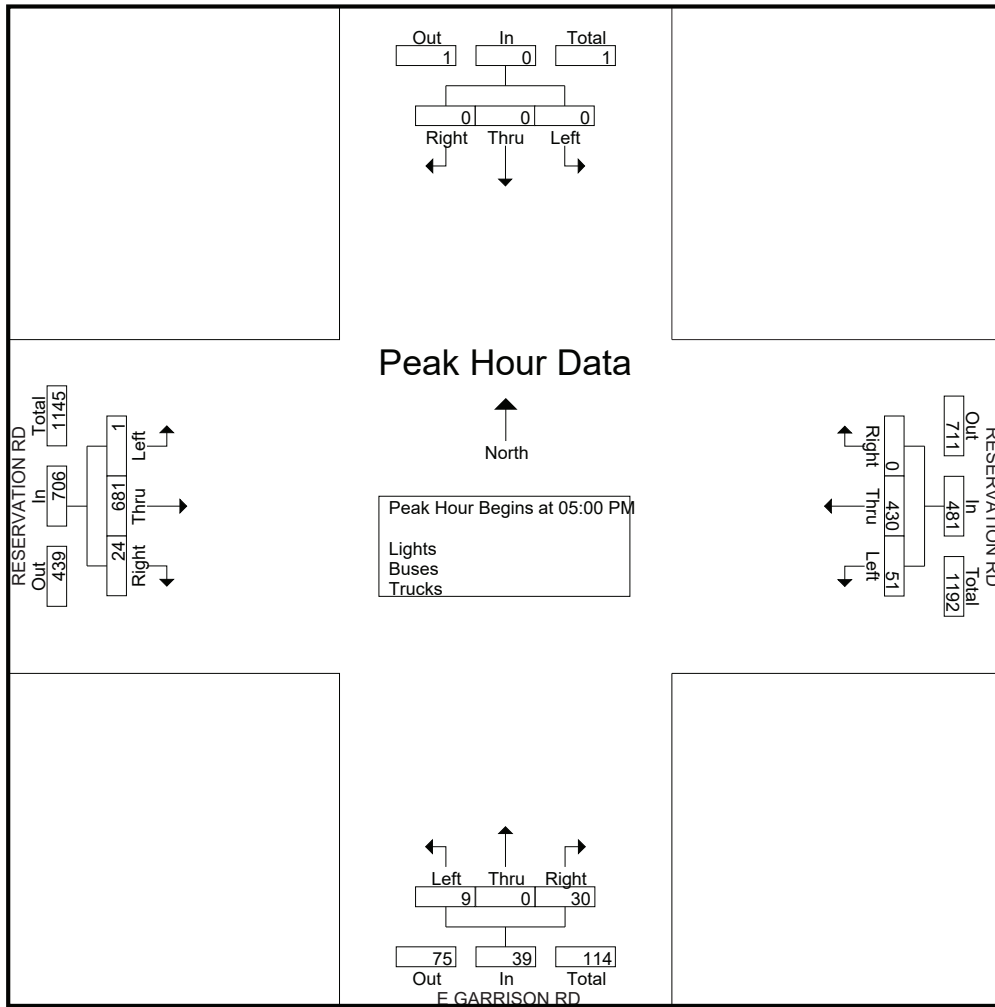
Start Time	Southbound					RESERVATION RD Westbound					E GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	78	14	0	92	14	0	6	0	20	1	160	0	0	161	273
04:15 PM	0	0	0	0	0	0	80	10	0	90	15	0	1	0	16	9	148	1	0	158	264
04:30 PM	0	0	0	0	0	0	90	12	0	102	9	0	2	0	11	7	140	1	0	148	261
04:45 PM	0	0	0	0	0	0	78	10	0	88	6	0	3	0	9	7	181	0	0	188	285
Total	0	0	0	0	0	0	326	46	0	372	44	0	12	0	56	24	629	2	0	655	1083
05:00 PM	0	0	0	0	0	0	99	10	0	109	11	0	3	0	14	6	172	1	0	179	302
05:15 PM	0	0	0	0	0	0	125	16	0	141	9	0	1	0	10	5	159	0	0	164	315
05:30 PM	0	0	0	0	0	0	110	14	0	124	3	0	2	0	5	6	177	0	0	183	312
05:45 PM	0	0	0	0	0	0	96	11	0	107	7	0	3	0	10	7	173	0	0	180	297
Total	0	0	0	0	0	0	430	51	0	481	30	0	9	0	39	24	681	1	0	706	1226
Grand Total	0	0	0	0	0	0	756	97	0	853	74	0	21	0	95	48	1310	3	0	1361	2309
Apprch %	0	0	0	0	0	0	88.6	11.4	0	88.6	77.9	0	22.1	0	77.9	3.5	96.3	0.2	0	96.3	
Total %	0	0	0	0	0	0	32.7	4.2	0	36.9	3.2	0	0.9	0	4.1	2.1	56.7	0.1	0	58.9	
Lights	0	0	0	0	0	0	741	96	0	837	72	0	21	0	93	46	1281	3	0	1330	2260
% Lights	0	0	0	0	0	0	98	99	0	98.1	97.3	0	100	0	97.9	95.8	97.8	100	0	97.7	97.9
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	8
% Buses	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.5	0	0	0.5	0.3
Trucks	0	0	0	0	0	0	14	1	0	15	2	0	0	0	2	2	22	0	0	24	41
% Trucks	0	0	0	0	0	0	1.9	1	0	1.8	2.7	0	0	0	2.1	4.2	1.7	0	0	1.8	1.8

Start Time	Southbound				RESERVATION RD Westbound				E GARRISON RD Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	99	10	109	11	0	3	14	6	172	1	179	302
05:15 PM	0	0	0	0	0	125	16	141	9	0	1	10	5	159	0	164	315
05:30 PM	0	0	0	0	0	110	14	124	3	0	2	5	6	177	0	183	312
05:45 PM	0	0	0	0	0	96	11	107	7	0	3	10	7	173	0	180	297
Total Volume	0	0	0	0	0	430	51	481	30	0	9	39	24	681	1	706	1226
% App. Total	0	0	0	0	0	89.4	10.6	89.4	76.9	0	23.1	76.9	3.4	96.5	0.1	96.5	
PHF	.000	.000	.000	.000	.000	.860	.797	.853	.682	.000	.750	.696	.857	.962	.250	.964	.973

Traffic Data Service

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File Name : 4PM FINAL
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 Page No : 2



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File Name : 4PM FINAL
 Site Code : 00000004
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					RESERVATION RD Westbound					E GARRISON RD Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

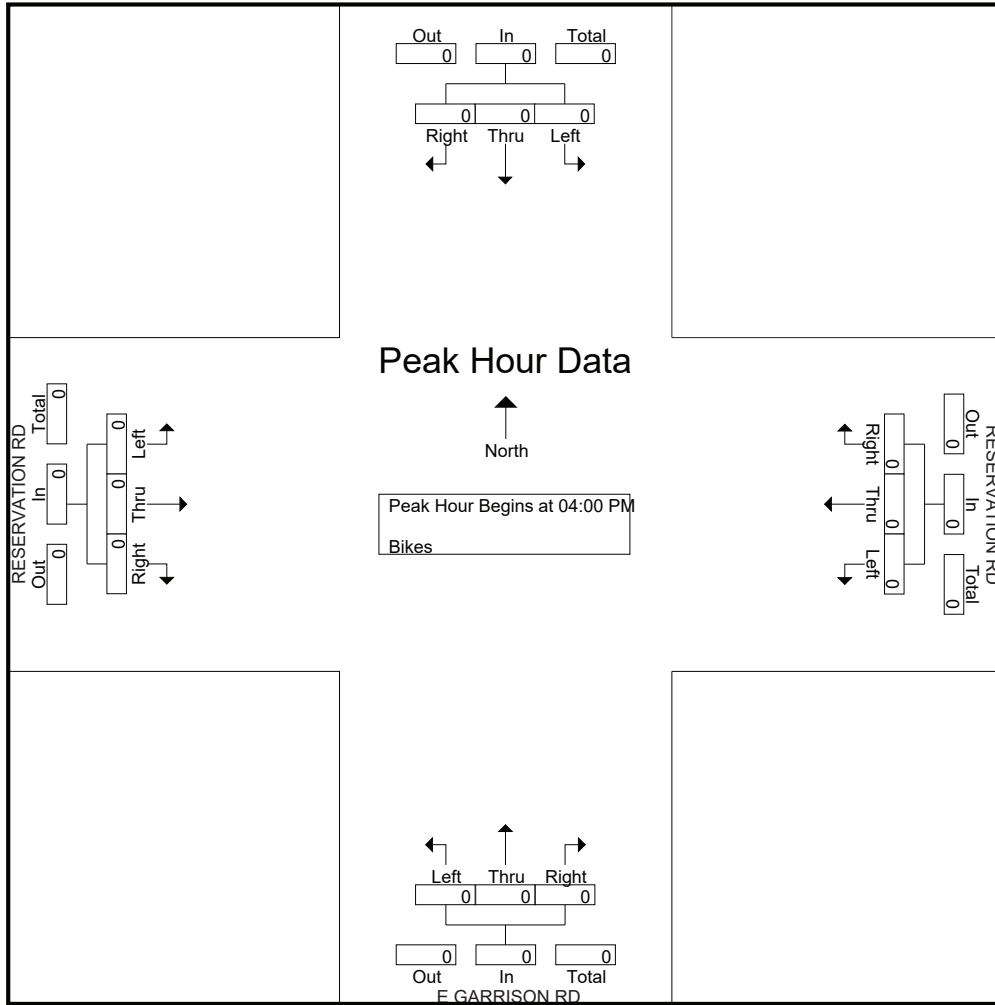
Start Time	Southbound				RESERVATION RD Westbound				E GARRISON RD Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 4PM FINAL
Site Code : 00000004
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

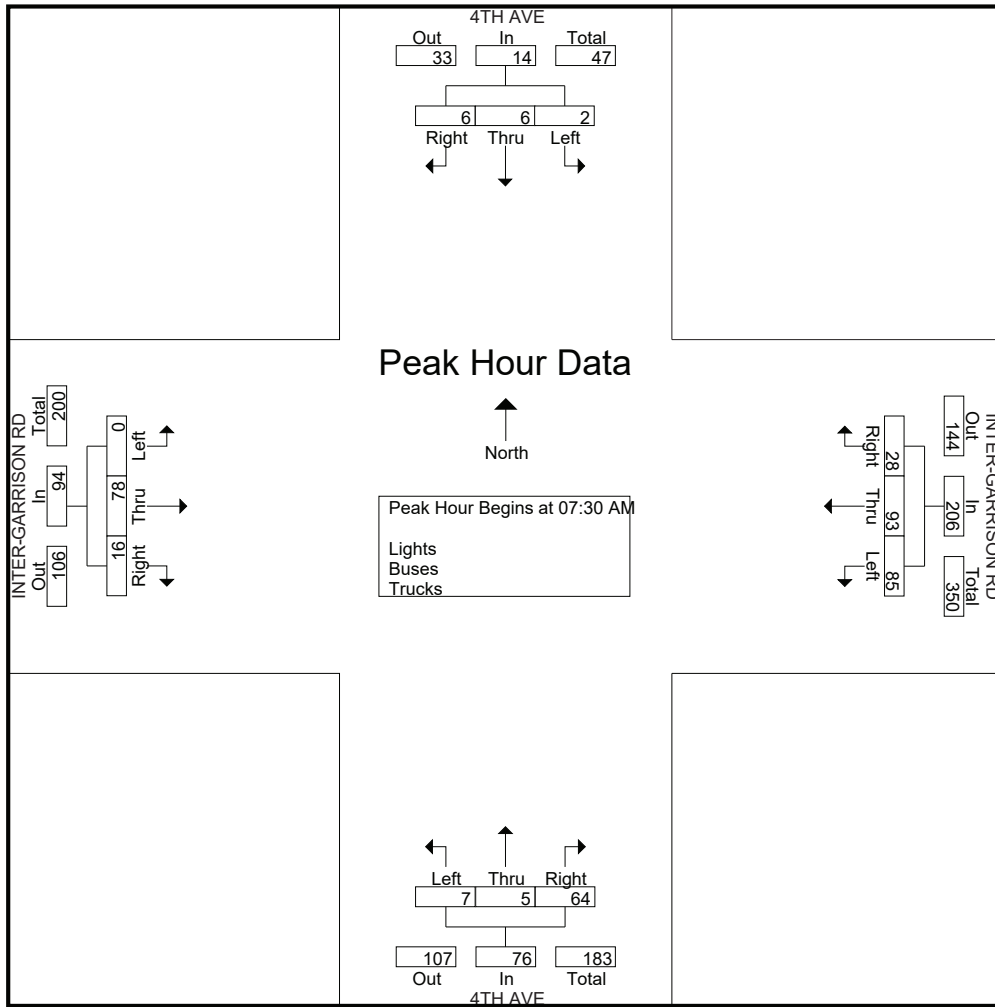
Start Time	4TH AVE Southbound					INTER-GARRISON RD Westbound					4TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	1	0	1	2	0	8	6	0	14	5	0	1	1	7	1	10	0	0	11	34
07:15 AM	0	2	1	0	3	1	13	18	0	32	10	1	0	1	12	0	9	0	0	9	56
07:30 AM	1	1	0	3	5	5	11	29	1	46	16	1	1	6	24	8	8	0	0	16	91
07:45 AM	1	2	1	10	14	10	25	23	6	64	26	3	3	3	35	3	18	0	2	23	136
Total	2	6	2	14	24	16	57	76	7	156	57	5	5	11	78	12	45	0	2	59	317
08:00 AM	1	1	0	5	7	7	29	18	2	56	15	1	2	3	21	3	22	0	2	27	111
08:15 AM	3	2	1	11	17	6	28	15	8	57	7	0	1	6	14	2	30	0	4	36	124
08:30 AM	0	1	0	2	3	4	19	8	3	34	5	0	1	5	11	2	17	1	1	21	69
08:45 AM	2	1	1	2	6	7	17	11	1	36	3	0	3	3	9	2	20	0	1	23	74
Total	6	5	2	20	33	24	93	52	14	183	30	1	7	17	55	9	89	1	8	107	378
Grand Total	8	11	4	34	57	40	150	128	21	339	87	6	12	28	133	21	134	1	10	166	695
Apprch %	14	19.3	7	59.6		11.8	44.2	37.8	6.2		65.4	4.5	9	21.1		12.7	80.7	0.6	6		
Total %	1.2	1.6	0.6	4.9	8.2	5.8	21.6	18.4	3	48.8	12.5	0.9	1.7	4	19.1	3	19.3	0.1	1.4	23.9	
Lights	8	11	4	34	57	40	144	125	21	330	79	6	12	28	125	20	125	1	10	156	668
% Lights	100	100	100	100	100	100	96	97.7	100	97.3	90.8	100	100	100	94	95.2	93.3	100	100	94	96.1
Buses	0	0	0	0	0	0	1	0	0	1	5	0	0	0	5	0	5	0	0	5	11
% Buses	0	0	0	0	0	0	0.7	0	0	0.3	5.7	0	0	0	3.8	0	3.7	0	0	3	1.6
Trucks	0	0	0	0	0	0	5	3	0	8	3	0	0	0	3	1	4	0	0	5	16
% Trucks	0	0	0	0	0	0	3.3	2.3	0	2.4	3.4	0	0	0	2.3	4.8	3	0	0	3	2.3

Start Time	4TH AVE Southbound				INTER-GARRISON RD Westbound				4TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	1	0	2	5	11	29	45	16	1	1	18	8	8	0	16	81
07:45 AM	1	2	1	4	10	25	23	58	26	3	3	32	3	18	0	21	115
08:00 AM	1	1	0	2	7	29	18	54	15	1	2	18	3	22	0	25	99
08:15 AM	3	2	1	6	6	28	15	49	7	0	1	8	2	30	0	32	95
Total Volume	6	6	2	14	28	93	85	206	64	5	7	76	16	78	0	94	390
% App. Total	42.9	42.9	14.3		13.6	45.1	41.3		84.2	6.6	9.2		17	83	0		
PHF	.500	.750	.500	.583	.700	.802	.733	.888	.615	.417	.583	.594	.500	.650	.000	.734	.848

Traffic Data Service

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File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	4TH AVE Southbound					INTER-GARRISON RD Westbound					4TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total		
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total			
07:00 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3
Total	1	0	1	0	2	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	1	0	1	0	2	0	2	1	1	4	0	0	2	0	2	0	0	0	0	0	0	0	8
Apprch %	50	0	50	0		0	50	25	25		0	0	100	0		0	0	0	0	0	0		
Total %	12.5	0	12.5	0	25	0	25	12.5	12.5	50	0	0	25	0	25	0	0	0	0	0	0		

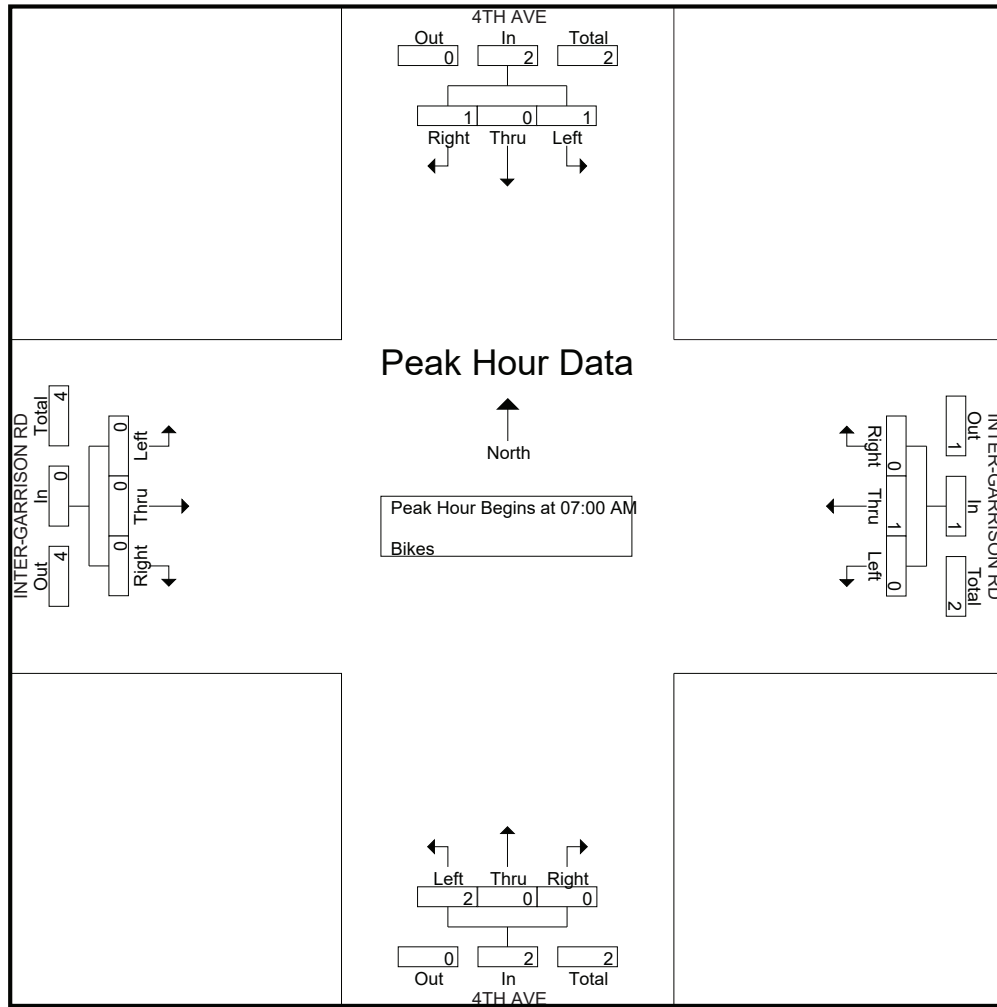
Start Time	4TH AVE Southbound					INTER-GARRISON RD Westbound					4TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total		
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total			
07:00 AM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3
Total Volume	1	0	1	0	2	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	5
% App. Total	50	0	50	0		0	100	0	0		0	0	100	0		0	0	0	0	0	0		
PHF	.250	.000	.250	.000	.500	.000	.250	.000	.000	.250	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.417

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 5AM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

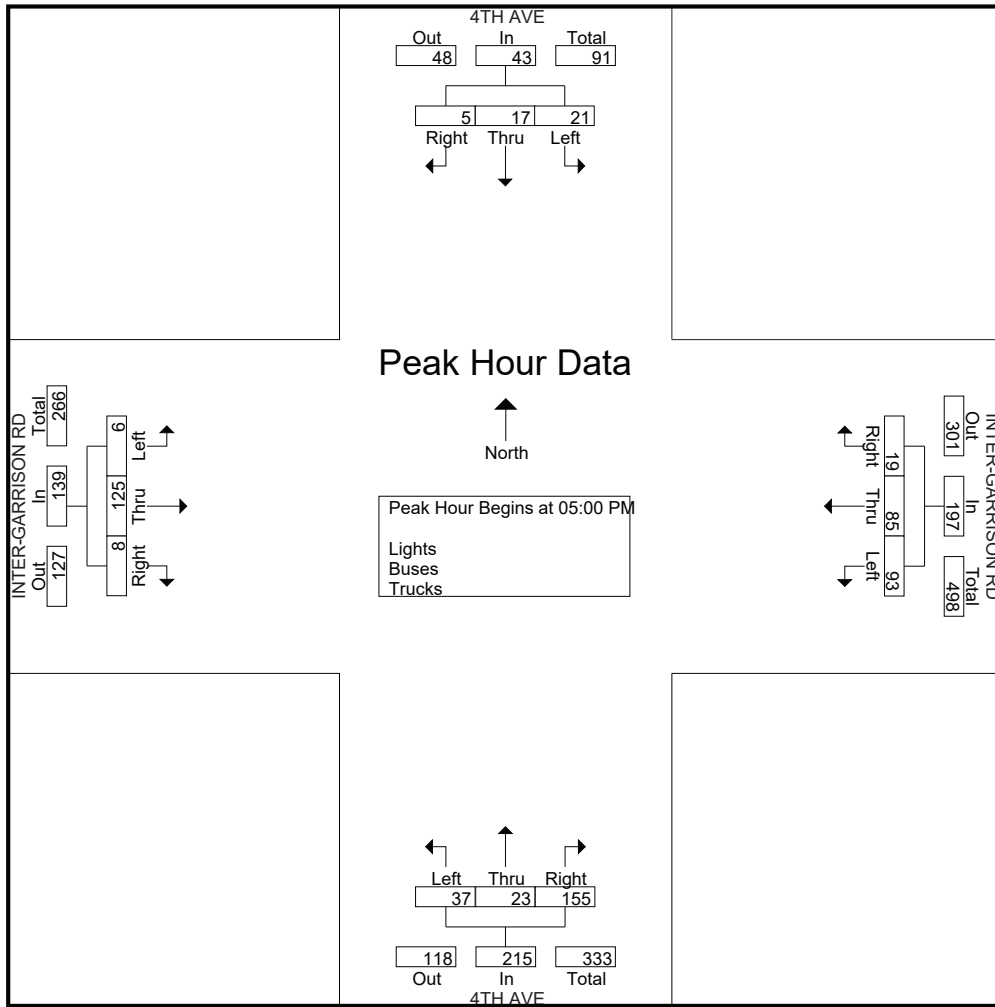
Start Time	4TH AVE Southbound					INTER-GARRISON RD Westbound					4TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	2	3	8	14	7	23	18	2	50	30	6	3	10	49	4	28	2	5	39	152
04:15 PM	0	2	3	2	7	2	19	9	0	30	26	4	4	6	40	0	12	1	3	16	93
04:30 PM	1	4	6	5	16	7	17	10	4	38	23	7	2	5	37	0	23	0	1	24	115
04:45 PM	1	3	7	6	17	4	16	11	1	32	33	9	8	8	58	4	28	2	3	37	144
Total	3	11	19	21	54	20	75	48	7	150	112	26	17	29	184	8	91	5	12	116	504
05:00 PM	2	6	4	7	19	4	10	18	5	37	34	3	7	4	48	1	29	1	1	32	136
05:15 PM	1	4	6	12	23	7	21	26	6	60	34	7	3	9	53	1	36	0	3	40	176
05:30 PM	1	3	6	11	21	5	17	21	5	48	44	6	10	11	71	2	30	3	5	40	180
05:45 PM	1	4	5	8	18	3	37	28	4	72	43	7	17	10	77	4	30	2	7	43	210
Total	5	17	21	38	81	19	85	93	20	217	155	23	37	34	249	8	125	6	16	155	702
Grand Total	8	28	40	59	135	39	160	141	27	367	267	49	54	63	433	16	216	11	28	271	1206
Apprch %	5.9	20.7	29.6	43.7		10.6	43.6	38.4	7.4		61.7	11.3	12.5	14.5		5.9	79.7	4.1	10.3		
Total %	0.7	2.3	3.3	4.9	11.2	3.2	13.3	11.7	2.2	30.4	22.1	4.1	4.5	5.2	35.9	1.3	17.9	0.9	2.3	22.5	
Lights	8	28	40	59	135	39	158	140	27	364	256	49	54	63	422	16	211	11	28	266	1187
% Lights	100	100	100	100	100	100	98.8	99.3	100	99.2	95.9	100	100	100	97.5	100	97.7	100	100	98.2	98.4
Buses	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	4	0	0	4	11
% Buses	0	0	0	0	0	0	0	0	0	0	2.6	0	0	0	1.6	0	1.9	0	0	1.5	0.9
Trucks	0	0	0	0	0	0	2	1	0	3	4	0	0	0	4	0	1	0	0	1	8
% Trucks	0	0	0	0	0	0	1.2	0.7	0	0.8	1.5	0	0	0	0.9	0	0.5	0	0	0.4	0.7

Start Time	4TH AVE Southbound				INTER-GARRISON RD Westbound				4TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	6	4	12	4	10	18	32	34	3	7	44	1	29	1	31	119
05:15 PM	1	4	6	11	7	21	26	54	34	7	3	44	1	36	0	37	146
05:30 PM	1	3	6	10	5	17	21	43	44	6	10	60	2	30	3	35	148
05:45 PM	1	4	5	10	3	37	28	68	43	7	17	67	4	30	2	36	181
Total Volume	5	17	21	43	19	85	93	197	155	23	37	215	8	125	6	139	594
% App. Total	11.6	39.5	48.8		9.6	43.1	47.2		72.1	10.7	17.2		5.8	89.9	4.3		
PHF	.625	.708	.875	.896	.679	.574	.830	.724	.881	.821	.544	.802	.500	.868	.500	.939	.820

Traffic Data Service

San Jose, CA
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File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

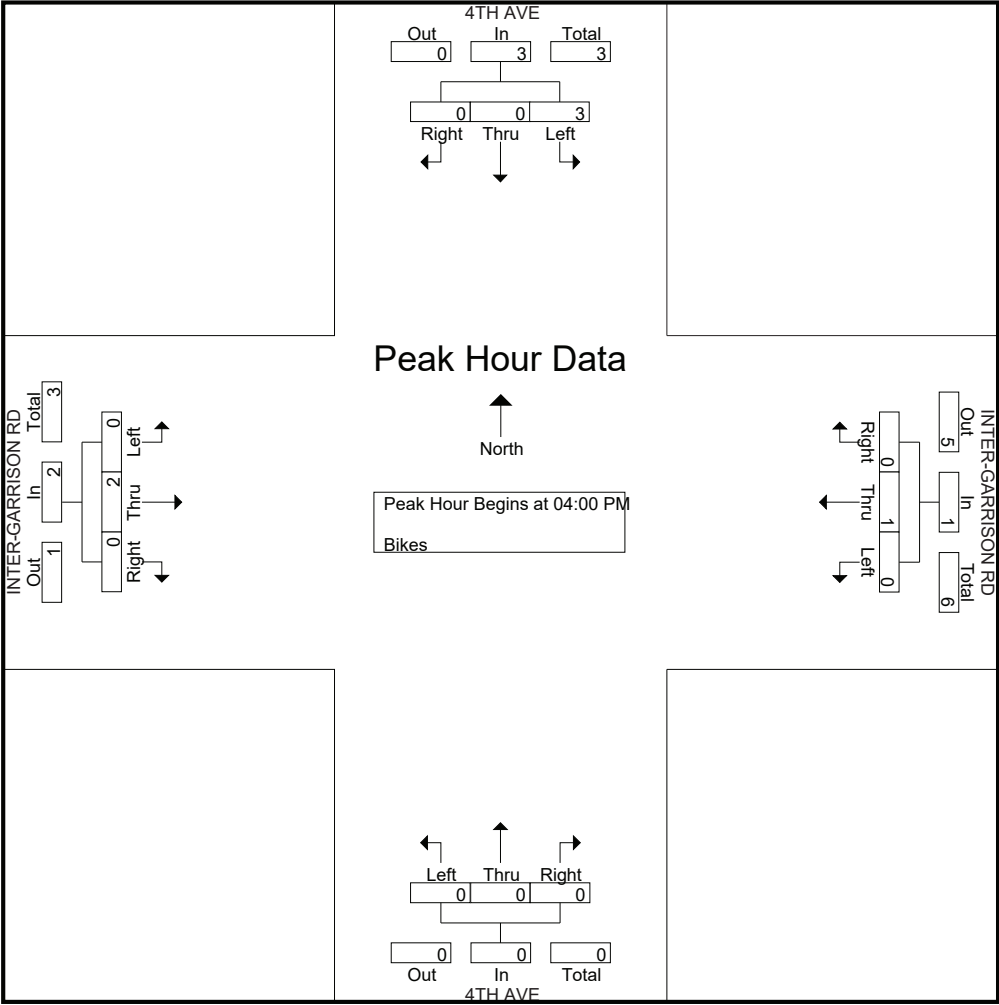
Start Time	4TH AVE Southbound					INTER-GARRISON RD Westbound					4TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	3	0	3	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	2	0	0	3	5
Grand Total	0	0	3	0	3	0	1	1	0	2	0	1	0	0	1	1	4	0	0	5	11
Apprch %	0	0	100	0		0	50	50	0		0	100	0	0		20	80	0	0		
Total %	0	0	27.3	0	27.3	0	9.1	9.1	0	18.2	0	9.1	0	0	9.1	9.1	36.4	0	0	45.5	

Start Time	4TH AVE Southbound				INTER-GARRISON RD Westbound				4TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	2	2	0	1	0	1	0	0	0	0	0	1	0	1	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	3	3	0	1	0	1	0	0	0	0	0	2	0	2	6
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.375	.375	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.375

Traffic Data Service

San Jose, CA
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File Name : 5PM FINAL
 Site Code : 00000005
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 6AM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

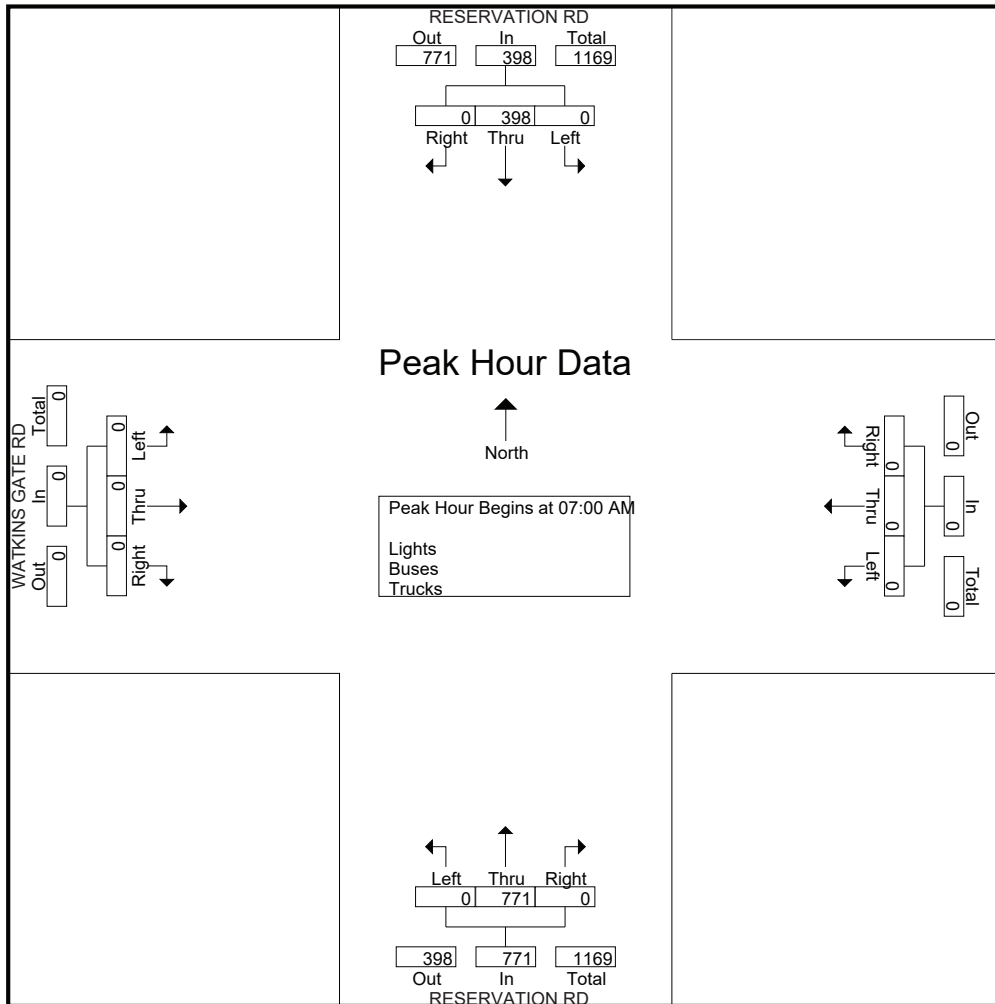
Start Time	RESERVATION RD Southbound					Westbound					RESERVATION RD Northbound					WATKINS GATE RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	77	0	0	77	0	0	0	0	0	0	190	0	0	190	0	0	0	0	0	267
07:15 AM	0	91	0	0	91	0	0	0	0	0	0	202	0	0	202	0	0	0	0	0	293
07:30 AM	0	116	0	0	116	0	0	0	0	0	0	218	0	0	218	0	0	0	0	0	334
07:45 AM	0	114	0	0	114	0	0	0	0	0	0	161	0	0	161	0	0	0	0	0	275
Total	0	398	0	0	398	0	0	0	0	0	0	771	0	0	771	0	0	0	0	0	1169
08:00 AM	0	91	0	0	91	0	0	0	0	0	0	149	0	0	149	0	0	0	0	0	240
08:15 AM	0	77	0	0	77	0	0	0	0	0	0	153	0	0	153	0	0	0	0	0	230
08:30 AM	0	51	0	0	51	0	0	0	0	0	0	111	0	0	111	0	0	0	0	0	162
08:45 AM	0	60	0	0	60	0	0	0	0	0	0	88	0	0	88	0	0	0	0	0	148
Total	0	279	0	0	279	0	0	0	0	0	0	501	0	0	501	0	0	0	0	0	780
Grand Total	0	677	0	0	677	0	0	0	0	0	0	1272	0	0	1272	0	0	0	0	0	1949
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	34.7	0	0	34.7	0	0	0	0	0	0	65.3	0	0	65.3	0	0	0	0	0	
Lights	0	655	0	0	655	0	0	0	0	0	0	1243	0	0	1243	0	0	0	0	0	1898
% Lights	0	96.8	0	0	96.8	0	0	0	0	0	0	97.7	0	0	97.7	0	0	0	0	0	97.4
Buses	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
% Buses	0	0.6	0	0	0.6	0	0	0	0	0	0	0.5	0	0	0.5	0	0	0	0	0	0.5
Trucks	0	18	0	0	18	0	0	0	0	0	0	23	0	0	23	0	0	0	0	0	41
% Trucks	0	2.7	0	0	2.7	0	0	0	0	0	0	1.8	0	0	1.8	0	0	0	0	0	2.1

Start Time	RESERVATION RD Southbound				Westbound				RESERVATION RD Northbound				WATKINS GATE RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	0	77	0	77	0	0	0	0	0	0	190	0	190	0	0	0	0	267
07:15 AM	0	91	0	91	0	0	0	0	0	0	202	0	202	0	0	0	0	293
07:30 AM	0	116	0	116	0	0	0	0	0	0	218	0	218	0	0	0	0	334
07:45 AM	0	114	0	114	0	0	0	0	0	0	161	0	161	0	0	0	0	275
Total Volume	0	398	0	398	0	0	0	0	0	0	771	0	771	0	0	0	0	1169
% App. Total	0	100	0		0	0	0		0	0	100	0		0	0	0		
PHF	.000	.858	.000	.858	.000	.000	.000	.000	.000	.000	.884	.000	.884	.000	.000	.000	.000	.875

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 6AM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 6AM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	RESERVATION RD Southbound					Westbound					RESERVATION RD Northbound					WATKINS GATE RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

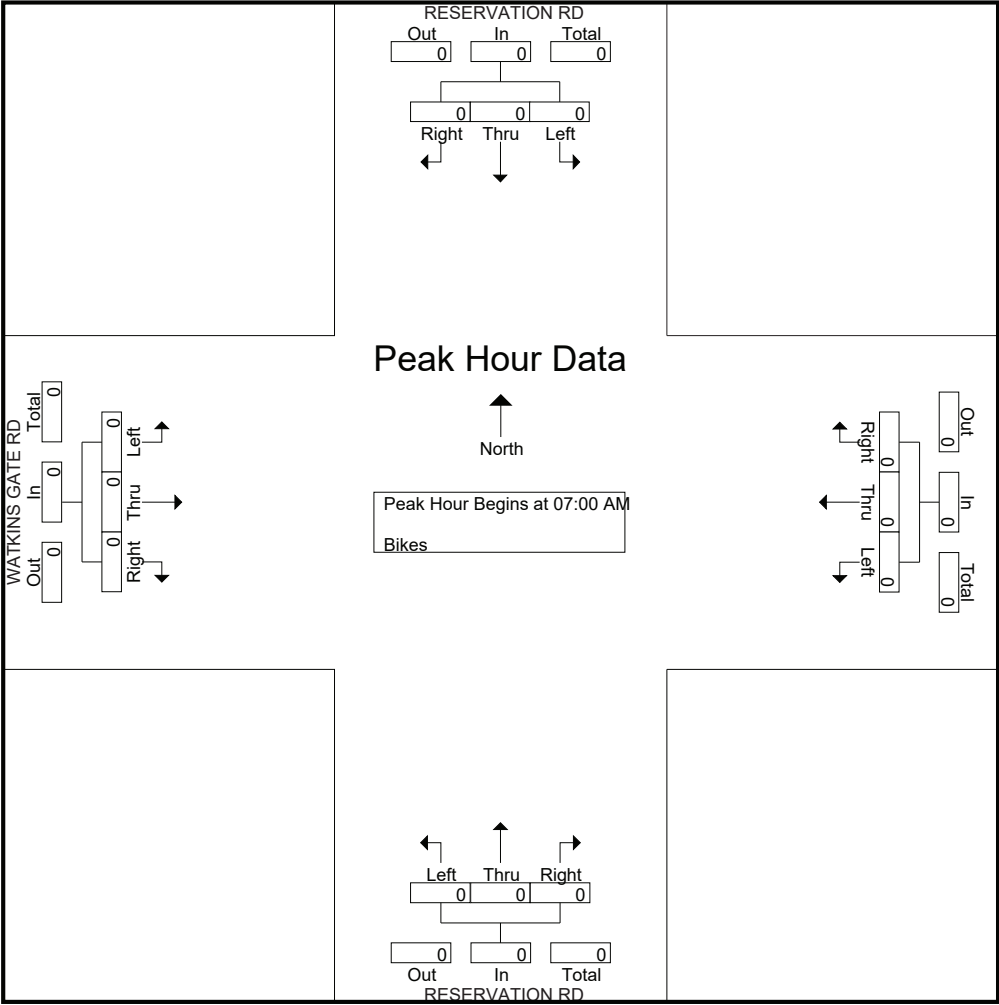
Start Time	RESERVATION RD Southbound				Westbound				RESERVATION RD Northbound				WATKINS GATE RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

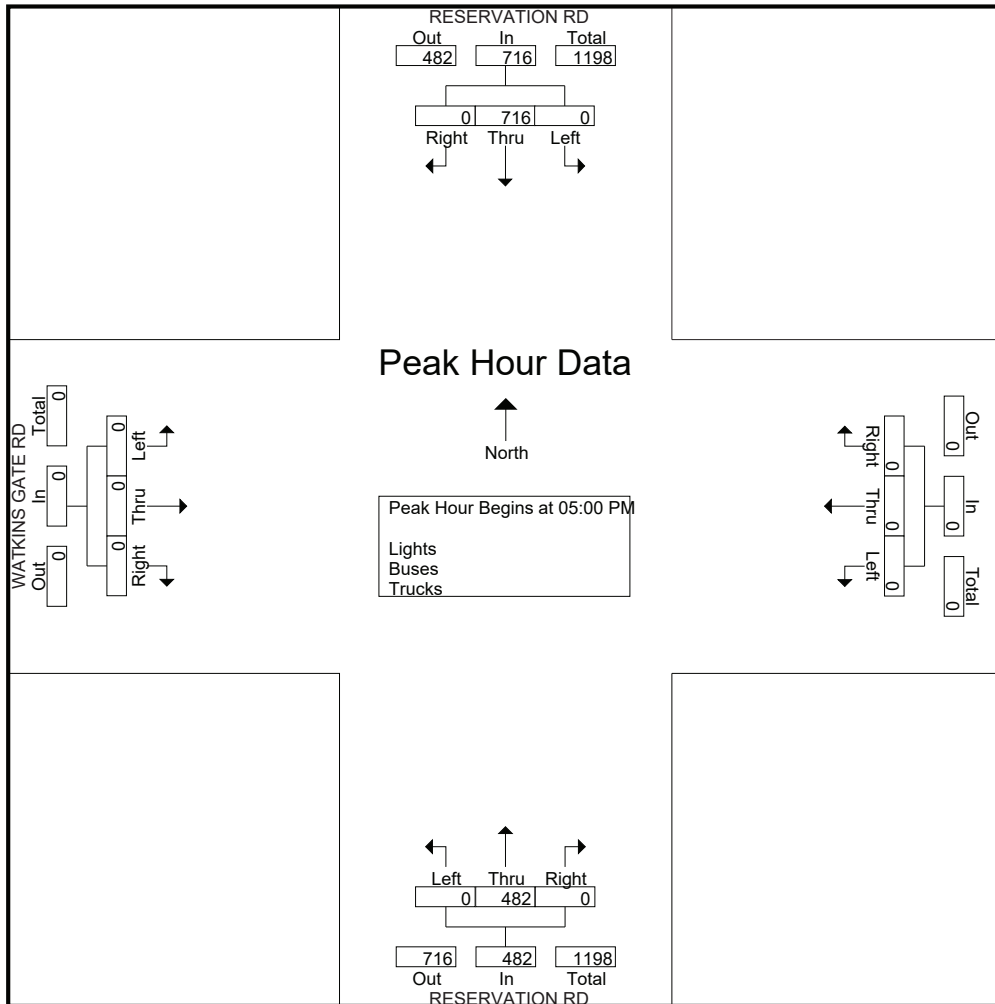
File Name : 6AM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	RESERVATION RD Southbound					Westbound					RESERVATION RD Northbound					WATKINS GATE RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	0	0		0	100	0	0	100	0	0	0	0		

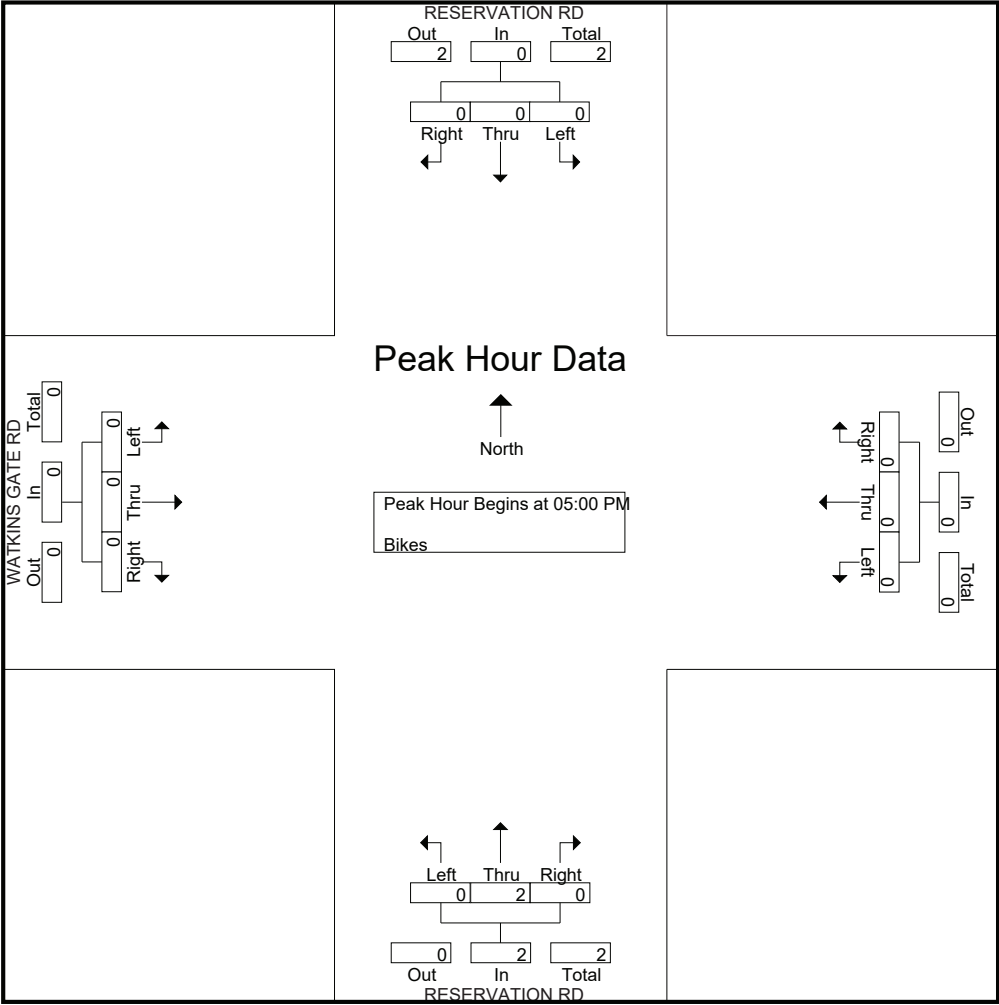
Start Time	RESERVATION RD Southbound					Westbound					RESERVATION RD Northbound					WATKINS GATE RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
% App. Total	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.500	.000	.500		.000	.000	.000	.000		.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:00 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 6PM FINAL
 Site Code : 00000006
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 7AM FINAL
 Site Code : 00000007
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

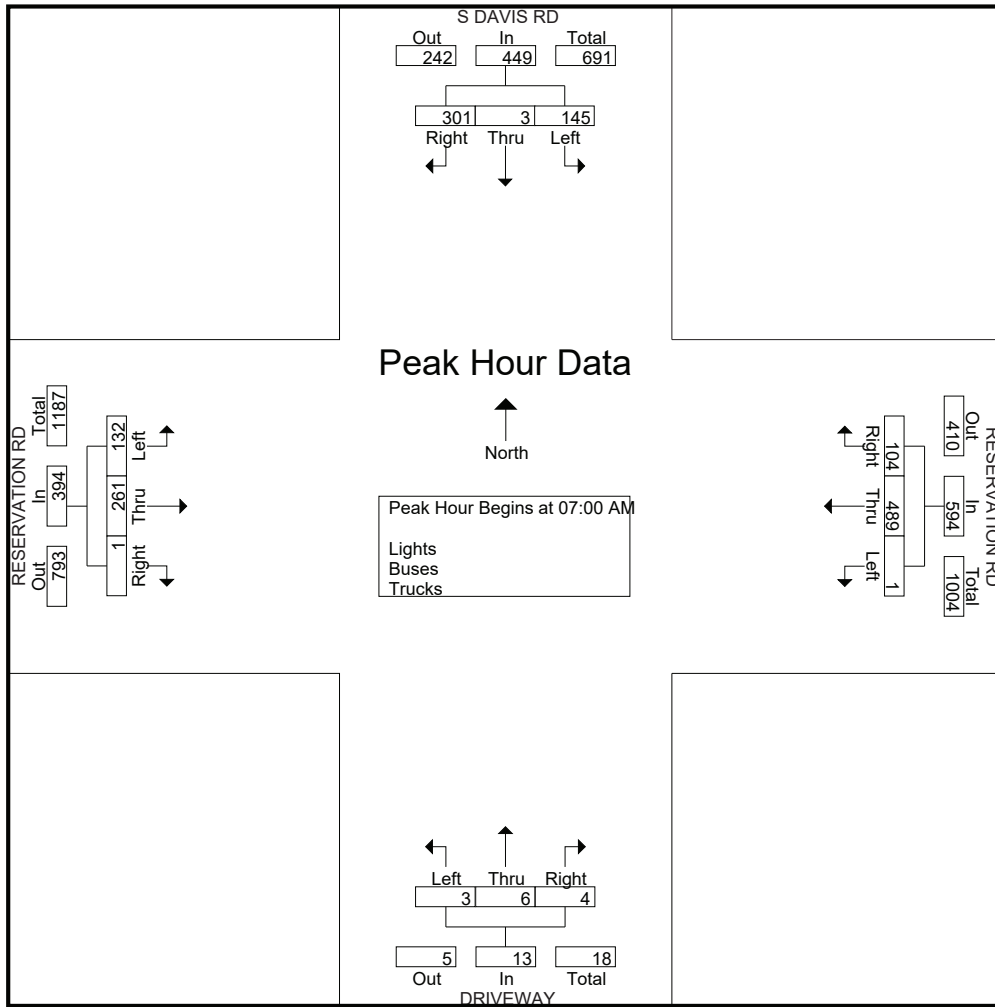
Start Time	S DAVIS RD Southbound					RESERVATION RD Westbound					DRIVEWAY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	96	0	32	0	128	14	102	1	0	117	0	3	0	0	3	0	52	19	0	71	319
07:15 AM	83	1	32	0	116	24	128	0	0	152	1	0	1	0	2	0	49	30	0	79	349
07:30 AM	74	2	38	0	114	38	138	0	0	176	3	1	2	0	6	1	78	48	0	127	423
07:45 AM	48	0	43	0	91	28	121	0	0	149	0	2	0	0	2	0	82	35	0	117	359
Total	301	3	145	0	449	104	489	1	0	594	4	6	3	0	13	1	261	132	0	394	1450
08:00 AM	45	1	39	0	85	33	92	0	0	125	0	1	0	0	1	1	59	40	0	100	311
08:15 AM	43	2	36	0	81	19	106	0	0	125	1	0	0	0	1	0	52	23	0	75	282
08:30 AM	27	2	27	0	56	27	81	1	0	109	1	1	3	0	5	0	42	14	0	56	226
08:45 AM	20	0	37	0	57	33	61	1	0	95	0	0	0	0	0	0	34	23	0	57	209
Total	135	5	139	0	279	112	340	2	0	454	2	2	3	0	7	1	187	100	0	288	1028
Grand Total	436	8	284	0	728	216	829	3	0	1048	6	8	6	0	20	2	448	232	0	682	2478
Apprch %	59.9	1.1	39	0		20.6	79.1	0.3	0		30	40	30	0		0.3	65.7	34	0		
Total %	17.6	0.3	11.5	0	29.4	8.7	33.5	0.1	0	42.3	0.2	0.3	0.2	0	0.8	0.1	18.1	9.4	0	27.5	
Lights	426	8	265	0	699	213	809	3	0	1025	6	8	6	0	20	2	434	223	0	659	2403
% Lights	97.7	100	93.3	0	96	98.6	97.6	100	0	97.8	100	100	100	0	100	100	96.9	96.1	0	96.6	97
Buses	3	0	3	0	6	0	4	0	0	4	0	0	0	0	0	0	2	2	0	4	14
% Buses	0.7	0	1.1	0	0.8	0	0.5	0	0	0.4	0	0	0	0	0	0	0.4	0.9	0	0.6	0.6
Trucks	7	0	16	0	23	3	16	0	0	19	0	0	0	0	0	0	12	7	0	19	61
% Trucks	1.6	0	5.6	0	3.2	1.4	1.9	0	0	1.8	0	0	0	0	0	0	2.7	3	0	2.8	2.5

Start Time	S DAVIS RD Southbound				RESERVATION RD Westbound				DRIVEWAY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	96	0	32	128	14	102	1	117	0	3	0	3	0	52	19	71	319
07:15 AM	83	1	32	116	24	128	0	152	1	0	1	2	0	49	30	79	349
07:30 AM	74	2	38	114	38	138	0	176	3	1	2	6	1	78	48	127	423
07:45 AM	48	0	43	91	28	121	0	149	0	2	0	2	0	82	35	117	359
Total Volume	301	3	145	449	104	489	1	594	4	6	3	13	1	261	132	394	1450
% App. Total	67	0.7	32.3		17.5	82.3	0.2		30.8	46.2	23.1		0.3	66.2	33.5		
PHF	.784	.375	.843	.877	.684	.886	.250	.844	.333	.500	.375	.542	.250	.796	.688	.776	.857

Traffic Data Service

San Jose, CA
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Traffic Data Service

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File Name : 7AM FINAL
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 Page No : 1

Groups Printed- Bikes

Start Time	S DAVIS RD Southbound					RESERVATION RD Westbound					DRIVEWAY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	1	0	0	0	1	3
Apprch %	0	0	0	0	0	100	0	0	0	100	100	0	0	0	100	100	0	0	0	100	
Total %	0	0	0	0	0	33.3	0	0	0	33.3	33.3	0	0	0	33.3	33.3	0	0	0	33.3	

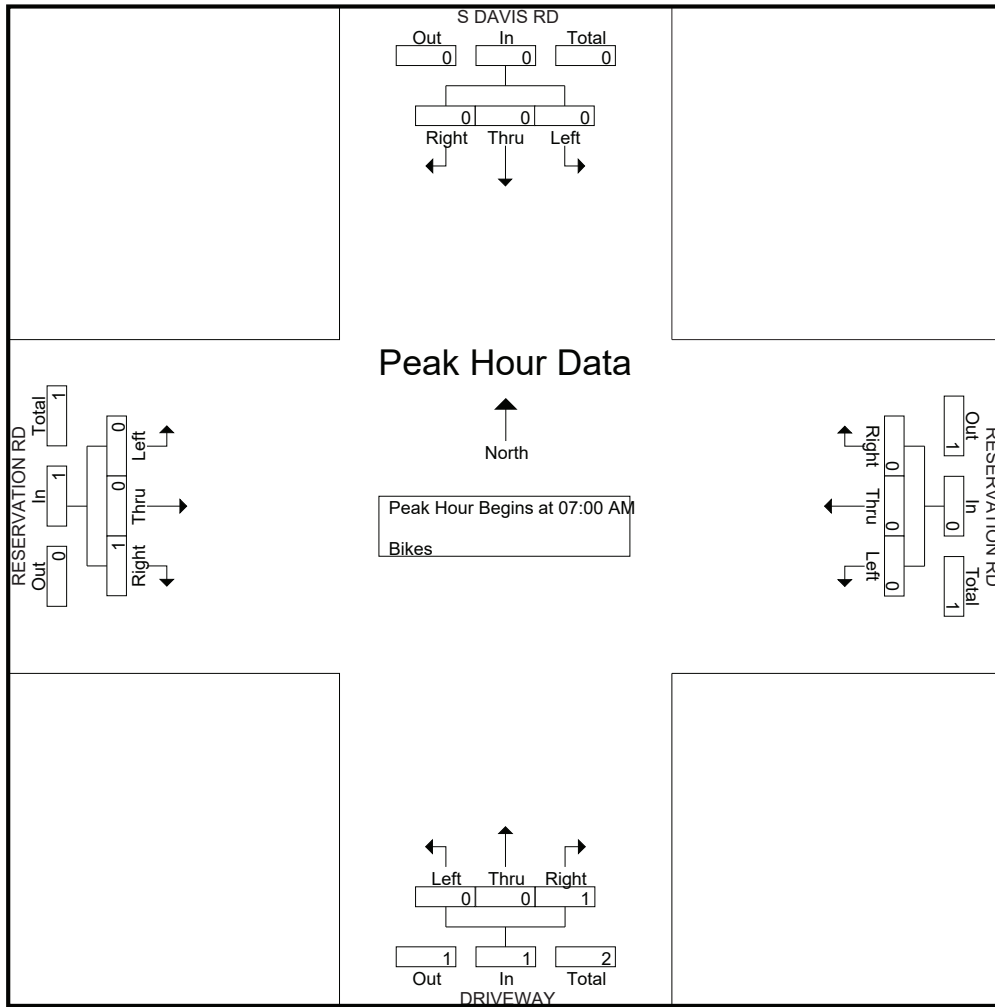
Start Time	S DAVIS RD Southbound					RESERVATION RD Westbound					DRIVEWAY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	2
% App. Total	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100	100	0	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.250	.250		

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

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File Name : 7PM FINAL
 Site Code : 00000007
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

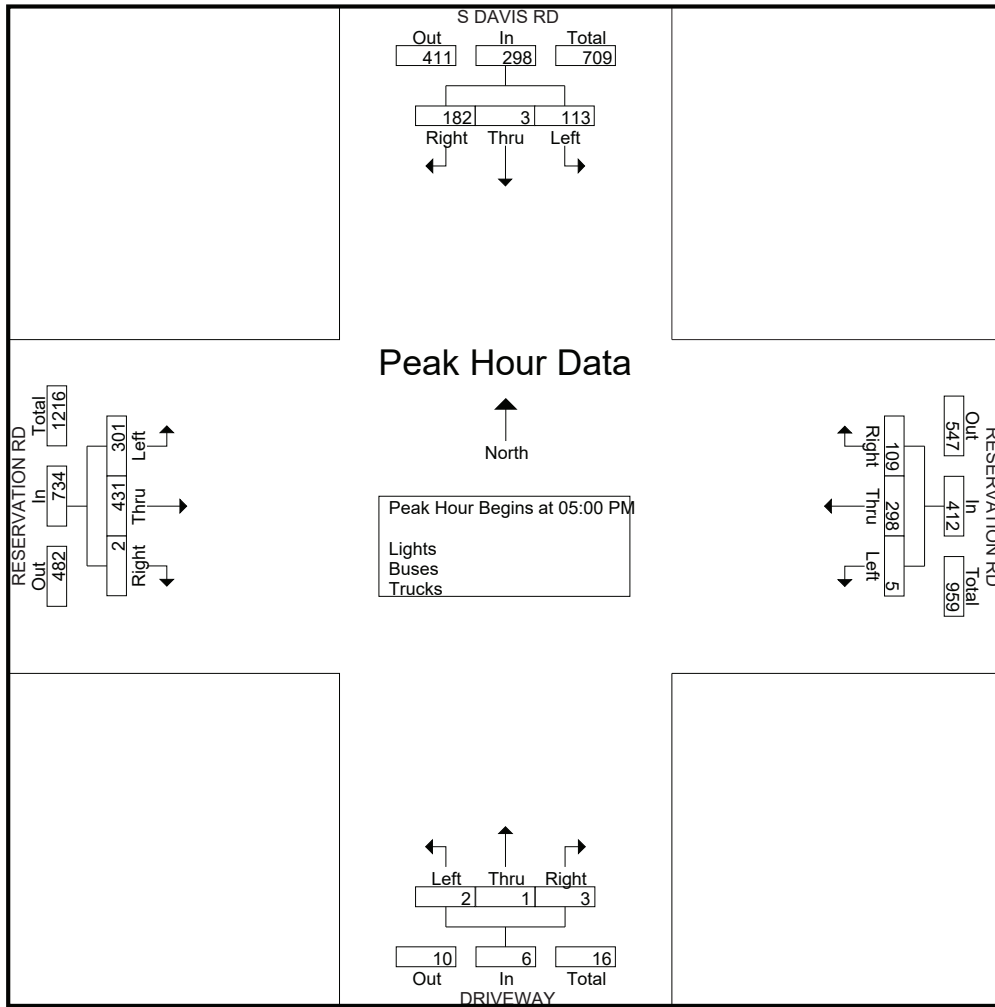
Start Time	S DAVIS RD Southbound					RESERVATION RD Westbound					DRIVEWAY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	33	1	23	0	57	27	65	1	0	93	1	0	0	0	1	1	96	59	0	156	307
04:15 PM	27	0	37	0	64	24	78	0	0	102	0	0	0	0	0	0	101	79	0	180	346
04:30 PM	32	2	33	0	67	27	59	1	0	87	1	0	0	0	1	0	86	52	0	138	293
04:45 PM	19	1	31	0	51	17	75	0	0	92	1	0	1	0	2	0	106	74	0	180	325
Total	111	4	124	0	239	95	277	2	0	374	3	0	1	0	4	1	389	264	0	654	1271
05:00 PM	39	1	23	0	63	47	71	0	0	118	0	1	0	0	1	0	119	71	0	190	372
05:15 PM	67	0	34	0	101	26	80	0	0	106	1	0	2	0	3	1	98	77	0	176	386
05:30 PM	36	2	26	0	64	20	82	2	0	104	0	0	0	0	0	0	111	75	0	186	354
05:45 PM	40	0	30	0	70	16	65	3	0	84	2	0	0	0	2	1	103	78	0	182	338
Total	182	3	113	0	298	109	298	5	0	412	3	1	2	0	6	2	431	301	0	734	1450
Grand Total	293	7	237	0	537	204	575	7	0	786	6	1	3	0	10	3	820	565	0	1388	2721
Apprch %	54.6	1.3	44.1	0		26	73.2	0.9	0		60	10	30	0		0.2	59.1	40.7	0		
Total %	10.8	0.3	8.7	0	19.7	7.5	21.1	0.3	0	28.9	0.2	0	0.1	0	0.4	0.1	30.1	20.8	0	51	
Lights	290	7	228	0	525	193	556	7	0	756	6	1	3	0	10	3	798	559	0	1360	2651
% Lights	99	100	96.2	0	97.8	94.6	96.7	100	0	96.2	100	100	100	0	100	100	97.3	98.9	0	98	97.4
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	5
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.4	0.2
Trucks	3	0	9	0	12	11	19	0	0	30	0	0	0	0	0	0	17	6	0	23	65
% Trucks	1	0	3.8	0	2.2	5.4	3.3	0	0	3.8	0	0	0	0	0	0	2.1	1.1	0	1.7	2.4

Start Time	S DAVIS RD Southbound				RESERVATION RD Westbound				DRIVEWAY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	39	1	23	63	47	71	0	118	0	1	0	1	0	119	71	190	372
05:15 PM	67	0	34	101	26	80	0	106	1	0	2	3	1	98	77	176	386
05:30 PM	36	2	26	64	20	82	2	104	0	0	0	0	0	111	75	186	354
05:45 PM	40	0	30	70	16	65	3	84	2	0	0	2	1	103	78	182	338
Total Volume	182	3	113	298	109	298	5	412	3	1	2	6	2	431	301	734	1450
% App. Total	61.1	1	37.9		26.5	72.3	1.2		50	16.7	33.3		0.3	58.7	41		
PHF	.679	.375	.831	.738	.580	.909	.417	.873	.375	.250	.250	.500	.500	.905	.965	.966	.939

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 Page No : 2



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 Page No : 1

Groups Printed- Bikes

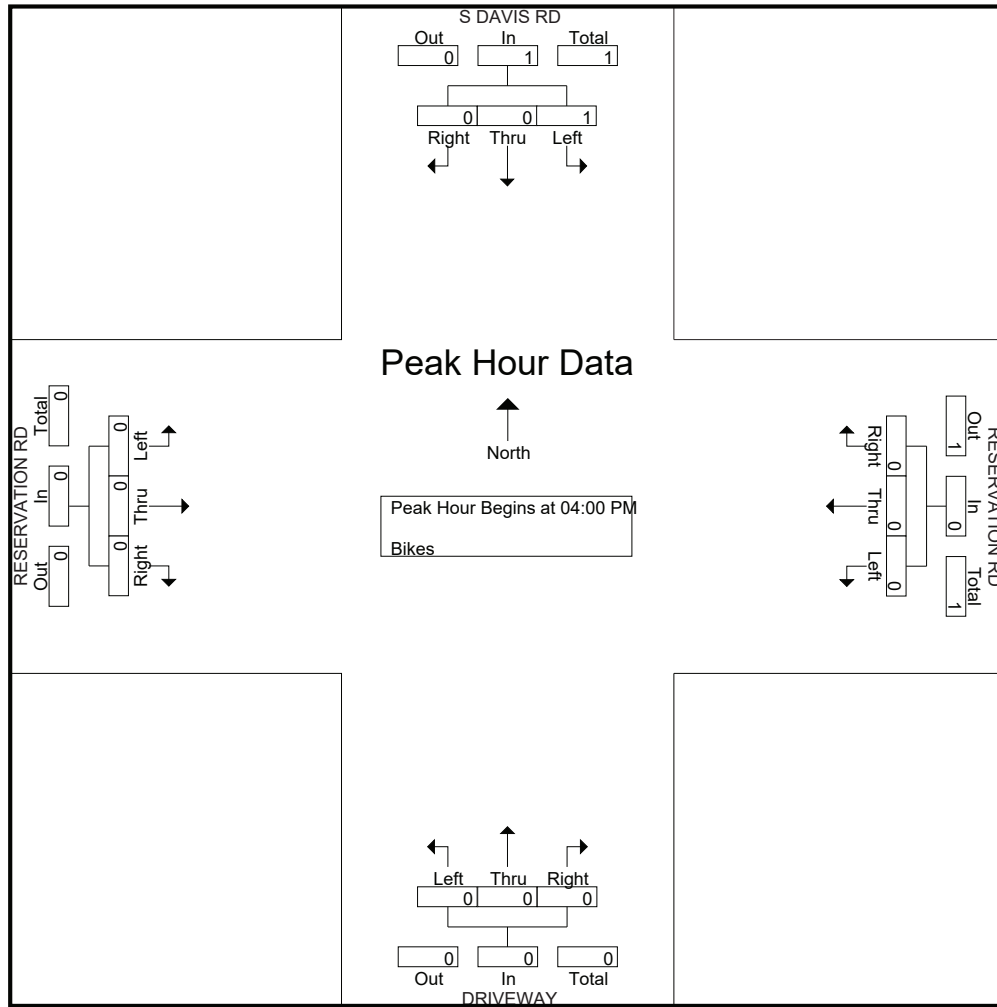
Start Time	S DAVIS RD Southbound					RESERVATION RD Westbound					DRIVEWAY Northbound					RESERVATION RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	50	0	50	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	50	0	50	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Start Time	S DAVIS RD Southbound				RESERVATION RD Westbound				DRIVEWAY Northbound				RESERVATION RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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Page No : 2



Traffic Data Service

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File Name : 8AM FINAL
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 Page No : 1

Groups Printed- Lights - Buses - Trucks

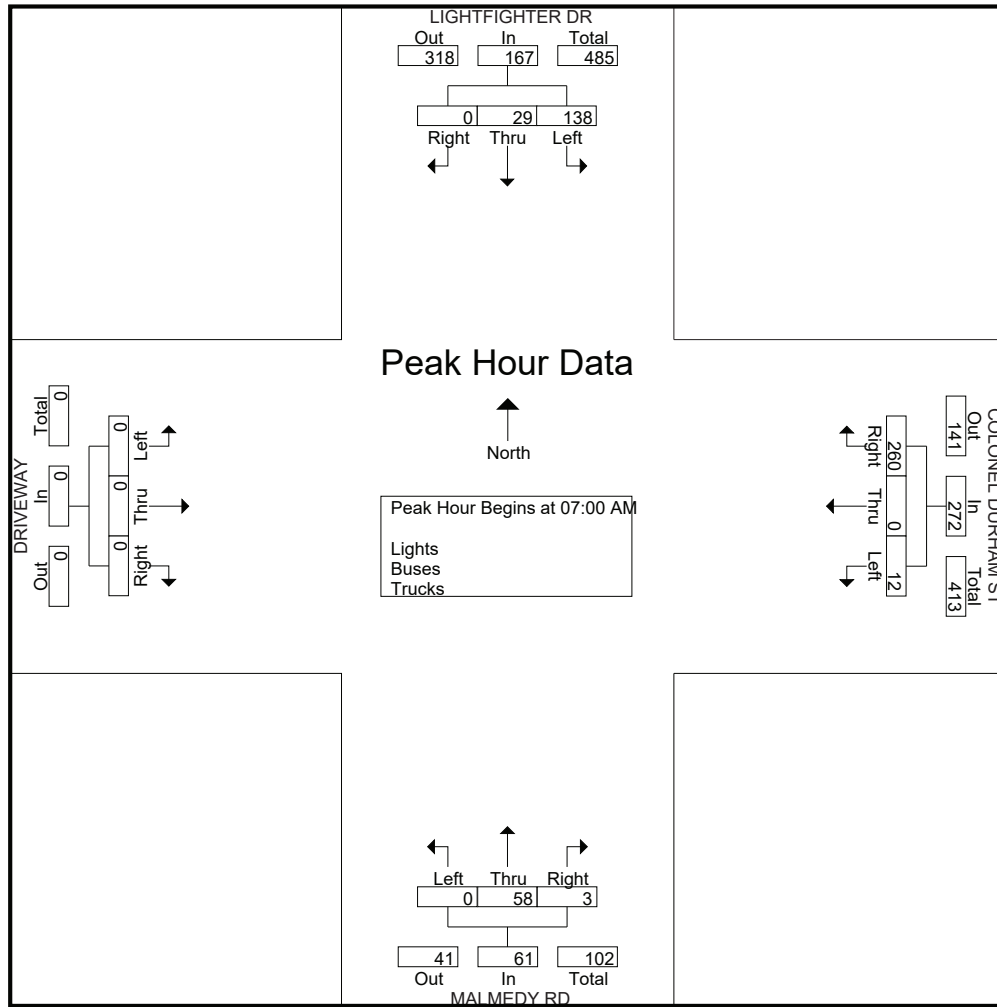
Start Time	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	0	3	20	0	23	64	0	1	0	65	0	9	0	0	9	0	0	0	0	0	0	97
07:15 AM	0	5	28	0	33	74	0	2	0	76	0	19	0	0	19	0	0	0	0	0	0	128
07:30 AM	0	7	44	0	51	89	0	6	0	95	3	14	0	0	17	0	0	0	0	0	0	163
07:45 AM	0	14	46	0	60	33	0	3	0	36	0	16	0	0	16	0	0	0	0	0	0	112
Total	0	29	138	0	167	260	0	12	0	272	3	58	0	0	61	0	0	0	0	0	0	500
08:00 AM	1	15	29	0	45	34	0	4	0	38	1	12	0	0	13	1	0	0	0	0	1	97
08:15 AM	1	9	42	0	52	27	0	1	0	28	1	12	0	0	13	0	0	0	0	0	0	93
08:30 AM	1	12	34	0	47	29	0	0	0	29	0	2	0	0	2	0	0	1	0	1	1	79
08:45 AM	0	12	36	0	48	22	0	0	0	22	1	9	0	0	10	0	0	0	0	0	0	80
Total	3	48	141	0	192	112	0	5	0	117	3	35	0	0	38	1	0	1	0	2	2	349
Grand Total	3	77	279	0	359	372	0	17	0	389	6	93	0	0	99	1	0	1	0	2	2	849
Apprch %	0.8	21.4	77.7	0		95.6	0	4.4	0		6.1	93.9	0	0		50	0	50	0			
Total %	0.4	9.1	32.9	0	42.3	43.8	0	2	0	45.8	0.7	11	0	0	11.7	0.1	0	0.1	0	0.2		
Lights	1	76	270	0	347	362	0	15	0	377	5	89	0	0	94	1	0	0	0	1	1	819
% Lights	33.3	98.7	96.8	0	96.7	97.3	0	88.2	0	96.9	83.3	95.7	0	0	94.9	100	0	0	0	50	96.5	
Buses	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Buses	0	0	2.5	0	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.8
Trucks	2	1	2	0	5	10	0	2	0	12	1	4	0	0	5	0	0	1	0	1	1	23
% Trucks	66.7	1.3	0.7	0	1.4	2.7	0	11.8	0	3.1	16.7	4.3	0	0	5.1	0	0	100	0	50	2.7	

Start Time	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	3	20	23	64	0	1	65	0	9	0	9	0	0	0	0	97
07:15 AM	0	5	28	33	74	0	2	76	0	19	0	19	0	0	0	0	128
07:30 AM	0	7	44	51	89	0	6	95	3	14	0	17	0	0	0	0	163
07:45 AM	0	14	46	60	33	0	3	36	0	16	0	16	0	0	0	0	112
Total Volume	0	29	138	167	260	0	12	272	3	58	0	61	0	0	0	0	500
% App. Total	0	17.4	82.6		95.6	0	4.4		4.9	95.1	0		0	0	0		
PHF	.000	.518	.750	.696	.730	.000	.500	.716	.250	.763	.000	.803	.000	.000	.000	.000	.767

Traffic Data Service

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 Page No : 2



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 Page No : 1

Groups Printed- Bikes

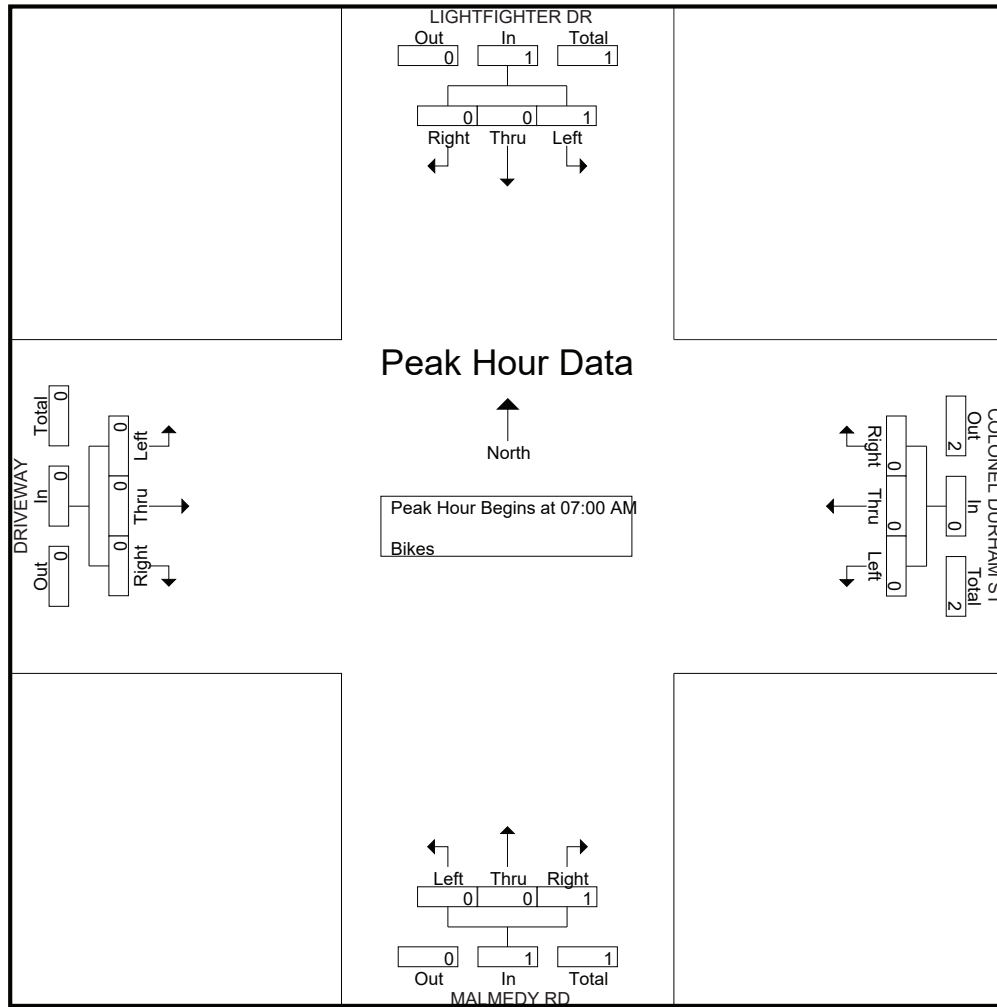
Start Time	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
Apprch %	0	0	100	0		0	0	0	0		100	0	0	0		0	0	0	0		
Total %	0	0	66.7	0	66.7	0	0	0	0	0	33.3	0	0	0	33.3	0	0	0	0	0	

Start Time	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	2
% App. Total	0	0	100		0	0	0		100	0	0		0	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.500

Traffic Data Service

San Jose, CA
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File Name : 8AM FINAL
 Site Code : 00000008
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

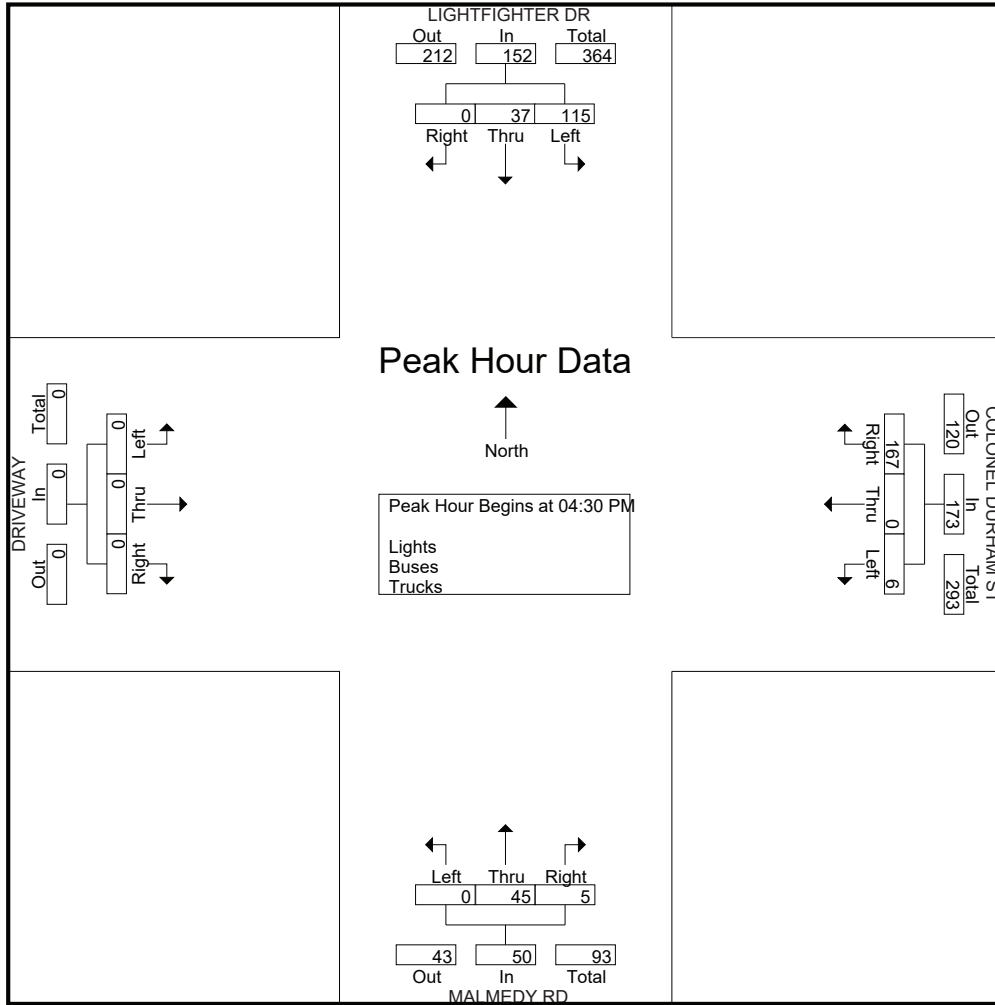
Start Time	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	12	32	0	44	46	0	0	0	46	0	10	0	0	10	0	0	0	0	0	100
04:15 PM	0	9	17	0	26	29	0	1	0	30	2	13	0	0	15	0	0	0	0	0	71
04:30 PM	0	8	29	0	37	35	0	0	0	35	1	13	0	0	14	0	0	0	0	0	86
04:45 PM	0	12	32	0	44	41	0	3	0	44	3	10	0	0	13	0	0	0	0	0	101
Total	0	41	110	0	151	151	0	4	0	155	6	46	0	0	52	0	0	0	0	0	358
05:00 PM	0	10	34	0	44	49	0	2	0	51	1	10	0	0	11	0	0	0	0	0	106
05:15 PM	0	7	20	0	27	42	0	1	0	43	0	12	0	0	12	0	0	0	0	0	82
05:30 PM	0	9	34	0	43	25	1	3	0	29	2	9	0	0	11	0	1	0	0	1	84
05:45 PM	0	5	32	0	37	26	0	2	0	28	0	9	0	0	9	0	0	0	0	0	74
Total	0	31	120	0	151	142	1	8	0	151	3	40	0	0	43	0	1	0	0	1	346
Grand Total	0	72	230	0	302	293	1	12	0	306	9	86	0	0	95	0	1	0	0	1	704
Apprch %	0	23.8	76.2	0		95.8	0.3	3.9	0		9.5	90.5	0	0		0	100	0	0		
Total %	0	10.2	32.7	0	42.9	41.6	0.1	1.7	0	43.5	1.3	12.2	0	0	13.5	0	0.1	0	0	0.1	
Lights	0	70	224	0	294	290	1	12	0	303	9	85	0	0	94	0	1	0	0	1	692
% Lights	0	97.2	97.4	0	97.4	99	100	100	0	99	100	98.8	0	0	98.9	0	100	0	0	100	98.3
Buses	0	1	1	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
% Buses	0	1.4	0.4	0	0.7	0.7	0	0	0	0.7	0	0	0	0	0	0	0	0	0	0	0.6
Trucks	0	1	5	0	6	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	8
% Trucks	0	1.4	2.2	0	2	0.3	0	0	0	0.3	0	1.2	0	0	1.1	0	0	0	0	0	1.1

Start Time	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	8	29	37	35	0	0	35	1	13	0	14	0	0	0	0	86
04:45 PM	0	12	32	44	41	0	3	44	3	10	0	13	0	0	0	0	101
05:00 PM	0	10	34	44	49	0	2	51	1	10	0	11	0	0	0	0	106
05:15 PM	0	7	20	27	42	0	1	43	0	12	0	12	0	0	0	0	82
Total Volume	0	37	115	152	167	0	6	173	5	45	0	50	0	0	0	0	375
% App. Total	0	24.3	75.7		96.5	0	3.5		10	90	0		0	0	0		
PHF	.000	.771	.846	.864	.852	.000	.500	.848	.417	.865	.000	.893	.000	.000	.000	.000	.884

Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/25/2018
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Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	LIGHTFIGHTER DR Southbound					COLONEL DURHAM ST Westbound					MALMEDY RD Northbound					DRIVEWAY Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	3
Apprch %	0	100	0	0		0	0	0	0		50	50	0	0		0	0	0	0		
Total %	0	33.3	0	0	33.3	0	0	0	0	0	33.3	33.3	0	0	66.7	0	0	0	0	0	

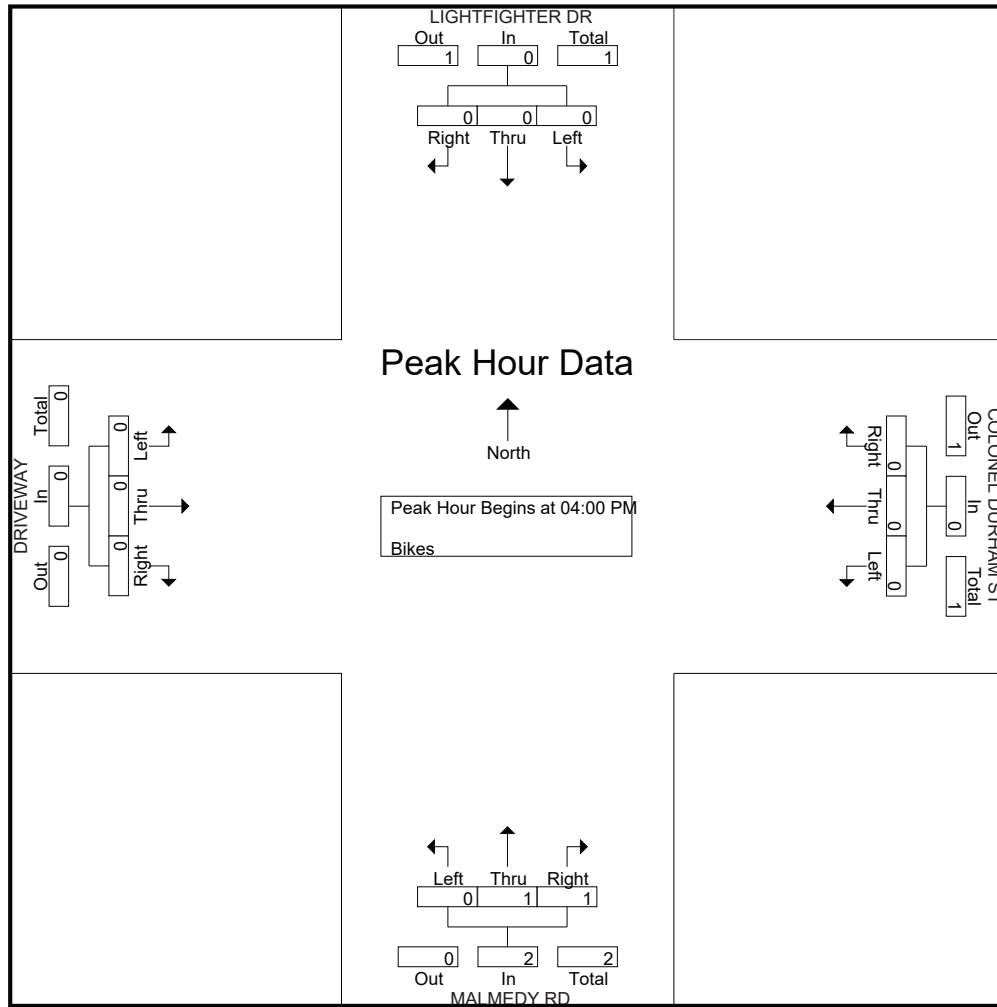
Start Time	LIGHTFIGHTER DR Southbound				COLONEL DURHAM ST Westbound				MALMEDY RD Northbound				DRIVEWAY Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	
% App. Total	0	0	0		0	0	0		50	50	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 8PM FINAL
 Site Code : 00000008
 Start Date : 4/25/2018
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Traffic Data Service

San Jose, CA
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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	61	1	0	62	1	0	1	0	2	1	9	0	0	10	74
07:15 AM	0	0	0	0	0	0	82	3	0	85	1	0	2	0	3	4	10	0	0	14	102
07:30 AM	0	0	0	0	0	0	92	1	0	93	0	0	2	0	2	6	23	0	0	29	124
07:45 AM	0	0	0	0	0	0	42	3	0	45	1	0	2	0	3	6	34	0	0	40	88
Total	0	0	0	0	0	0	277	8	0	285	3	0	7	0	10	17	76	0	0	93	388
08:00 AM	0	0	0	0	0	0	37	1	0	38	2	0	1	0	3	6	27	0	0	33	74
08:15 AM	0	0	0	0	0	0	24	2	0	26	1	0	2	0	3	4	36	0	0	40	69
08:30 AM	0	0	0	0	0	0	28	0	0	28	1	0	0	0	1	4	28	0	0	32	61
08:45 AM	0	0	0	0	0	0	21	1	0	22	0	0	3	0	3	8	27	0	0	35	60
Total	0	0	0	0	0	0	110	4	0	114	4	0	6	0	10	22	118	0	0	140	264
Grand Total	0	0	0	0	0	0	387	12	0	399	7	0	13	0	20	39	194	0	0	233	652
Apprch %	0	0	0	0	0	0	97	3	0	100	35	0	65	0	100	16.7	83.3	0	0	100	
Total %	0	0	0	0	0	0	59.4	1.8	0	61.2	1.1	0	2	0	3.1	6	29.8	0	0	35.7	
Lights	0	0	0	0	0	0	376	12	0	388	7	0	13	0	20	39	185	0	0	224	632
% Lights	0	0	0	0	0	0	97.2	100	0	97.2	100	0	100	0	100	100	95.4	0	0	96.1	96.9
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	7
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.6	0	0	3	1.1
Trucks	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	2	0	0	2	13
% Trucks	0	0	0	0	0	0	2.8	0	0	2.8	0	0	0	0	0	0	1	0	0	0.9	2

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	61	1	0	62	1	0	1	0	2	1	9	0	0	10	74
07:15 AM	0	0	0	0	0	0	82	3	0	85	1	0	2	0	3	4	10	0	0	14	102
07:30 AM	0	0	0	0	0	0	92	1	0	93	0	0	2	0	2	6	23	0	0	29	124
07:45 AM	0	0	0	0	0	0	42	3	0	45	1	0	2	0	3	6	34	0	0	40	88
Total Volume	0	0	0	0	0	0	277	8	0	285	3	0	7	0	10	17	76	0	0	93	388
% App. Total	0	0	0	0	0	0	97.2	2.8	0	97.2	30	0	70	0	100	18.3	81.7	0	0	96.1	96.9
PHF	.000	.000	.000	.000	.000	.000	.753	.667	.766	.766	.750	.000	.875	.833	.833	.708	.559	.000	.581	.581	.782

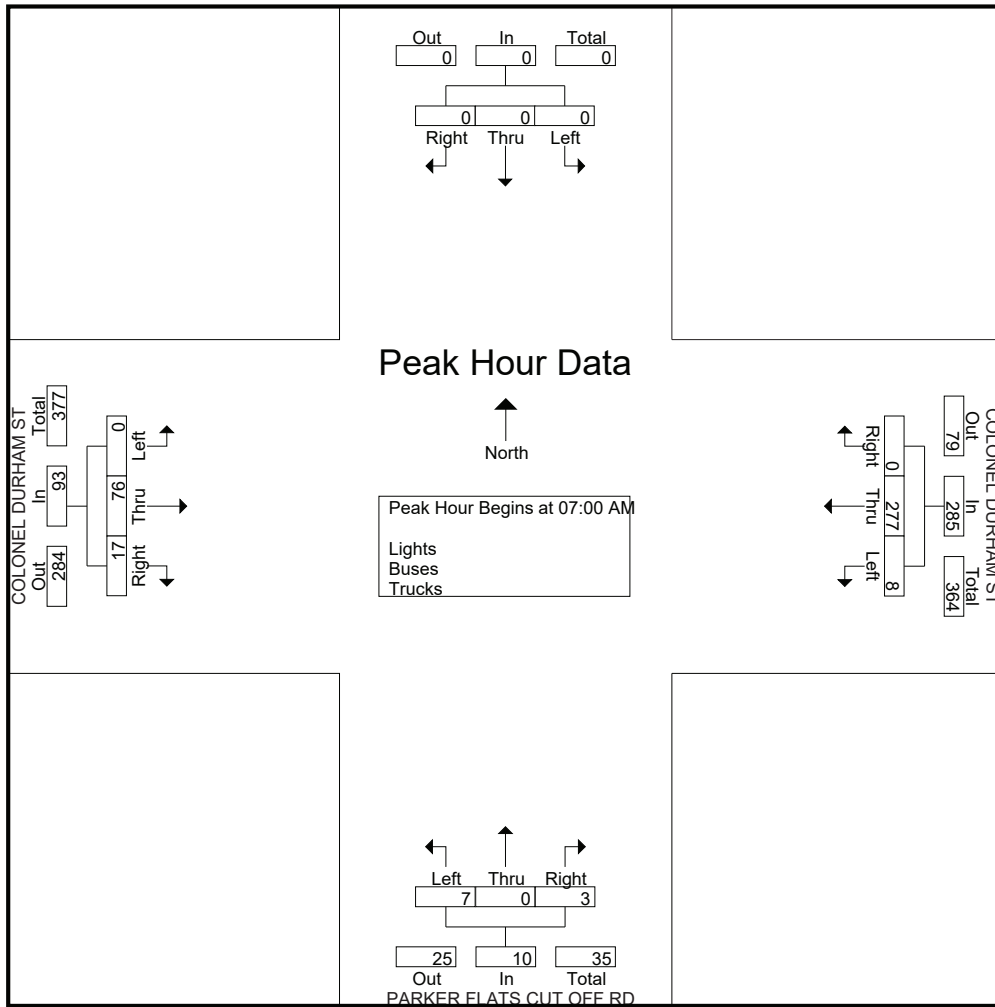
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
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Traffic Data Service

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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	1	1	0	0	2	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	1	2	0	0	3	6
Apprch %	0	0	0	0		0	0	100	0		100	0	0	0		33.3	66.7	0	0		
Total %	0	0	0	0	0	0	0	33.3	0	33.3	16.7	0	0	0	16.7	16.7	33.3	0	0	50	

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	1	1	0	0	2	5
% App. Total	0	0	0	0		0	0	100	0		100	0	0	0		50	50	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.500	.500	.000	.250	.000	.000	.250	.000	.250	.250	.000	.500	.000	.625

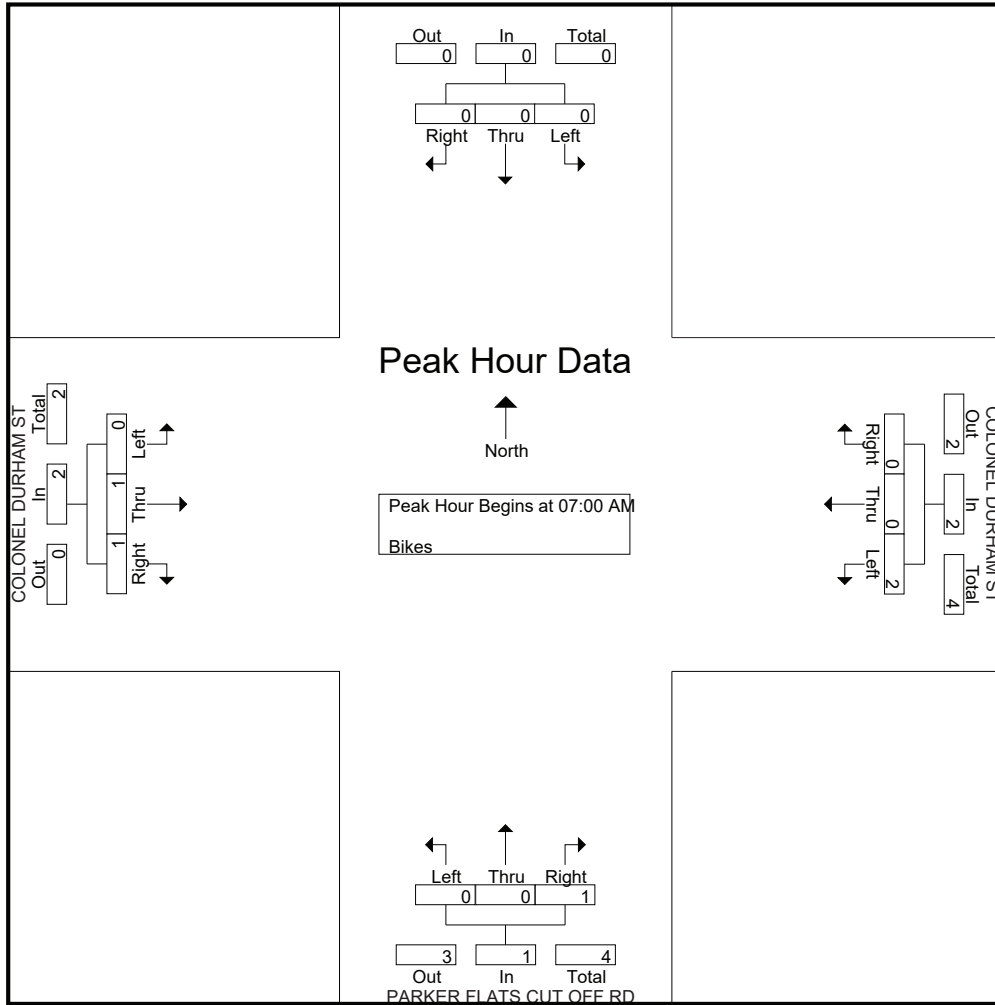
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 9AM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	32	3	0	35	2	0	8	0	10	1	33	0	0	34	79
04:15 PM	0	0	0	0	0	0	17	0	0	17	3	0	7	0	10	1	16	0	0	17	44
04:30 PM	0	0	0	0	0	0	26	2	0	28	0	0	6	0	6	0	23	0	0	23	57
04:45 PM	0	0	0	0	0	0	38	0	0	38	3	0	5	0	8	0	31	0	0	31	77
Total	0	0	0	0	0	0	113	5	0	118	8	0	26	0	34	2	103	0	0	105	257
05:00 PM	0	0	0	0	0	0	37	0	0	37	0	0	9	0	9	2	32	0	0	34	80
05:15 PM	0	0	0	0	0	0	35	0	0	35	1	0	4	2	7	2	15	0	0	17	59
05:30 PM	0	0	0	0	0	0	19	1	0	20	1	0	8	0	9	1	24	0	0	25	54
05:45 PM	0	0	0	0	0	0	21	0	0	21	0	0	4	2	6	0	21	0	0	21	48
Total	0	0	0	0	0	0	112	1	0	113	2	0	25	4	31	5	92	0	0	97	241
Grand Total	0	0	0	0	0	0	225	6	0	231	10	0	51	4	65	7	195	0	0	202	498
Apprch %	0	0	0	0	0	0	97.4	2.6	0	231	15.4	0	78.5	6.2	65	3.5	96.5	0	0	202	498
Total %	0	0	0	0	0	0	45.2	1.2	0	46.4	2	0	10.2	0.8	13.1	1.4	39.2	0	0	40.6	
Lights	0	0	0	0	0	0	223	6	0	229	10	0	51	4	65	7	188	0	0	195	489
% Lights	0	0	0	0	0	0	99.1	100	0	99.1	100	0	100	100	100	100	96.4	0	0	96.5	98.2
Buses	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% Buses	0	0	0	0	0	0	0.9	0	0	0.9	0	0	0	0	0	0	0.5	0	0	0.5	0.6
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.1	0	0	3	1.2

Start Time	Southbound				COLONEL DURHAM ST Westbound				PARKER FLATS CUT OFF RD Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:30 PM	0	0	0	0	0	26	2	28	0	0	6	6	0	23	0	23	57
04:45 PM	0	0	0	0	0	38	0	38	3	0	5	8	0	31	0	31	77
05:00 PM	0	0	0	0	0	37	0	37	0	0	9	9	2	32	0	34	80
05:15 PM	0	0	0	0	0	35	0	35	1	0	4	5	2	15	0	17	57
Total Volume	0	0	0	0	0	136	2	138	4	0	24	28	4	101	0	105	271
% App. Total	0	0	0	0	0	98.6	1.4	138	14.3	0	85.7	28	3.8	96.2	0	105	271
PHF	.000	.000	.000	.000	.000	.895	.250	.908	.333	.000	.667	.778	.500	.789	.000	.772	.847

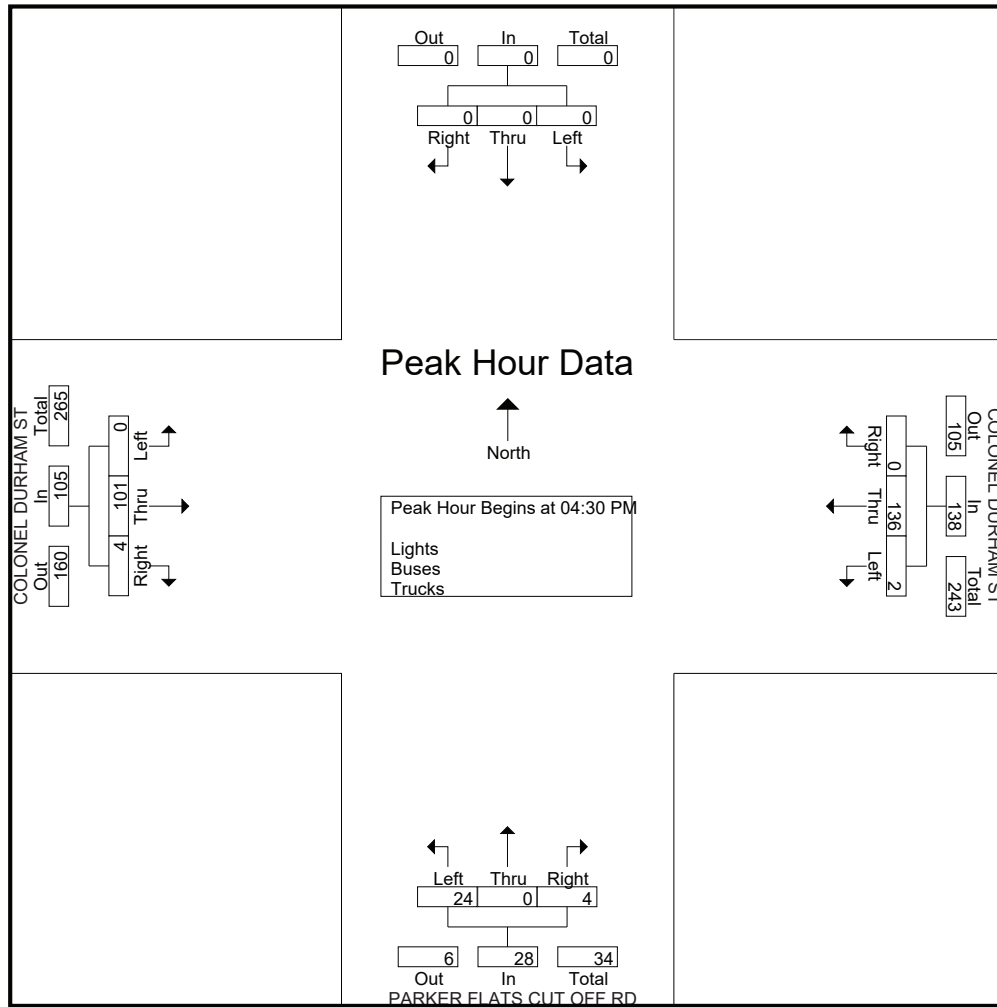
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	50	0	50	0	0	0	0	0	0	50	0	0	50	

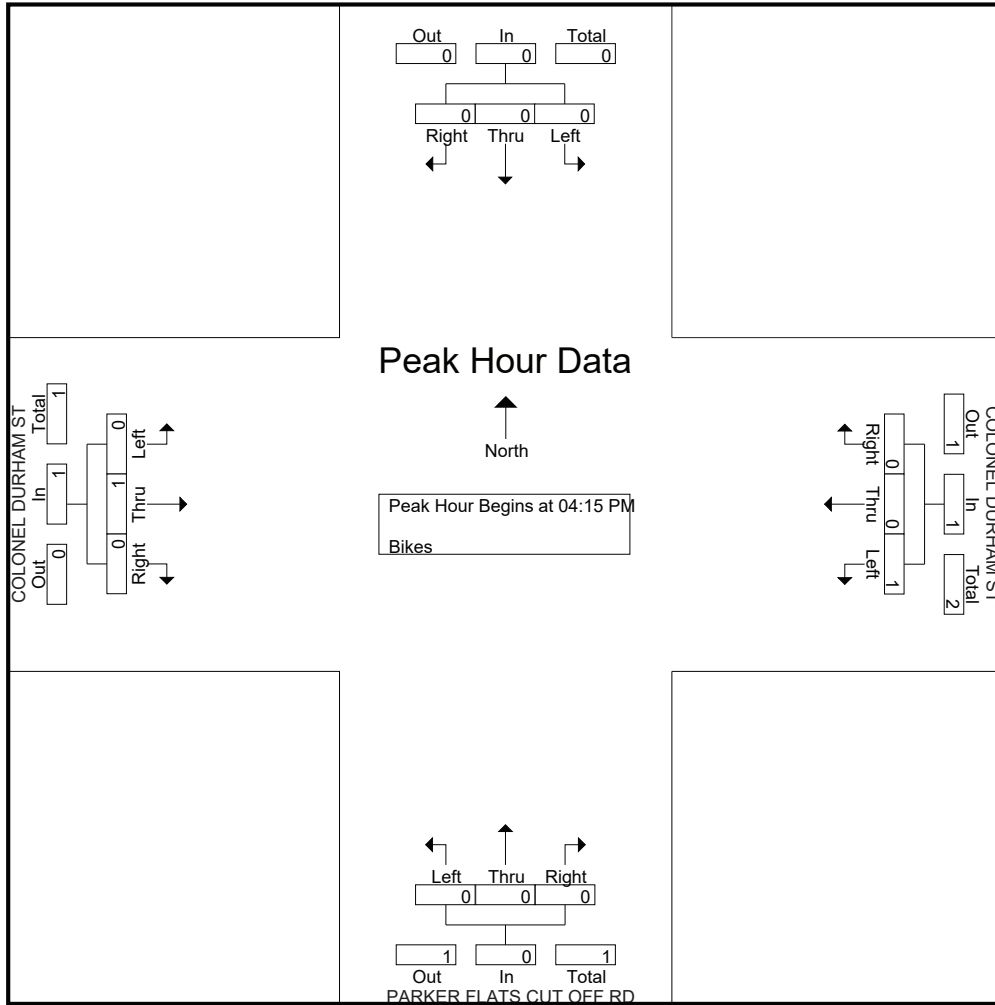
Start Time	Southbound					COLONEL DURHAM ST Westbound					PARKER FLATS CUT OFF RD Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
% App. Total	0	0	0	0		0	0	100	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.500	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 9PM FINAL
 Site Code : 00000009
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

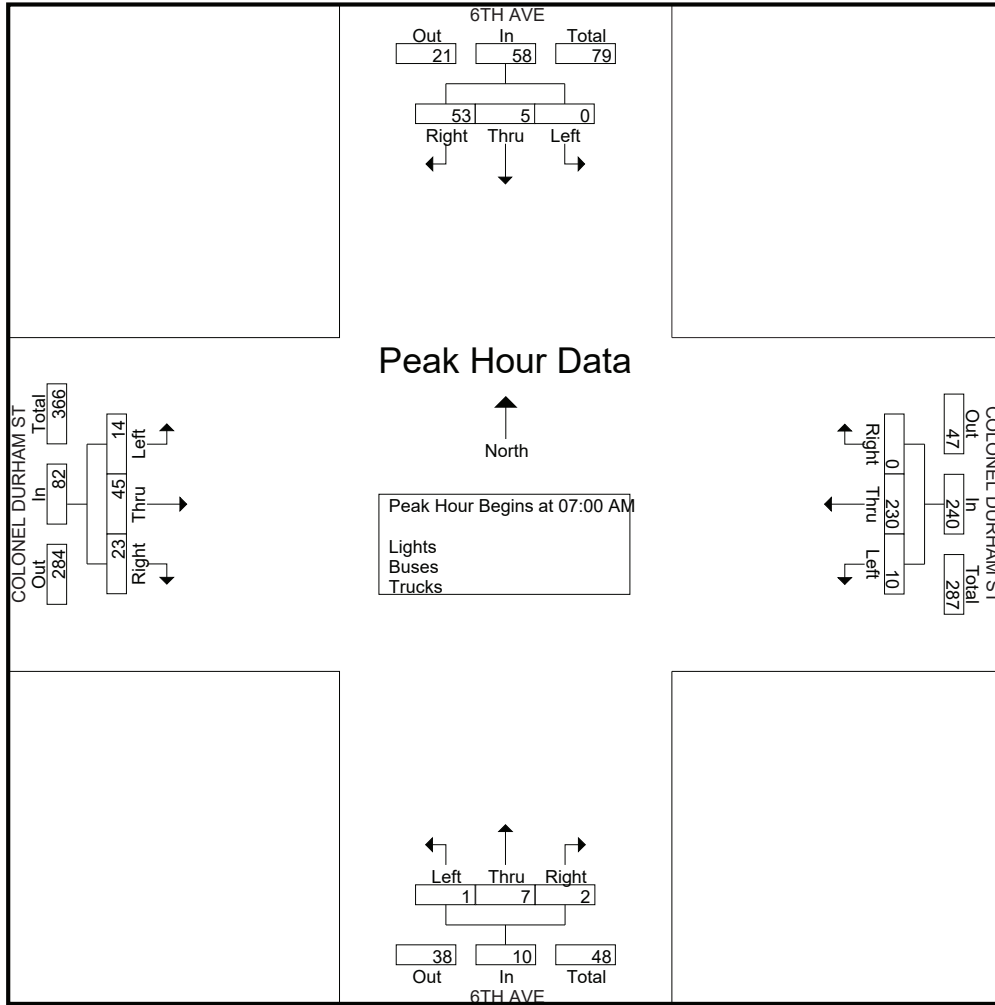
Start Time	6TH AVE Southbound					COLONEL DURHAM ST Westbound					6TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	11	0	0	0	11	0	55	0	0	55	0	0	0	0	0	1	7	1	0	9	75
07:15 AM	21	1	0	0	22	0	58	2	0	60	0	1	0	0	1	5	6	2	0	13	96
07:30 AM	13	3	0	0	16	0	78	4	0	82	1	2	1	0	4	7	9	5	0	21	123
07:45 AM	8	1	0	0	9	0	39	4	0	43	1	4	0	0	5	10	23	6	0	39	96
Total	53	5	0	0	58	0	230	10	0	240	2	7	1	0	10	23	45	14	0	82	390
08:00 AM	7	5	0	0	12	0	31	2	0	33	0	1	0	0	1	5	17	4	1	27	73
08:15 AM	6	1	1	0	8	0	20	1	0	21	0	2	0	0	2	3	16	14	0	33	64
08:30 AM	3	0	0	0	3	0	22	1	0	23	0	3	3	0	6	4	14	14	0	32	64
08:45 AM	4	0	0	0	4	0	17	1	0	18	0	3	0	0	3	2	9	15	0	26	51
Total	20	6	1	0	27	0	90	5	0	95	0	9	3	0	12	14	56	47	1	118	252
Grand Total	73	11	1	0	85	0	320	15	0	335	2	16	4	0	22	37	101	61	1	200	642
Apprch %	85.9	12.9	1.2	0		0	95.5	4.5	0		9.1	72.7	18.2	0		18.5	50.5	30.5	0.5		
Total %	11.4	1.7	0.2	0	13.2	0	49.8	2.3	0	52.2	0.3	2.5	0.6	0	3.4	5.8	15.7	9.5	0.2	31.2	
Lights	72	10	1	0	83	0	310	15	0	325	1	15	4	0	20	37	93	60	1	191	619
% Lights	98.6	90.9	100	0	97.6	0	96.9	100	0	97	50	93.8	100	0	90.9	100	92.1	98.4	100	95.5	96.4
Buses	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	6	1	0	7	10
% Buses	0	9.1	0	0	1.2	0	0	0	0	0	50	6.2	0	0	9.1	0	5.9	1.6	0	3.5	1.6
Trucks	1	0	0	0	1	0	10	0	0	10	0	0	0	0	0	0	2	0	0	2	13
% Trucks	1.4	0	0	0	1.2	0	3.1	0	0	3	0	0	0	0	0	0	2	0	0	1	2

Start Time	6TH AVE Southbound				COLONEL DURHAM ST Westbound				6TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	11	0	0	11	0	55	0	55	0	0	0	0	0	1	7	1	9	75
07:15 AM	21	1	0	22	0	58	2	60	0	1	0	1	1	5	6	2	13	96
07:30 AM	13	3	0	16	0	78	4	82	1	2	1	4	1	7	9	5	21	123
07:45 AM	8	1	0	9	0	39	4	43	1	4	0	5	1	10	23	6	39	96
Total Volume	53	5	0	58	0	230	10	240	2	7	1	10	2	23	45	14	82	390
% App. Total	91.4	8.6	0		0	95.8	4.2		20	70	10		28	54.9	17.1			
PHF	.631	.417	.000	.659	.000	.737	.625	.732	.500	.438	.250	.500	.575	.489	.583	.526	.793	

Traffic Data Service

San Jose, CA
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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

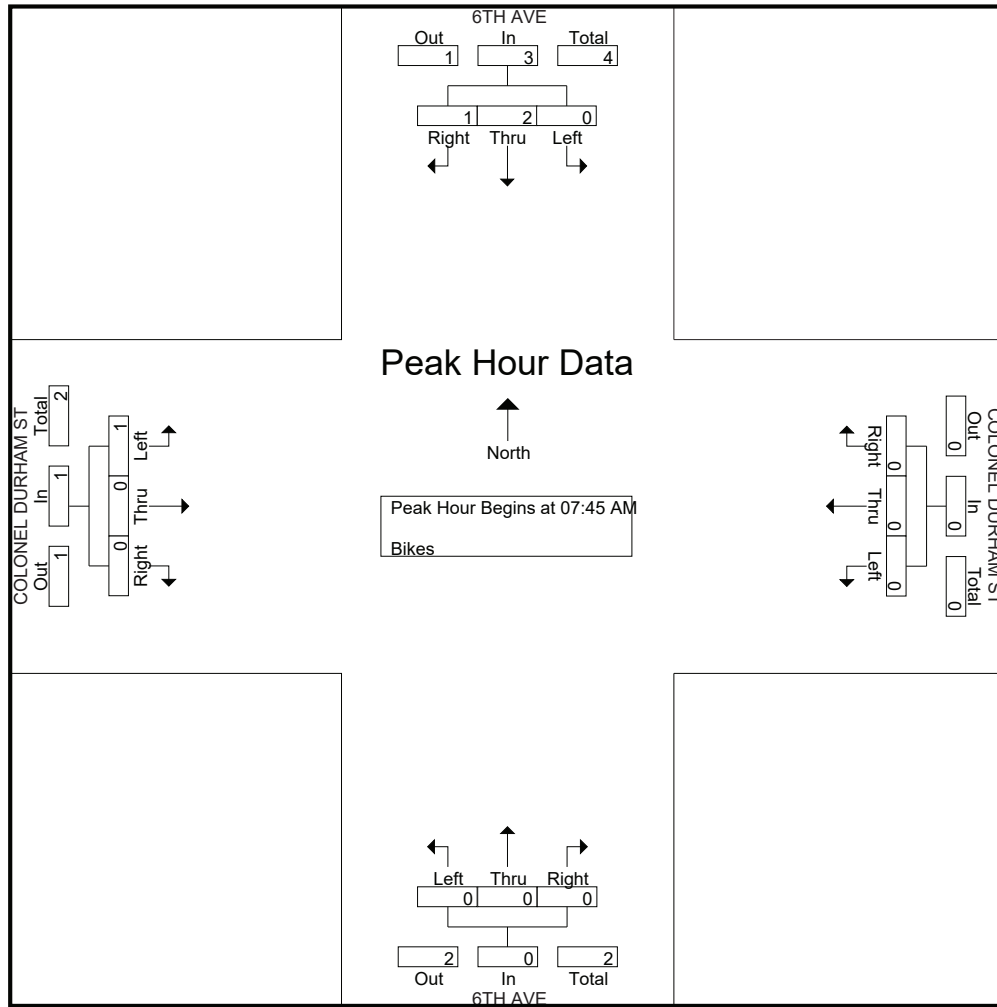
Start Time	6TH AVE Southbound					COLONEL DURHAM ST Westbound					6TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
08:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4
Grand Total	2	3	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6
Apprch %	40	60	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	33.3	50	0	0	83.3	0	0	0	0	0	0	0	0	0	0	0	0	16.7	0	16.7	

Start Time	6TH AVE Southbound				COLONEL DURHAM ST Westbound				6TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	0	1	1	4
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	0	100		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500

Traffic Data Service

San Jose, CA
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File Name : 10AM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

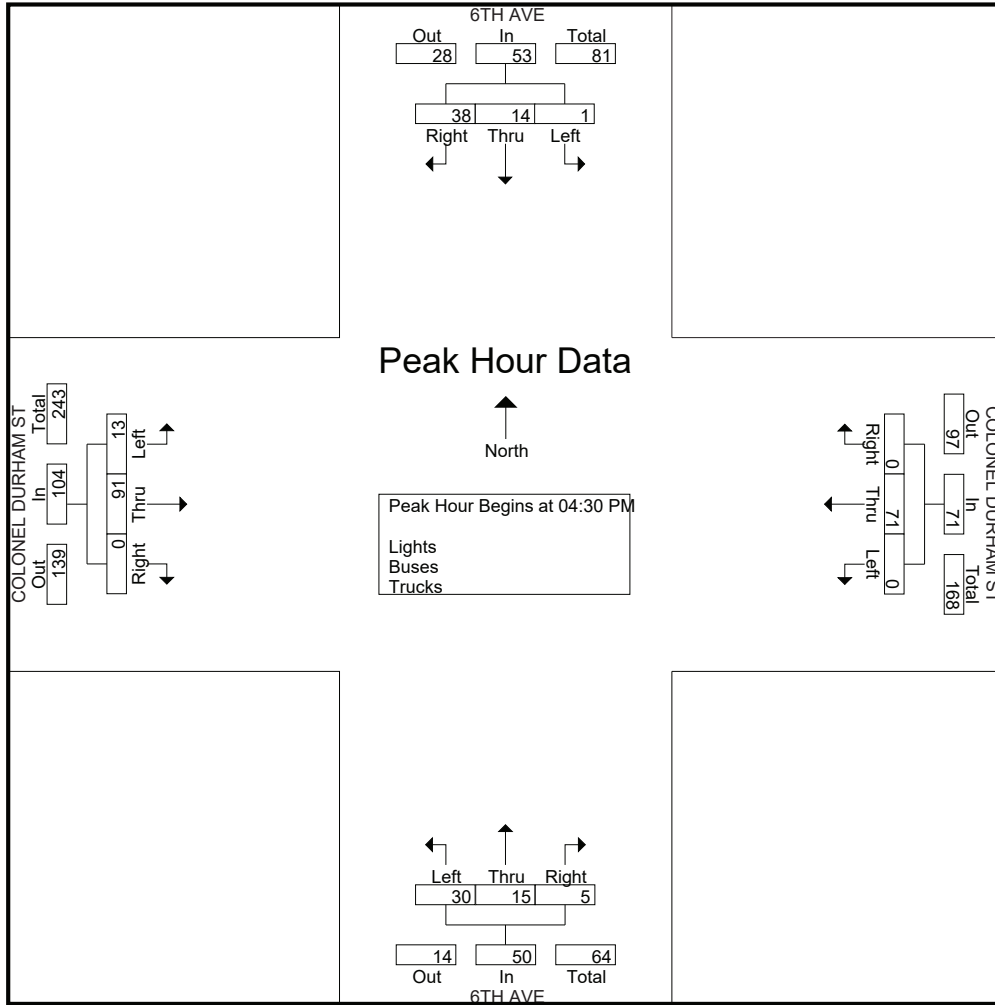
Start Time	6TH AVE Southbound					COLONEL DURHAM ST Westbound					6TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	15	1	0	0	16	0	11	0	0	11	1	2	7	0	10	0	26	7	0	33	70
04:15 PM	4	1	0	0	5	0	11	0	0	11	0	4	2	0	6	0	20	1	0	21	43
04:30 PM	6	1	0	0	7	0	14	0	0	14	2	1	8	0	11	0	22	1	1	24	56
04:45 PM	9	2	0	0	11	0	25	0	0	25	1	4	5	0	10	0	30	2	0	32	78
Total	34	5	0	0	39	0	61	0	0	61	4	11	22	0	37	0	98	11	1	110	247
05:00 PM	12	7	1	0	20	0	13	0	0	13	2	5	13	0	20	0	24	8	2	34	87
05:15 PM	11	4	0	0	15	0	19	0	0	19	0	5	4	0	9	0	15	2	0	17	60
05:30 PM	6	3	1	0	10	0	11	1	0	12	0	2	3	0	5	0	19	3	4	26	53
05:45 PM	12	0	0	0	12	0	10	0	0	10	0	2	1	0	3	0	21	3	0	24	49
Total	41	14	2	0	57	0	53	1	0	54	2	14	21	0	37	0	79	16	6	101	249
Grand Total	75	19	2	0	96	0	114	1	0	115	6	25	43	0	74	0	177	27	7	211	496
Apprch %	78.1	19.8	2.1	0		0	99.1	0.9	0		8.1	33.8	58.1	0		0	83.9	12.8	3.3		
Total %	15.1	3.8	0.4	0	19.4	0	23	0.2	0	23.2	1.2	5	8.7	0	14.9	0	35.7	5.4	1.4	42.5	
Lights	74	19	2	0	95	0	113	1	0	114	5	25	43	0	73	0	172	27	7	206	488
% Lights	98.7	100	100	0	99	0	99.1	100	0	99.1	83.3	100	100	0	98.6	0	97.2	100	100	97.6	98.4
Buses	1	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	4
% Buses	1.3	0	0	0	1	0	0.9	0	0	0.9	16.7	0	0	0	1.4	0	0.6	0	0	0.5	0.8
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.3	0	0	1.9	0.8

Start Time	6TH AVE Southbound				COLONEL DURHAM ST Westbound				6TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	6	1	0	7	0	14	0	14	2	1	8	11	0	22	1	23	55
04:45 PM	9	2	0	11	0	25	0	25	1	4	5	10	0	30	2	32	78
05:00 PM	12	7	1	20	0	13	0	13	2	5	13	20	0	24	8	32	85
05:15 PM	11	4	0	15	0	19	0	19	0	5	4	9	0	15	2	17	60
Total Volume	38	14	1	53	0	71	0	71	5	15	30	50	0	91	13	104	278
% App. Total	71.7	26.4	1.9		0	100	0		10	30	60		0	87.5	12.5		
PHF	.792	.500	.250	.663	.000	.710	.000	.710	.625	.750	.577	.625	.000	.758	.406	.813	.818

Traffic Data Service

San Jose, CA
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File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

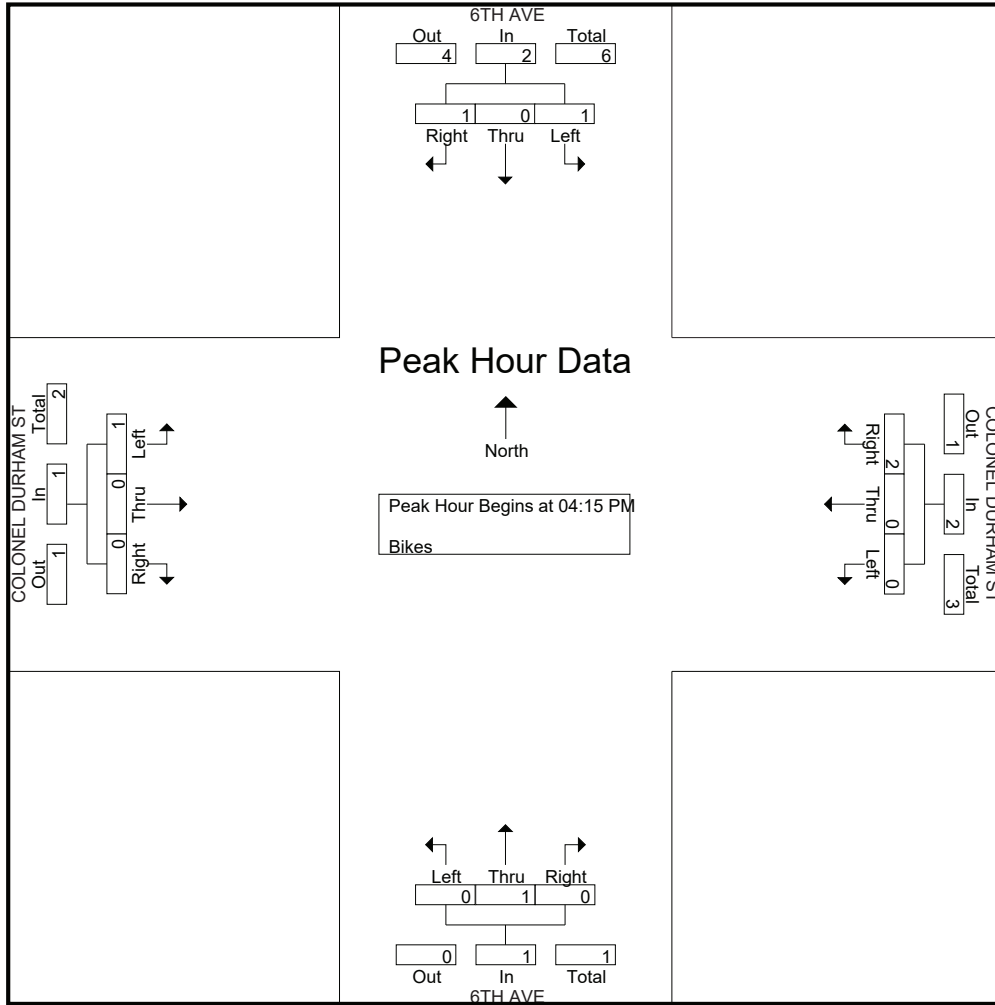
Start Time	6TH AVE Southbound					COLONEL DURHAM ST Westbound					6TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	1	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2
Grand Total	1	0	1	0	2	2	0	0	0	2	0	1	0	0	1	0	0	1	0	1	6
Apprch %	50	0	50	0		100	0	0	0		0	100	0	0		0	0	100	0		
Total %	16.7	0	16.7	0	33.3	33.3	0	0	0	33.3	0	16.7	0	0	16.7	0	0	16.7	0	16.7	

Start Time	6TH AVE Southbound				COLONEL DURHAM ST Westbound				6TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total Volume	1	0	1	2	2	0	0	2	0	1	0	1	0	0	1	1	6
% App. Total	50	0	50		100	0	0		0	100	0		0	0	100		
PHF	.250	.000	.250	.250	.500	.000	.000	.500	.000	.250	.000	.250	.000	.000	.250	.250	.750

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 10PM FINAL
 Site Code : 00000010
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

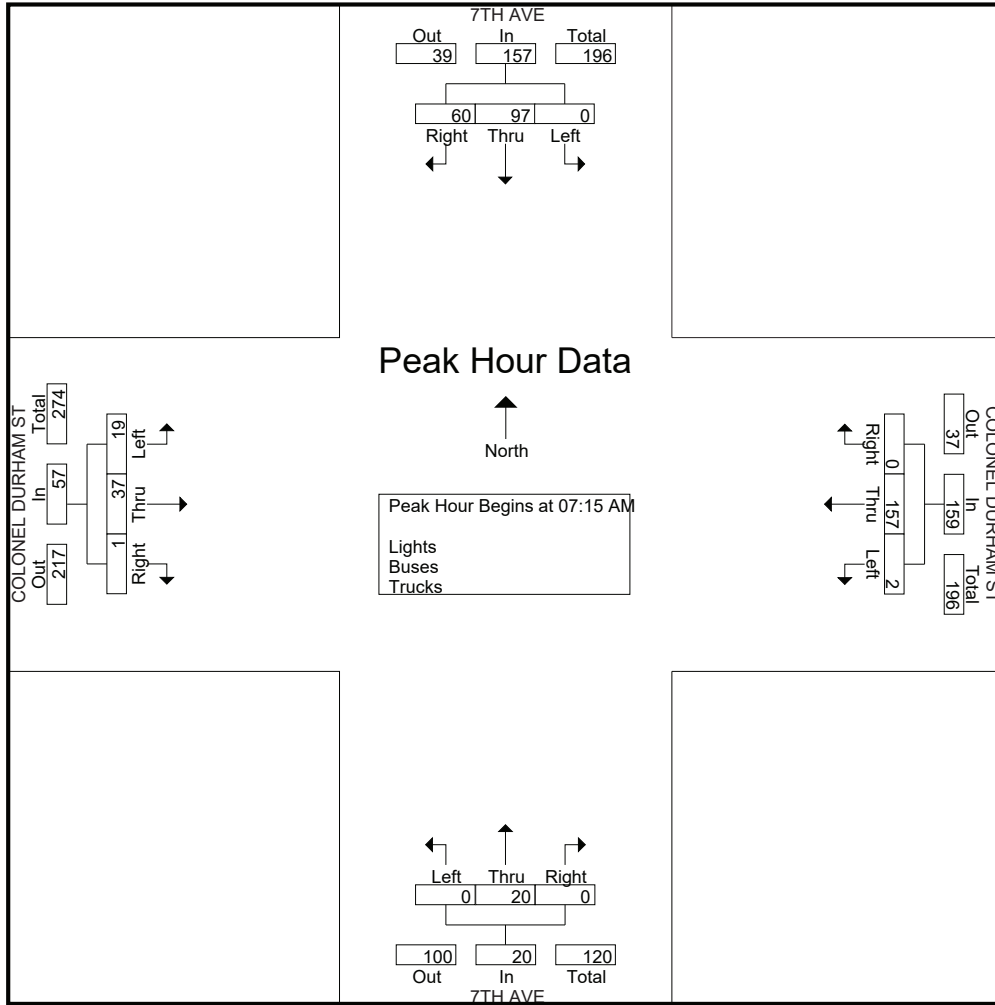
Start Time	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	9	7	0	0	16	0	44	0	0	44	0	2	0	0	2	0	3	4	0	7	69
07:15 AM	20	25	0	0	45	0	43	0	0	43	0	0	0	0	0	0	4	2	0	6	94
07:30 AM	22	24	0	0	46	0	56	2	0	58	0	6	0	0	6	0	7	3	0	10	120
07:45 AM	11	32	0	0	43	0	31	0	0	31	0	7	0	0	7	1	18	3	0	22	103
Total	62	88	0	0	150	0	174	2	0	176	0	15	0	0	15	1	32	12	0	45	386
08:00 AM	7	16	0	0	23	0	27	0	0	27	0	7	0	0	7	0	8	11	1	20	77
08:15 AM	1	17	0	0	18	0	19	0	0	19	0	1	0	0	1	0	7	9	0	16	54
08:30 AM	4	17	0	0	21	0	19	0	0	19	0	3	0	0	3	2	9	4	0	15	58
08:45 AM	3	6	0	0	9	0	15	0	0	15	0	1	0	0	1	0	5	4	0	9	34
Total	15	56	0	0	71	0	80	0	0	80	0	12	0	0	12	2	29	28	1	60	223
Grand Total	77	144	0	0	221	0	254	2	0	256	0	27	0	0	27	3	61	40	1	105	609
Apprch %	34.8	65.2	0	0		0	99.2	0.8	0		0	100	0	0		2.9	58.1	38.1	1		
Total %	12.6	23.6	0	0	36.3	0	41.7	0.3	0	42	0	4.4	0	0	4.4	0.5	10	6.6	0.2	17.2	
Lights	68	135	0	0	203	0	254	2	0	256	0	25	0	0	25	1	55	39	1	96	580
% Lights	88.3	93.8	0	0	91.9	0	100	100	0	100	0	92.6	0	0	92.6	33.3	90.2	97.5	100	91.4	95.2
Buses	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	5	0	0	7	9
% Buses	0	0.7	0	0	0.5	0	0	0	0	0	0	3.7	0	0	3.7	66.7	8.2	0	0	6.7	1.5
Trucks	9	8	0	0	17	0	0	0	0	0	0	1	0	0	1	0	1	1	0	2	20
% Trucks	11.7	5.6	0	0	7.7	0	0	0	0	0	0	3.7	0	0	3.7	0	1.6	2.5	0	1.9	3.3

Start Time	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	20	25	0	45	0	43	0	43	0	0	0	0	0	0	4	2	6	94
07:30 AM	22	24	0	46	0	56	2	58	0	6	0	6	0	7	3	10	120	
07:45 AM	11	32	0	43	0	31	0	31	0	7	0	7	1	18	3	22	103	
08:00 AM	7	16	0	23	0	27	0	27	0	7	0	7	0	8	11	19	76	
Total Volume	60	97	0	157	0	157	2	159	0	20	0	20	1	37	19	57	393	
% App. Total	38.2	61.8	0		0	98.7	1.3		0	100	0		1.8	64.9	33.3			
PHF	.682	.758	.000	.853	.000	.701	.250	.685	.000	.714	.000	.714	.250	.514	.432	.648	.819	

Traffic Data Service

San Jose, CA
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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 11AM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

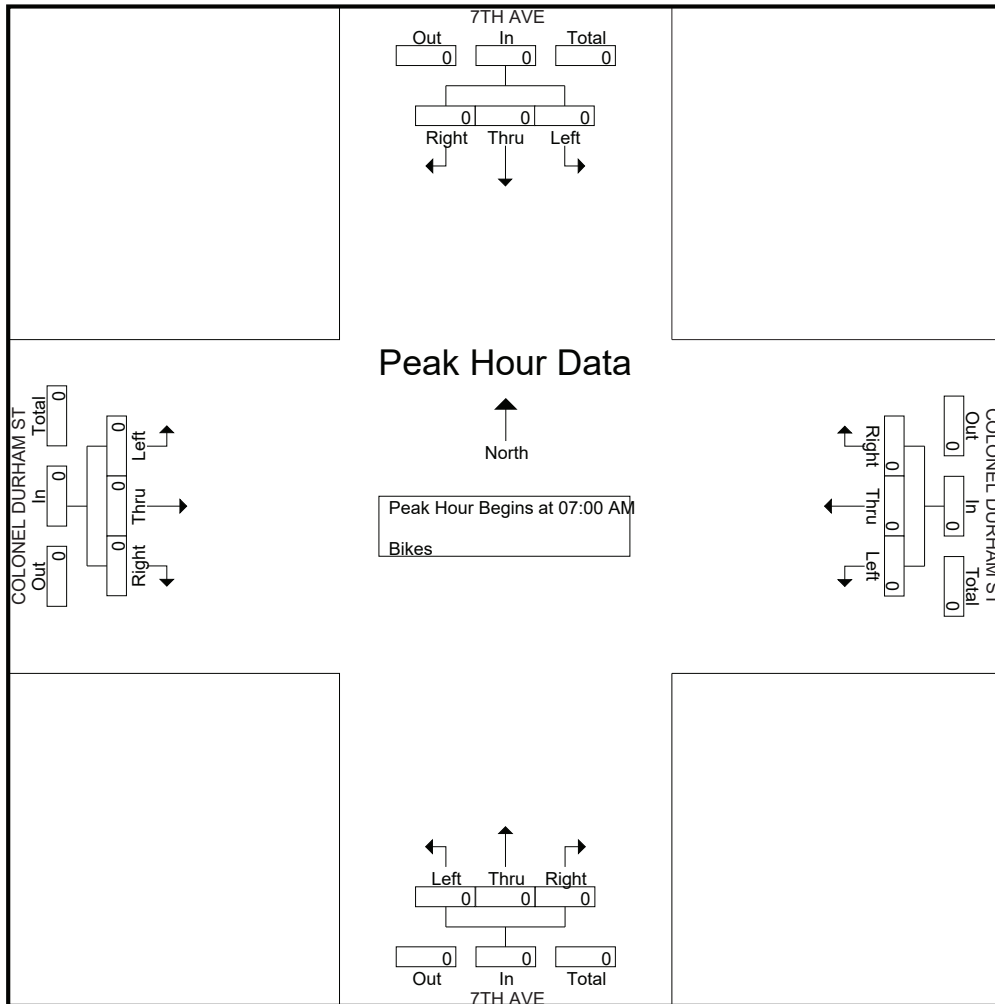
Start Time	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Start Time	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	

Traffic Data Service

San Jose, CA
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File Name : 11AM FINAL
Site Code : 00000011
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

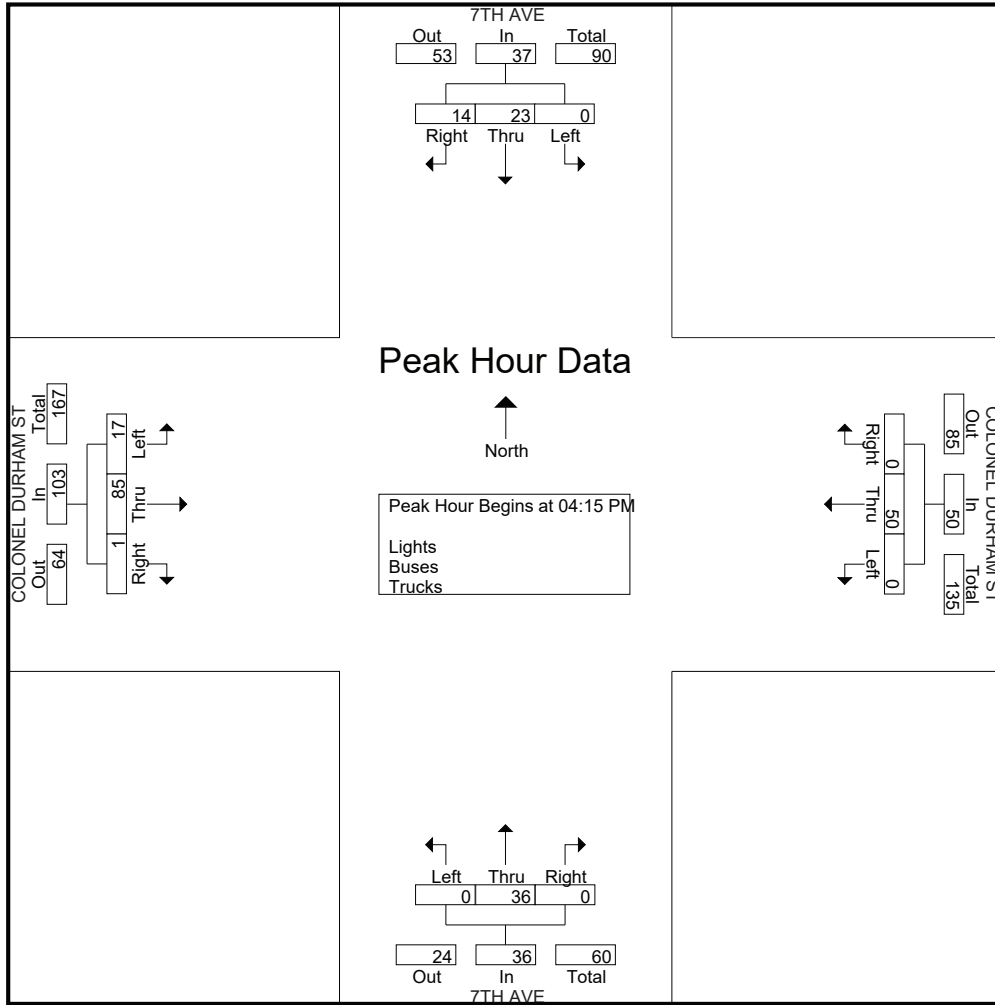
Start Time	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	4	4	0	0	8	0	7	0	0	7	0	6	0	0	6	0	18	9	0	27	48
04:15 PM	2	6	0	0	8	0	9	0	0	9	0	8	0	0	8	0	15	6	0	21	46
04:30 PM	4	4	0	0	8	0	10	0	0	10	0	7	0	0	7	0	15	5	0	20	45
04:45 PM	1	6	0	0	7	0	25	0	0	25	0	12	0	0	12	1	28	3	0	32	76
Total	11	20	0	0	31	0	51	0	0	51	0	33	0	0	33	1	76	23	0	100	215
05:00 PM	7	7	0	0	14	0	6	0	0	6	0	9	0	0	9	0	27	3	0	30	59
05:15 PM	5	6	0	0	11	0	12	0	0	12	0	2	0	0	2	0	14	1	0	15	40
05:30 PM	3	5	0	0	8	0	10	0	0	10	0	8	0	0	8	0	17	2	0	19	45
05:45 PM	6	11	0	0	17	0	5	0	0	5	0	5	1	0	6	0	19	2	0	21	49
Total	21	29	0	0	50	0	33	0	0	33	0	24	1	0	25	0	77	8	0	85	193
Grand Total	32	49	0	0	81	0	84	0	0	84	0	57	1	0	58	1	153	31	0	185	408
Apprch %	39.5	60.5	0	0		0	100	0	0		0	98.3	1.7	0		0.5	82.7	16.8	0		
Total %	7.8	12	0	0	19.9	0	20.6	0	0	20.6	0	14	0.2	0	14.2	0.2	37.5	7.6	0	45.3	
Lights	32	46	0	0	78	0	82	0	0	82	0	53	1	0	54	0	151	25	0	176	390
% Lights	100	93.9	0	0	96.3	0	97.6	0	0	97.6	0	93	100	0	93.1	0	98.7	80.6	0	95.1	95.6
Buses	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2	4
% Buses	0	0	0	0	0	0	1.2	0	0	1.2	0	1.8	0	0	1.7	100	0.7	0	0	1.1	1
Trucks	0	3	0	0	3	0	1	0	0	1	0	3	0	0	3	0	1	6	0	7	14
% Trucks	0	6.1	0	0	3.7	0	1.2	0	0	1.2	0	5.3	0	0	5.2	0	0.7	19.4	0	3.8	3.4

Start Time	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	2	6	0	8	0	9	0	9	0	8	0	8	0	15	6	21	46
04:30 PM	4	4	0	8	0	10	0	10	0	7	0	7	0	15	5	20	45
04:45 PM	1	6	0	7	0	25	0	25	0	12	0	12	1	28	3	32	76
05:00 PM	7	7	0	14	0	6	0	6	0	9	0	9	0	27	3	30	59
Total Volume	14	23	0	37	0	50	0	50	0	36	0	36	1	85	17	103	226
% App. Total	37.8	62.2	0		0	100	0		0	100	0		1	82.5	16.5		
PHF	.500	.821	.000	.661	.000	.500	.000	.500	.000	.750	.000	.750	.250	.759	.708	.805	.743

Traffic Data Service

San Jose, CA
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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	7TH AVE Southbound					COLONEL DURHAM ST Westbound					7TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	1	0	0	0	1	4
Apprch %	0	0	0	0		0	0	0	0		0	33.3	66.7	0		100	0	0	0		
Total %	0	0	0	0		0	0	0	0		0	25	50	0	75	25	0	0	0	25	

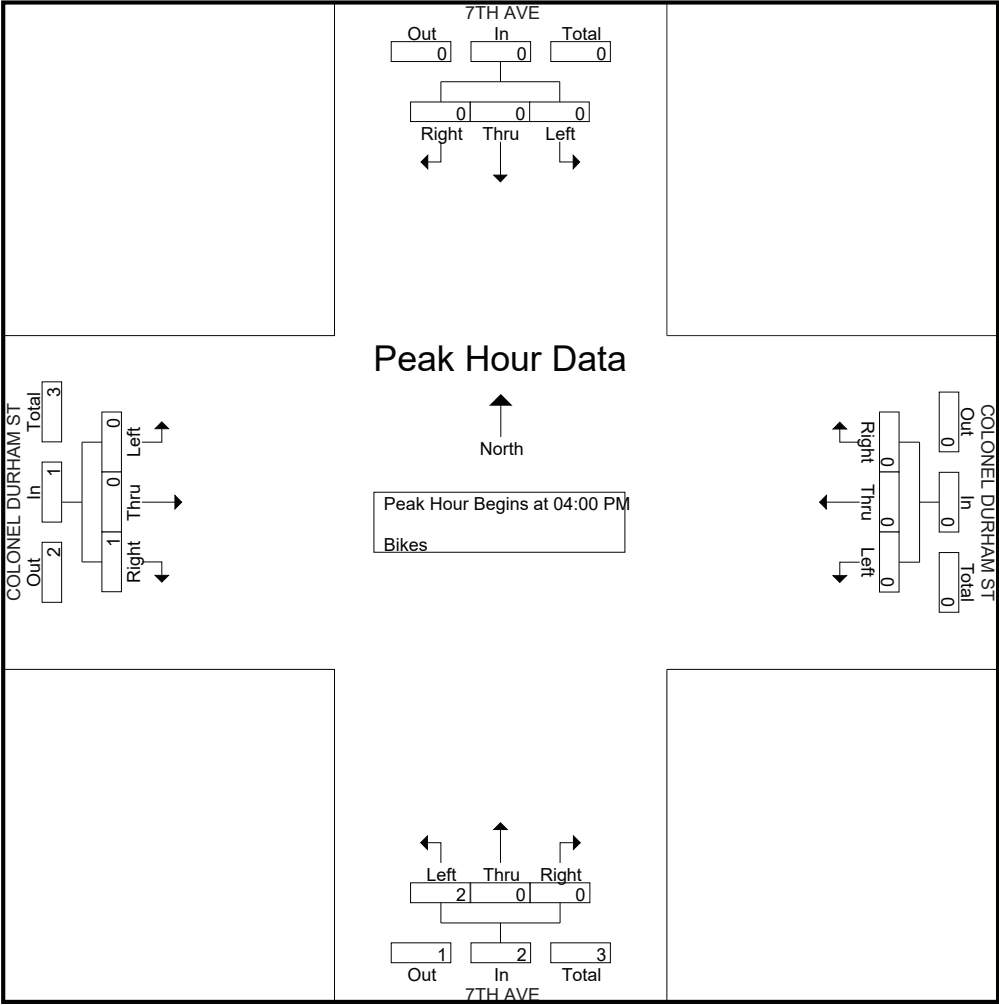
Start Time	7TH AVE Southbound				COLONEL DURHAM ST Westbound				7TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	1	3
% App. Total	0	0	0		0	0	0		0	0	100		100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.500	.250	.000	.000	.250	.750

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 11PM FINAL
 Site Code : 00000011
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

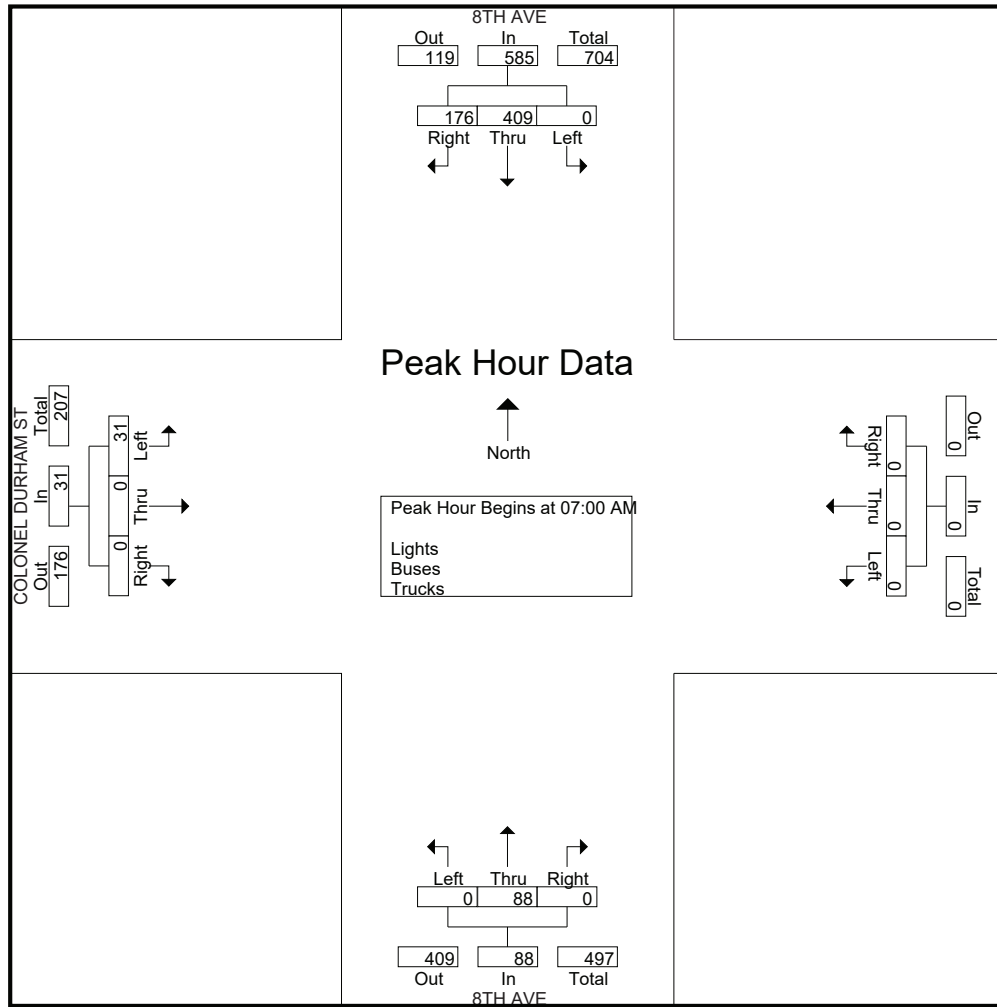
Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	44	78	0	0	122	0	0	0	0	0	0	15	0	0	15	0	0	3	0	3	140
07:15 AM	46	126	0	0	172	0	0	0	0	0	0	18	0	0	18	0	0	2	0	2	192
07:30 AM	56	107	0	0	163	0	0	0	0	0	0	27	0	0	27	0	0	7	0	7	197
07:45 AM	30	98	0	0	128	0	0	0	0	0	0	28	0	0	28	0	0	19	0	19	175
Total	176	409	0	0	585	0	0	0	0	0	0	88	0	0	88	0	0	31	0	31	704
08:00 AM	27	50	0	0	77	0	0	0	0	0	0	25	0	0	25	0	0	9	0	9	111
08:15 AM	22	55	0	0	77	0	0	0	0	0	0	27	0	0	27	0	0	6	0	6	110
08:30 AM	18	40	0	0	58	0	0	0	0	0	0	21	0	0	21	0	0	9	0	9	88
08:45 AM	13	31	0	0	44	0	0	0	0	0	0	13	0	0	13	0	0	5	0	5	62
Total	80	176	0	0	256	0	0	0	0	0	0	86	0	0	86	0	0	29	0	29	371
Grand Total	256	585	0	0	841	0	0	0	0	0	0	174	0	0	174	0	0	60	0	60	1075
Apprch %	30.4	69.6	0	0		0	0	0	0		0	100	0	0		0	0	100	0		
Total %	23.8	54.4	0	0	78.2	0	0	0	0	0	0	16.2	0	0	16.2	0	0	5.6	0	5.6	
Lights	256	582	0	0	838	0	0	0	0	0	0	166	0	0	166	0	0	54	0	54	1058
% Lights	100	99.5	0	0	99.6	0	0	0	0	0	0	95.4	0	0	95.4	0	0	90	0	90	98.4
Buses	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	0	0	5	0	5	14
% Buses	0	0.5	0	0	0.4	0	0	0	0	0	0	3.4	0	0	3.4	0	0	8.3	0	8.3	1.3
Trucks	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	3
% Trucks	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	1.1	0	0	1.7	0	1.7	0.3

Start Time	8TH AVE Southbound				Westbound				8TH AVE Northbound				COLONEL DURHAM ST Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	44	78	0	122	0	0	0	0	0	15	0	15	0	0	3	3	140
07:15 AM	46	126	0	172	0	0	0	0	0	18	0	18	0	0	2	2	192
07:30 AM	56	107	0	163	0	0	0	0	0	27	0	27	0	0	7	7	197
07:45 AM	30	98	0	128	0	0	0	0	0	28	0	28	0	0	19	19	175
Total Volume	176	409	0	585	0	0	0	0	0	88	0	88	0	0	31	31	704
% App. Total	30.1	69.9	0		0	0	0		0	100	0		0	0	100		
PHF	.786	.812	.000	.850	.000	.000	.000	.000	.000	.786	.000	.786	.000	.000	.408	.408	.893

Traffic Data Service

San Jose, CA
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File Name : 12AM FINAL
 Site Code : 00000012
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 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 12AM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

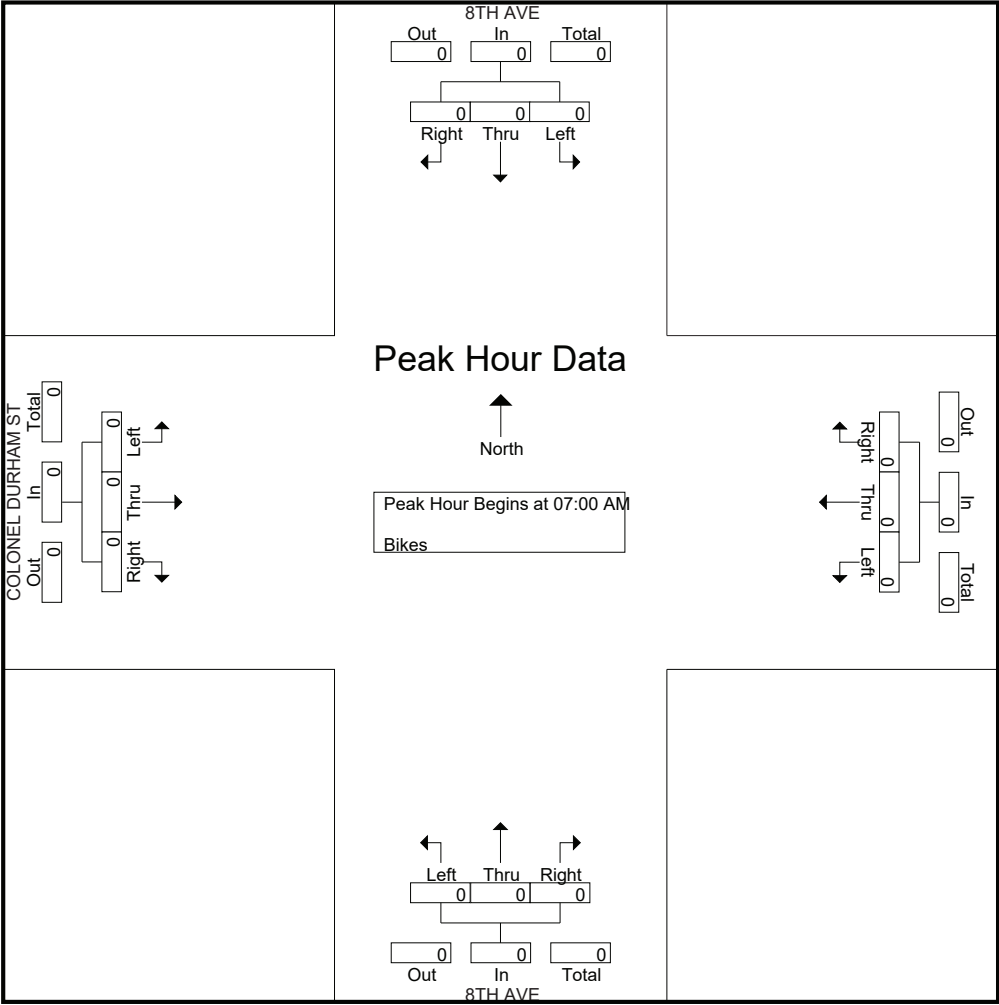
Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 12AM FINAL
 Site Code : 00000012
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 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

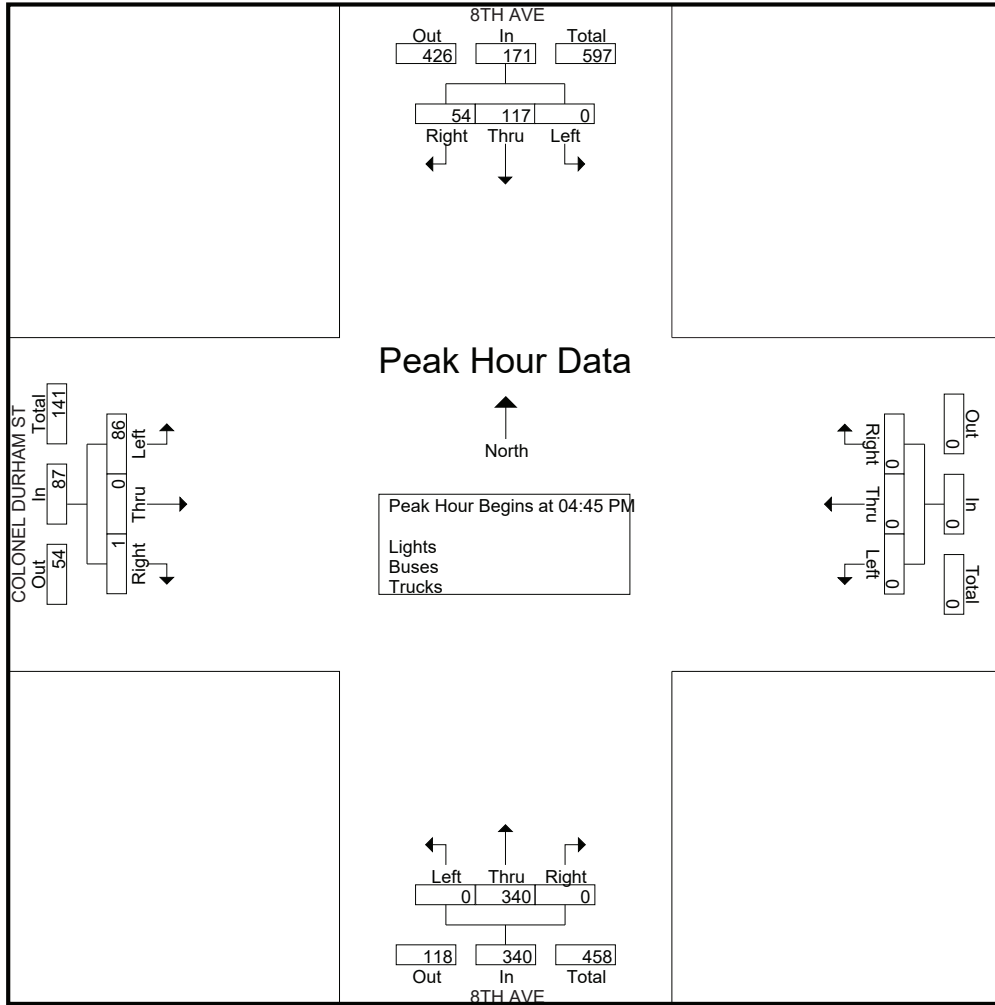
Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	9	28	0	0	37	0	0	0	0	0	0	62	0	0	62	1	0	17	0	18	117
04:15 PM	7	16	0	0	23	0	0	0	0	0	0	76	0	0	76	0	0	14	0	14	113
04:30 PM	10	21	0	0	31	0	0	0	0	0	0	72	0	0	72	0	0	16	0	16	119
04:45 PM	25	29	0	0	54	0	0	0	0	0	0	88	0	0	88	1	0	27	0	28	170
Total	51	94	0	0	145	0	0	0	0	0	0	298	0	0	298	2	0	74	0	76	519
05:00 PM	6	26	0	0	32	0	0	0	0	0	0	77	0	0	77	0	0	27	0	27	136
05:15 PM	13	29	0	0	42	0	0	0	0	0	0	97	0	0	97	0	0	13	0	13	152
05:30 PM	10	33	0	0	43	0	0	0	0	0	0	78	0	0	78	0	0	19	0	19	140
05:45 PM	5	21	0	0	26	0	0	0	0	0	0	55	0	0	55	0	0	15	0	15	96
Total	34	109	0	0	143	0	0	0	0	0	0	307	0	0	307	0	0	74	0	74	524
Grand Total	85	203	0	0	288	0	0	0	0	0	0	605	0	0	605	2	0	148	0	150	1043
Apprch %	29.5	70.5	0	0		0	0	0	0		0	100	0	0		1.3	0	98.7	0		
Total %	8.1	19.5	0	0	27.6	0	0	0	0	0	0	58	0	0	58	0.2	0	14.2	0	14.4	
Lights	84	200	0	0	284	0	0	0	0	0	0	591	0	0	591	1	0	147	0	148	1023
% Lights	98.8	98.5	0	0	98.6	0	0	0	0	0	0	97.7	0	0	97.7	50	0	99.3	0	98.7	98.1
Buses	1	2	0	0	3	0	0	0	0	0	0	7	0	0	7	0	0	1	0	1	11
% Buses	1.2	1	0	0	1	0	0	0	0	0	0	1.2	0	0	1.2	0	0	0.7	0	0.7	1.1
Trucks	0	1	0	0	1	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	9
% Trucks	0	0.5	0	0	0.3	0	0	0	0	0	0	1.2	0	0	1.2	50	0	0	0	0.7	0.9

Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	25	29	0	0	54	0	0	0	0	0	0	88	0	0	88	1	0	27	0	28	170
05:00 PM	6	26	0	0	32	0	0	0	0	0	0	77	0	0	77	0	0	27	0	27	136
05:15 PM	13	29	0	0	42	0	0	0	0	0	0	97	0	0	97	0	0	13	0	13	152
05:30 PM	10	33	0	0	43	0	0	0	0	0	0	78	0	0	78	0	0	19	0	19	140
Total Volume	54	117	0	0	171	0	0	0	0	0	0	340	0	0	340	1	0	86	0	87	598
% App. Total	31.6	68.4	0	0		0	0	0	0		0	100	0	0		1.1	0	98.9	0		
PHF	.540	.886	.000	.000	.792	.000	.000	.000	.000	.000	.000	.876	.000	.876	.250	.000	.796	.000	.777	.879	

Traffic Data Service

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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

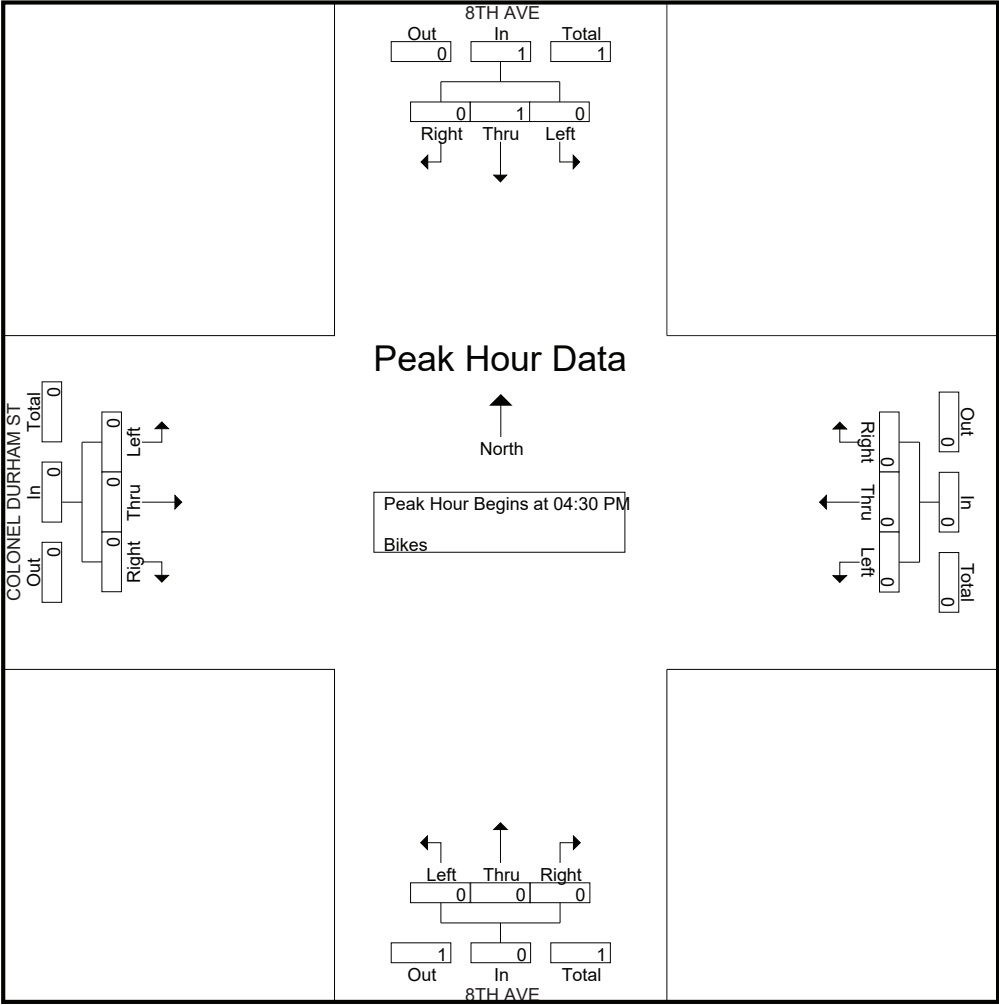
Start Time	8TH AVE Southbound					Westbound					8TH AVE Northbound					COLONEL DURHAM ST Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

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File Name : 12PM FINAL
 Site Code : 00000012
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

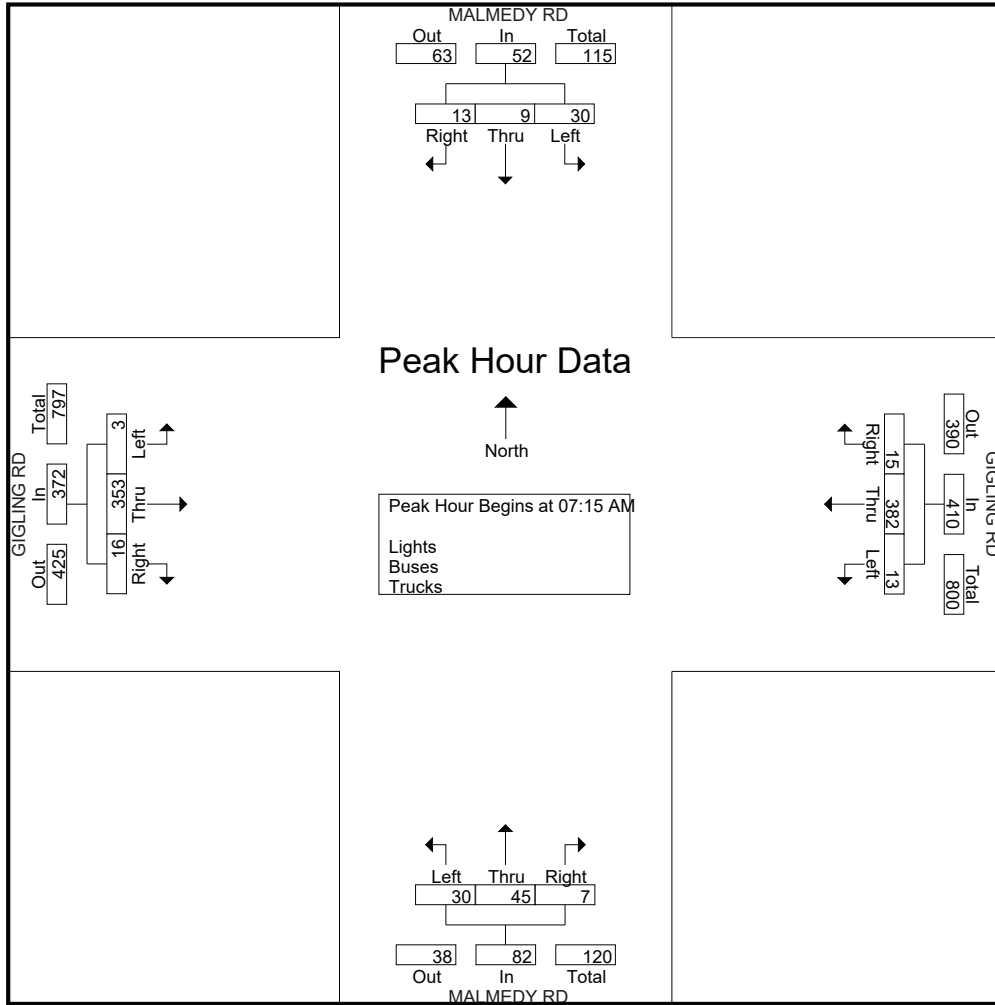
Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	1	1	1	0	3	0	69	0	0	69	2	10	1	0	13	1	43	0	0	44	129
07:15 AM	3	1	2	0	6	4	111	1	0	116	0	15	6	0	21	2	54	0	0	56	199
07:30 AM	3	0	5	0	8	6	125	1	0	132	2	11	5	0	18	6	92	2	0	100	258
07:45 AM	3	2	13	1	19	4	87	10	0	101	3	10	8	0	21	5	114	0	0	119	260
Total	10	4	21	1	36	14	392	12	0	418	7	46	20	0	73	14	303	2	0	319	846
08:00 AM	4	6	10	0	20	1	59	1	0	61	2	9	11	0	22	3	93	1	0	97	200
08:15 AM	2	5	7	0	14	4	78	4	0	86	1	9	2	0	12	1	73	1	0	75	187
08:30 AM	2	3	9	0	14	0	61	1	0	62	1	1	1	0	3	2	59	0	0	61	140
08:45 AM	2	3	6	0	11	2	30	0	0	32	3	4	4	0	11	2	45	2	0	49	103
Total	10	17	32	0	59	7	228	6	0	241	7	23	18	0	48	8	270	4	0	282	630
Grand Total	20	21	53	1	95	21	620	18	0	659	14	69	38	0	121	22	573	6	0	601	1476
Apprch %	21.1	22.1	55.8	1.1		3.2	94.1	2.7	0		11.6	57	31.4	0		3.7	95.3	1	0		
Total %	1.4	1.4	3.6	0.1	6.4	1.4	42	1.2	0	44.6	0.9	4.7	2.6	0	8.2	1.5	38.8	0.4	0	40.7	
Lights	20	21	50	1	92	18	600	18	0	636	13	69	37	0	119	20	555	5	0	580	1427
% Lights	100	100	94.3	100	96.8	85.7	96.8	100	0	96.5	92.9	100	97.4	0	98.3	90.9	96.9	83.3	0	96.5	96.7
Buses	0	0	0	0	0	0	10	0	0	10	0	0	1	0	1	2	11	0	0	13	24
% Buses	0	0	0	0	0	0	1.6	0	0	1.5	0	0	2.6	0	0.8	9.1	1.9	0	0	2.2	1.6
Trucks	0	0	3	0	3	3	10	0	0	13	1	0	0	0	1	0	7	1	0	8	25
% Trucks	0	0	5.7	0	3.2	14.3	1.6	0	0	2	7.1	0	0	0	0.8	0	1.2	16.7	0	1.3	1.7

Start Time	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	1	2	6	4	111	1	116	0	15	6	21	2	54	0	56	199
07:30 AM	3	0	5	8	6	125	1	132	2	11	5	18	6	92	2	100	258
07:45 AM	3	2	13	18	4	87	10	101	3	10	8	21	5	114	0	119	259
08:00 AM	4	6	10	20	1	59	1	61	2	9	11	22	3	93	1	97	200
Total Volume	13	9	30	52	15	382	13	410	7	45	30	82	16	353	3	372	916
% App. Total	25	17.3	57.7		3.7	93.2	3.2		8.5	54.9	36.6		4.3	94.9	0.8		
PHF	.813	.375	.577	.650	.625	.764	.325	.777	.583	.750	.682	.932	.667	.774	.375	.782	.884

Traffic Data Service

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File Name : 13AM FINAL
 Site Code : 00000013
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 Page No : 2



Traffic Data Service

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File Name : 13AM FINAL
 Site Code : 00000013
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0	100	

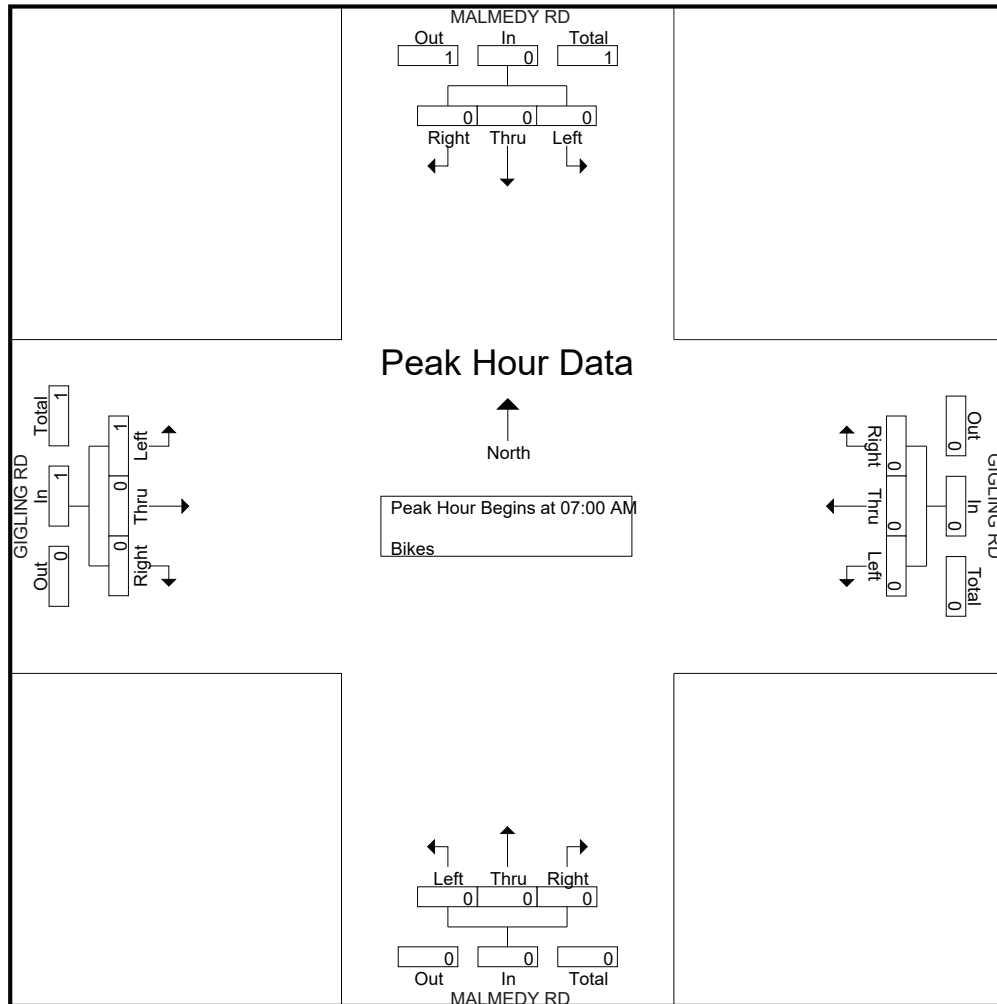
Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	100	0		
PHF	.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.250		.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
(408) 622-4787
tdsbay@cs.com

File Name : 13AM FINAL
Site Code : 00000013
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	6	5	0	12	4	89	2	0	95	0	5	2	0	7	6	52	0	0	58	172
04:15 PM	1	5	4	0	10	5	70	1	0	76	0	9	1	0	10	4	59	1	0	64	160
04:30 PM	0	4	3	0	7	6	81	0	0	87	3	8	3	1	15	3	57	0	0	60	169
04:45 PM	1	11	3	0	15	4	99	1	0	104	2	5	4	0	11	11	79	0	0	90	220
Total	3	26	15	0	44	19	339	4	0	362	5	27	10	1	43	24	247	1	0	272	721
05:00 PM	0	5	3	0	8	3	83	5	0	91	1	5	6	0	12	11	83	1	0	95	206
05:15 PM	2	7	1	1	11	3	74	4	0	81	0	9	0	0	9	6	99	0	0	105	206
05:30 PM	2	4	2	1	9	3	56	2	0	61	3	6	2	1	12	11	79	2	0	92	174
05:45 PM	0	4	2	0	6	2	49	2	0	53	1	7	1	0	9	8	62	0	0	70	138
Total	4	20	8	2	34	11	262	13	0	286	5	27	9	1	42	36	323	3	0	362	724
Grand Total	7	46	23	2	78	30	601	17	0	648	10	54	19	2	85	60	570	4	0	634	1445
Apprch %	9	59	29.5	2.6		4.6	92.7	2.6	0		11.8	63.5	22.4	2.4		9.5	89.9	0.6	0		
Total %	0.5	3.2	1.6	0.1	5.4	2.1	41.6	1.2	0	44.8	0.7	3.7	1.3	0.1	5.9	4.2	39.4	0.3	0	43.9	
Lights	7	45	22	2	76	30	591	17	0	638	10	53	19	2	84	59	552	4	0	615	1413
% Lights	100	97.8	95.7	100	97.4	100	98.3	100	0	98.5	100	98.1	100	98.8	98.3	96.8	100	0	0	97	97.8
Buses	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	1	11	0	0	12	19
% Buses	0	0	4.3	0	1.3	0	1	0	0	0.9	0	0	0	0	0	1.7	1.9	0	0	1.9	1.3
Trucks	0	1	0	0	1	0	4	0	0	4	0	1	0	0	1	0	7	0	0	7	13
% Trucks	0	2.2	0	0	1.3	0	0.7	0	0	0.6	0	1.9	0	0	1.2	0	1.2	0	0	1.1	0.9

Start Time	MALMEDY RD Southbound				GIGLING RD Westbound				MALMEDY RD Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:45 PM	1	11	3	15	4	99	1	104	2	5	4	11	11	79	0	90	220
05:00 PM	0	5	3	8	3	83	5	91	1	5	6	12	11	83	1	95	206
05:15 PM	2	7	1	10	3	74	4	81	0	9	0	9	6	99	0	105	205
05:30 PM	2	4	2	8	3	56	2	61	3	6	2	11	11	79	2	92	172
Total Volume	5	27	9	41	13	312	12	337	6	25	12	43	39	340	3	382	803
% App. Total	12.2	65.9	22		3.9	92.6	3.6		14	58.1	27.9		10.2	89	0.8		
PHF	.625	.614	.750	.683	.813	.788	.600	.810	.500	.694	.500	.896	.886	.859	.375	.910	.913

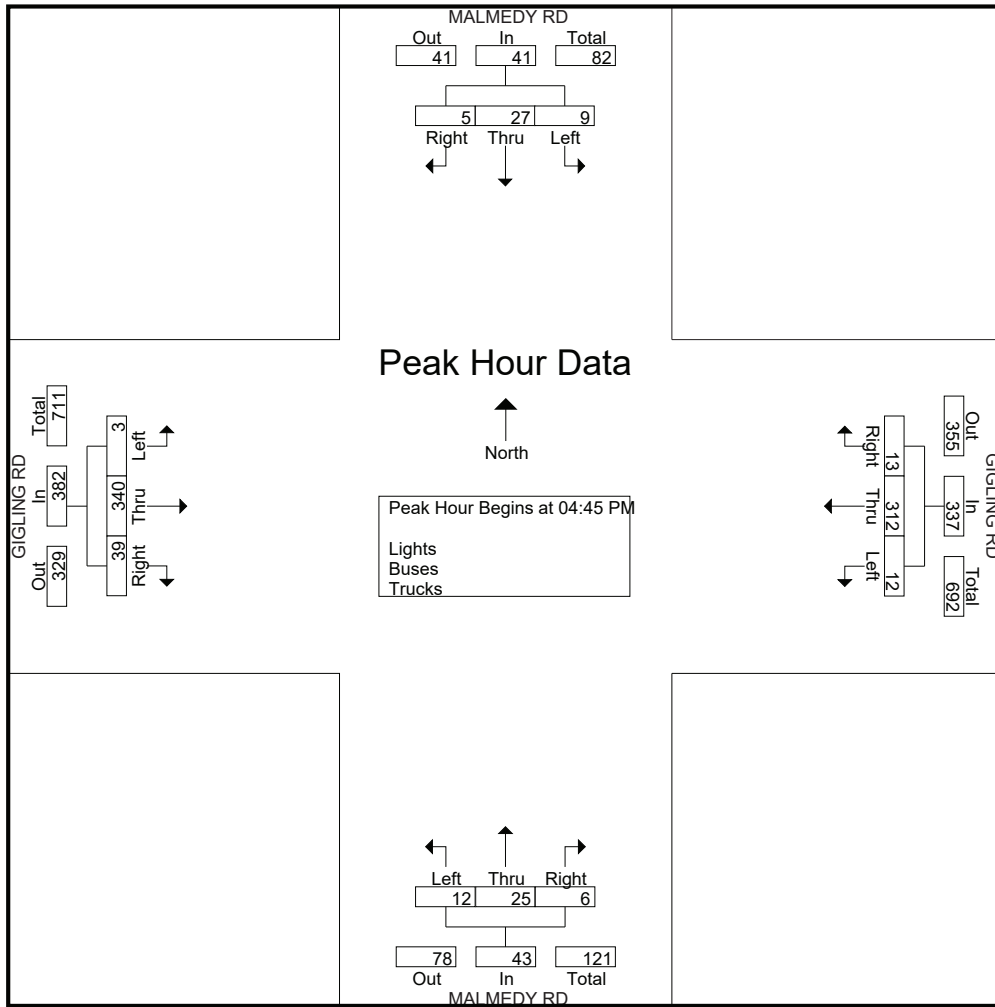
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 13PM FINAL
 Site Code : 00000013
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File Name : 13PM FINAL
 Site Code : 00000013
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	50	0	0	50	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	

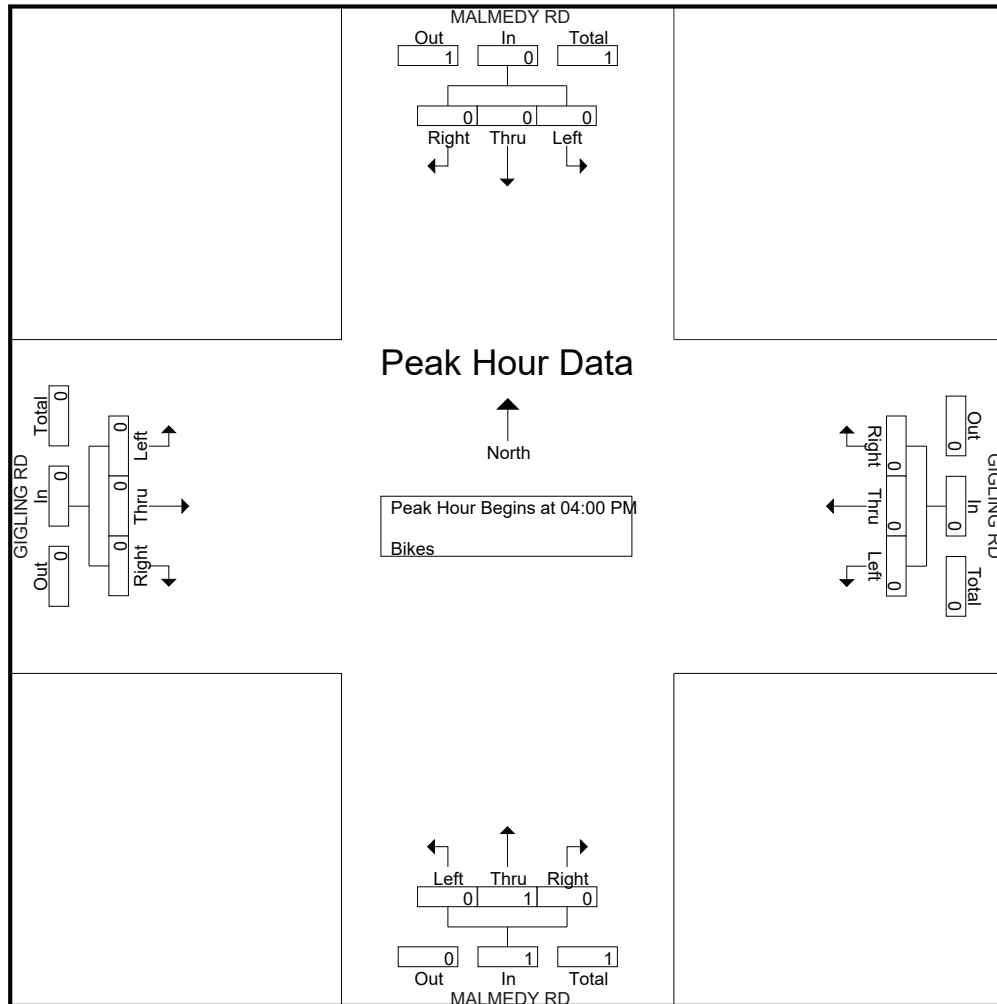
Start Time	MALMEDY RD Southbound					GIGLING RD Westbound					MALMEDY RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 13PM FINAL
Site Code : 00000013
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Traffic Data Service

San Jose, CA
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File Name : 14AM FINAL
 Site Code : 00000014
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	1	0	0	1	0	62	3	0	65	2	1	2	0	5	8	41	0	0	49	120
07:15 AM	0	2	1	0	3	0	112	9	0	121	6	2	4	0	12	10	45	0	0	55	191
07:30 AM	0	2	4	0	6	0	124	10	0	134	9	3	1	0	13	17	80	2	0	99	252
07:45 AM	0	5	1	0	6	0	84	17	0	101	9	3	6	0	18	40	97	0	0	137	262
Total	0	10	6	0	16	0	382	39	0	421	26	9	13	0	48	75	263	2	0	340	825
08:00 AM	0	2	1	0	3	0	61	5	0	66	7	1	6	0	14	24	63	3	0	90	173
08:15 AM	0	4	0	0	4	1	55	4	0	60	3	3	12	0	18	25	56	0	0	81	163
08:30 AM	0	4	0	0	4	0	45	4	0	49	2	0	6	1	9	17	47	1	0	65	127
08:45 AM	0	8	1	0	9	0	25	4	0	29	3	2	4	0	9	9	43	1	0	53	100
Total	0	18	2	0	20	1	186	17	0	204	15	6	28	1	50	75	209	5	0	289	563
Grand Total	0	28	8	0	36	1	568	56	0	625	41	15	41	1	98	150	472	7	0	629	1388
Apprch %	0	77.8	22.2	0		0.2	90.9	9	0		41.8	15.3	41.8	1		23.8	75	1.1	0		
Total %	0	2	0.6	0	2.6	0.1	40.9	4	0	45	3	1.1	3	0.1	7.1	10.8	34	0.5	0	45.3	
Lights	0	28	8	0	36	1	554	56	0	611	41	15	34	1	91	142	460	7	0	609	1347
% Lights	0	100	100	0	100	100	97.5	100	0	97.8	100	100	82.9	100	92.9	94.7	97.5	100	0	96.8	97
Buses	0	0	0	0	0	0	6	0	0	6	0	0	7	0	7	2	8	0	0	10	23
% Buses	0	0	0	0	0	0	1.1	0	0	1	0	0	17.1	0	7.1	1.3	1.7	0	0	1.6	1.7
Trucks	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	6	4	0	0	10	18
% Trucks	0	0	0	0	0	0	1.4	0	0	1.3	0	0	0	0	0	4	0.8	0	0	1.6	1.3

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	0	2	1	0	3	0	112	9	0	121	6	2	4	0	12	10	45	0	0	55	191
07:30 AM	0	2	4	0	6	0	124	10	0	134	9	3	1	0	13	17	80	2	0	99	252
07:45 AM	0	5	1	0	6	0	84	17	0	101	9	3	6	0	18	40	97	0	0	137	262
08:00 AM	0	2	1	0	3	0	61	5	0	66	7	1	6	0	14	24	63	3	0	90	173
Total Volume	0	11	7	0	18	0	381	41	0	422	31	9	17	0	57	91	285	5	0	381	878
% App. Total	0	61.1	38.9	0		0	90.3	9.7	0		54.4	15.8	29.8	0		23.9	74.8	1.3	0		
PHF	.000	.550	.438	.750		.000	.768	.603	.787		.861	.750	.708	.792		.569	.735	.417	.695		.838

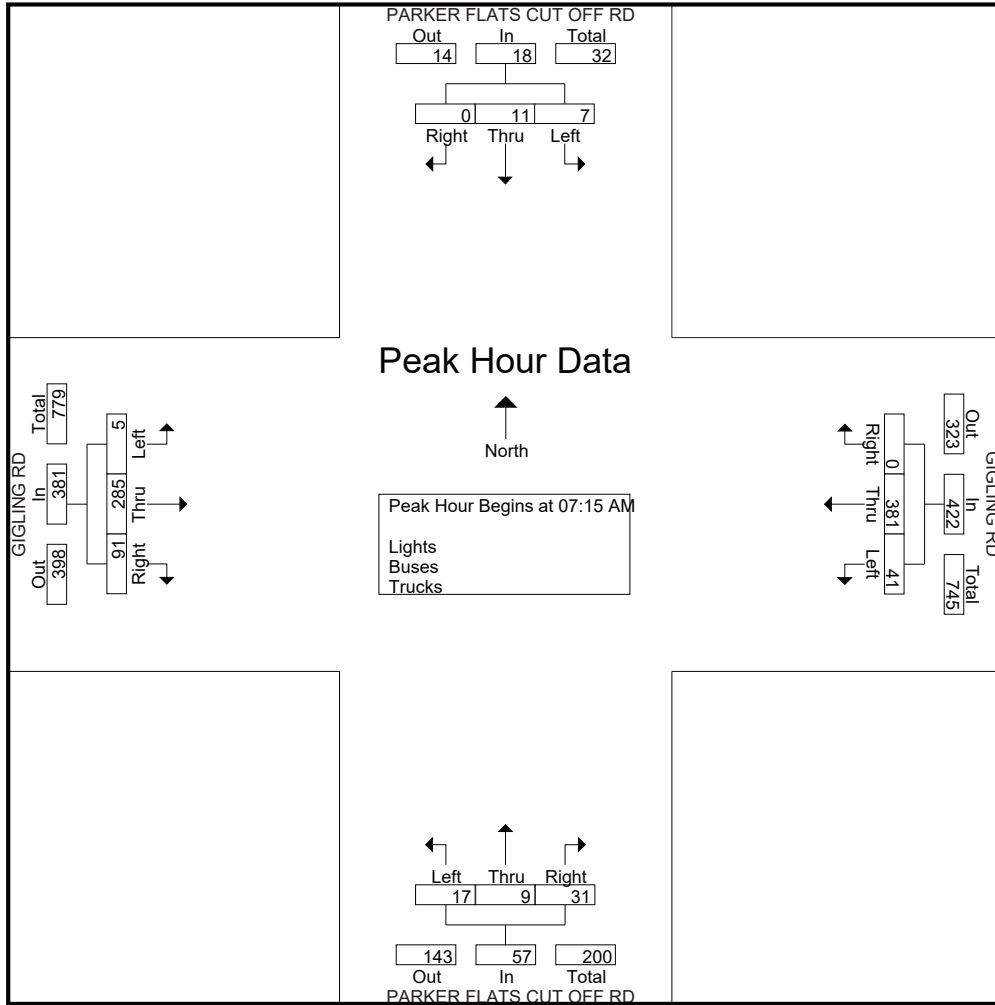
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 14AM FINAL
 Site Code : 00000014
 Start Date : 4/25/2018
 Page No : 2



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San Jose, CA
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File Name : 14AM FINAL
 Site Code : 00000014
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 Page No : 1

Groups Printed- Bikes

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Apprch %	0	66.7	33.3	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
Total %	0	50	25	0	75	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	0	0	0	0	0	

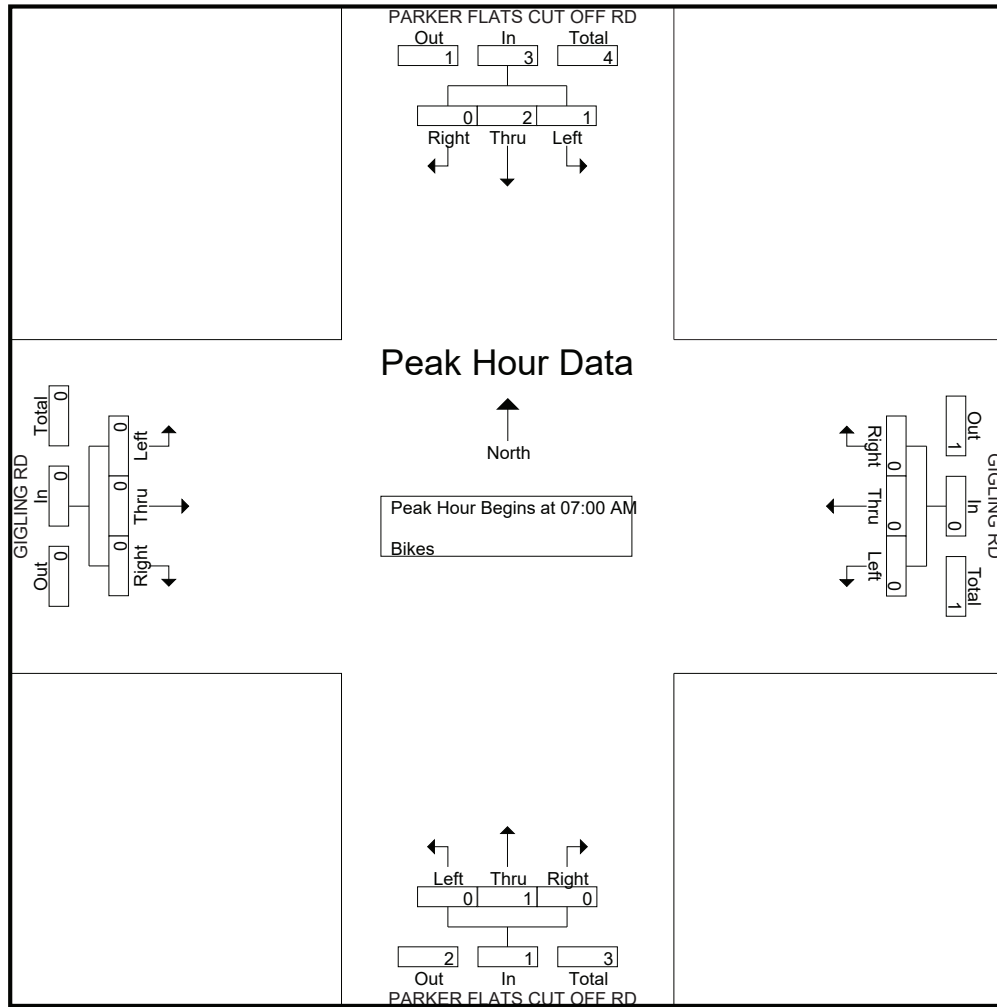
Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
% App. Total	0	66.7	33.3	0		0	0	0	0		0	100	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.500	.250		.750	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.000	.000		.500	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 14PM FINAL
 Site Code : 00000014
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	2	1	0	0	3	0	64	2	1	67	7	6	18	1	32	2	55	0	0	57	159
04:15 PM	0	1	0	0	1	0	48	3	0	51	6	9	18	0	33	3	53	1	0	57	142
04:30 PM	0	1	0	0	1	0	65	4	0	69	7	6	20	1	34	2	62	0	0	64	168
04:45 PM	0	0	0	0	0	1	81	5	0	87	6	5	25	0	36	2	81	1	0	84	207
Total	2	3	0	0	5	1	258	14	1	274	26	26	81	2	135	9	251	2	0	262	676
05:00 PM	0	0	0	0	0	1	80	2	2	85	5	7	6	0	18	2	77	0	0	79	182
05:15 PM	0	2	0	0	2	0	58	1	0	59	3	3	14	2	22	2	96	1	0	99	182
05:30 PM	1	2	0	0	3	0	50	3	0	53	3	7	7	0	17	2	82	1	0	85	158
05:45 PM	1	0	0	0	1	0	45	1	0	46	3	2	8	0	13	2	55	0	0	57	117
Total	2	4	0	0	6	1	233	7	2	243	14	19	35	2	70	8	310	2	0	320	639
Grand Total	4	7	0	0	11	2	491	21	3	517	40	45	116	4	205	17	561	4	0	582	1315
Apprch %	36.4	63.6	0	0		0.4	95	4.1	0.6		19.5	22	56.6	2		2.9	96.4	0.7	0		
Total %	0.3	0.5	0	0	0.8	0.2	37.3	1.6	0.2	39.3	3	3.4	8.8	0.3	15.6	1.3	42.7	0.3	0	44.3	
Lights	4	7	0	0	11	2	482	21	3	508	39	45	114	4	202	17	543	4	0	564	1285
% Lights	100	100	0	0	100	100	98.2	100	100	98.3	97.5	100	98.3	100	98.5	100	96.8	100	0	96.9	97.7
Buses	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	12	0	0	12	18
% Buses	0	0	0	0	0	0	1.2	0	0	1.2	0	0	0	0	0	0	2.1	0	0	2.1	1.4
Trucks	0	0	0	0	0	0	3	0	0	3	1	0	2	0	3	0	6	0	0	6	12
% Trucks	0	0	0	0	0	0	0.6	0	0	0.6	2.5	0	1.7	0	1.5	0	1.1	0	0	1	0.9

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:30 PM	0	1	0	0	1	0	65	4	0	69	7	6	20	33	2	62	0	0	64	167	
04:45 PM	0	0	0	0	0	1	81	5	0	87	6	5	25	36	2	81	1	0	84	207	
05:00 PM	0	0	0	0	0	1	80	2	0	83	5	7	6	18	2	77	0	0	79	180	
05:15 PM	0	2	0	0	2	0	58	1	0	59	3	3	14	20	2	96	1	0	99	180	
Total Volume	0	3	0	0	3	2	284	12	0	298	21	21	65	107	8	316	2	0	326	734	
% App. Total	0	100	0	0		0.7	95.3	4	0		19.6	19.6	60.7		2.5	96.9	0.6	0			
PHF	.000	.375	.000	.000	.375	.500	.877	.600	.856	.750	.750	.650	.743	1.00	.823	.500	.823	.823	.823	.886	

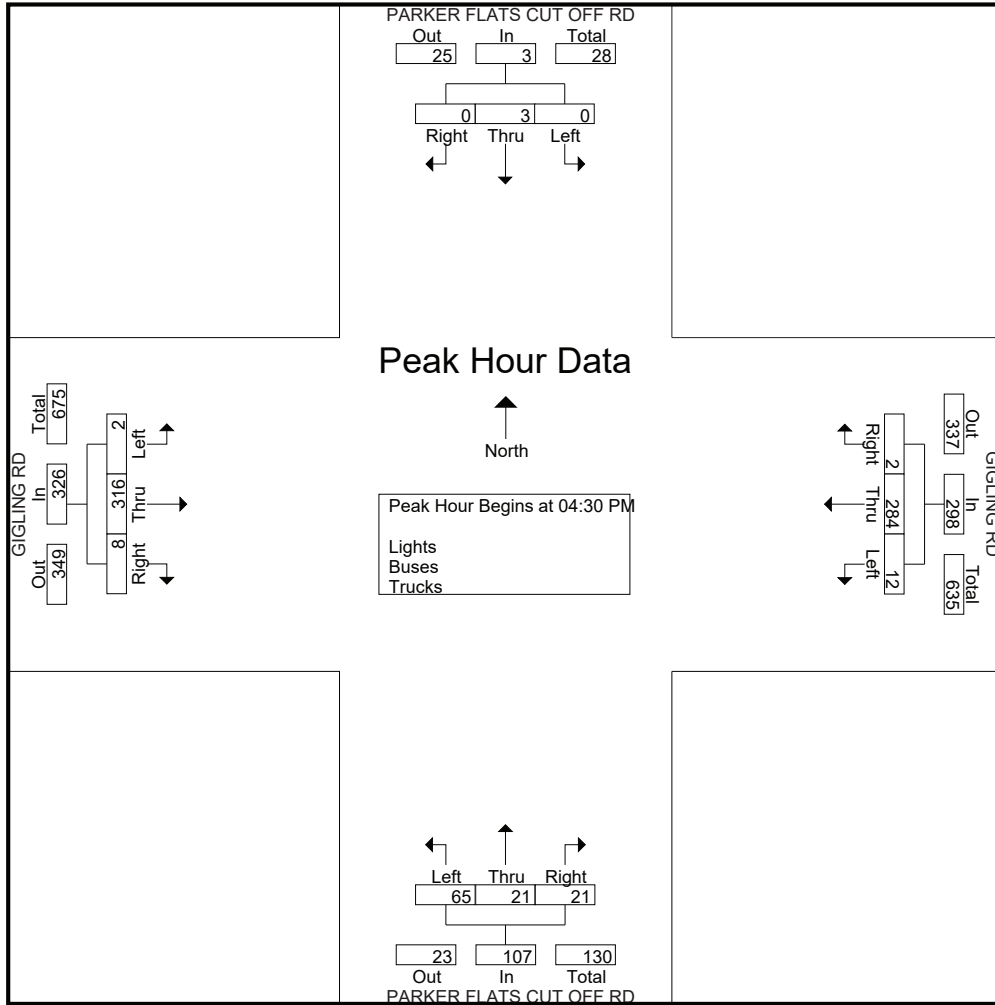
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 14PM FINAL
 Site Code : 00000014
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 14PM FINAL
 Site Code : 00000014
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

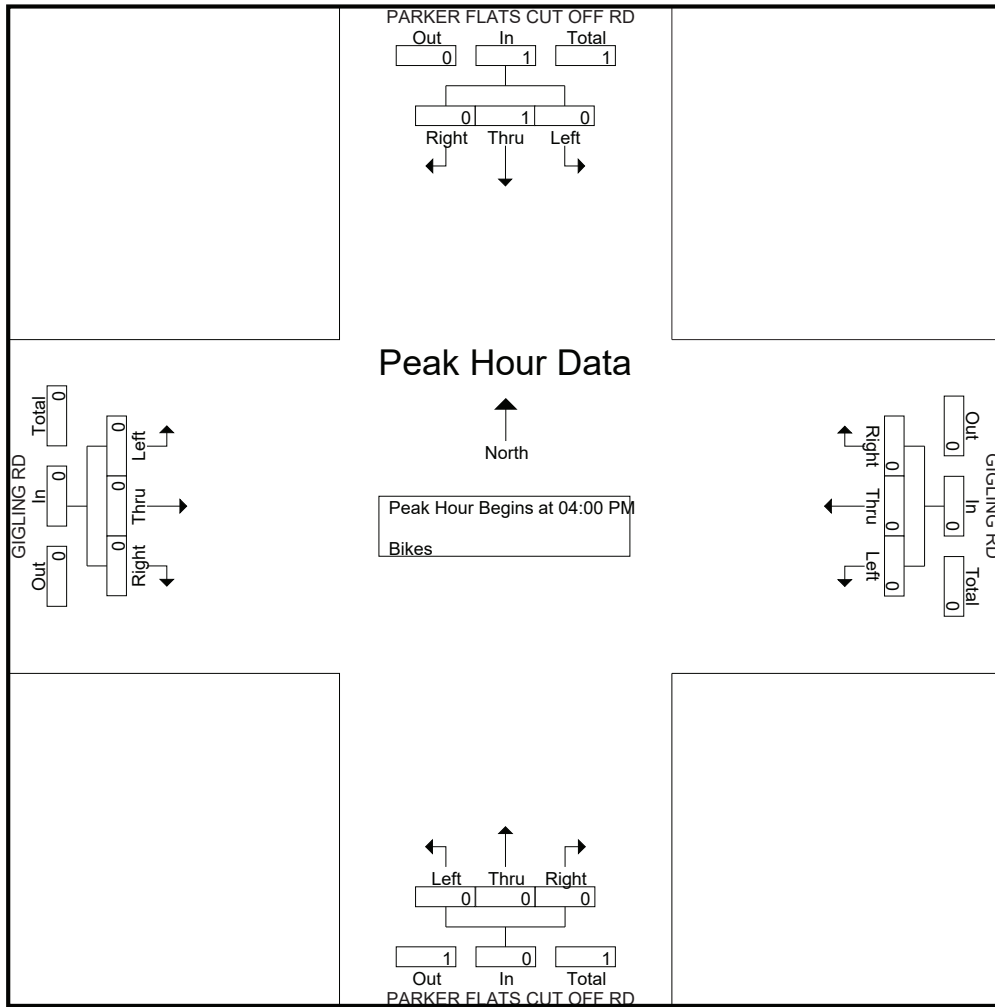
Start Time	PARKER FLATS CUT OFF RD Southbound					GIGLING RD Westbound					PARKER FLATS CUT OFF RD Northbound					GIGLING RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 14PM FINAL
Site Code : 00000014
Start Date : 4/25/2018
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Traffic Data Service

San Jose, CA
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File Name : 15AM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

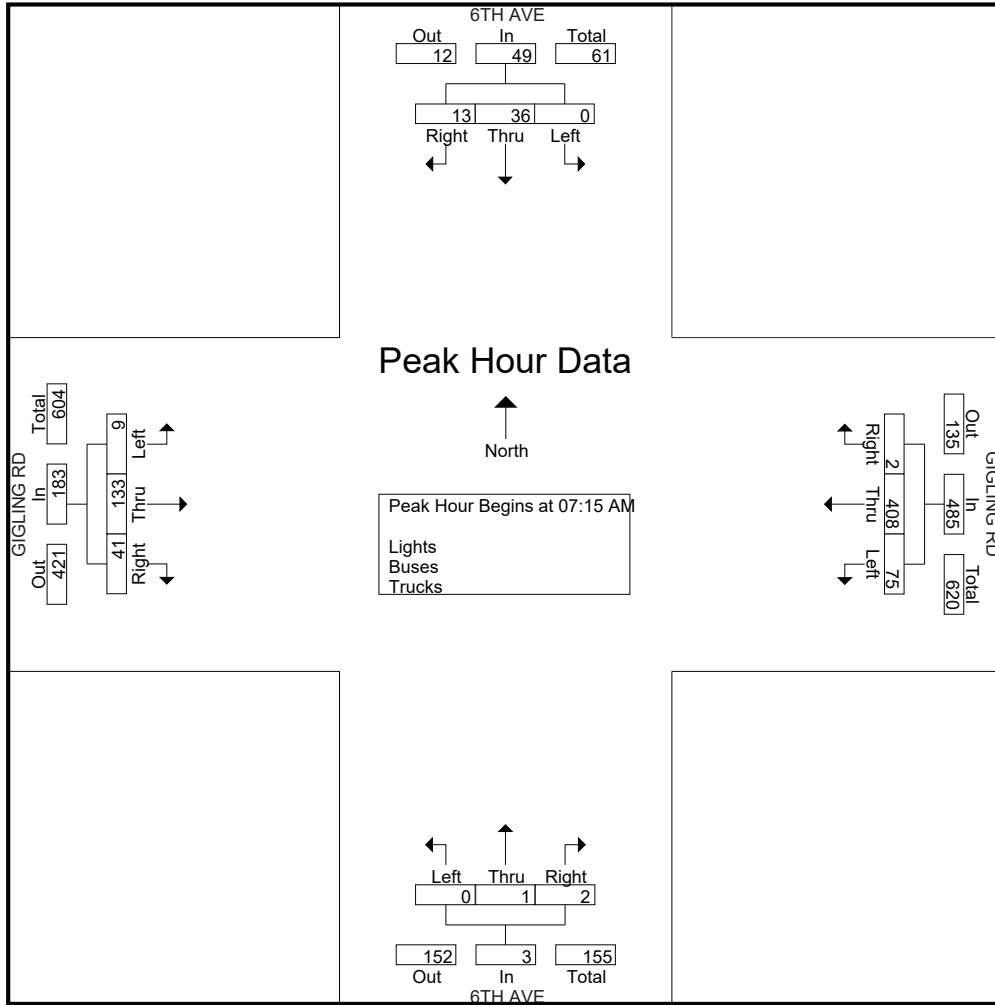
Start Time	6TH AVE Southbound					GIGLING RD Westbound					6TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	1	0	0	1	0	71	13	0	84	0	0	0	0	0	1	23	0	0	24	109
07:15 AM	2	6	0	0	8	1	126	17	0	144	1	1	0	0	2	4	28	1	0	33	187
07:30 AM	6	8	0	0	14	1	121	17	0	139	0	0	0	0	0	13	33	3	1	50	203
07:45 AM	2	13	0	0	15	0	100	26	0	126	0	0	0	0	0	14	37	5	0	56	197
Total	10	28	0	0	38	2	418	73	0	493	1	1	0	0	2	32	121	9	1	163	696
08:00 AM	3	9	0	0	12	0	61	15	0	76	1	0	0	0	1	10	35	0	1	46	135
08:15 AM	0	5	0	0	5	0	61	8	0	69	1	0	1	0	2	6	26	2	0	34	110
08:30 AM	0	5	0	0	5	0	50	10	0	60	0	3	0	0	3	8	20	3	0	31	99
08:45 AM	0	3	0	0	3	0	26	10	0	36	0	0	0	0	0	6	15	3	0	24	63
Total	3	22	0	0	25	0	198	43	0	241	2	3	1	0	6	30	96	8	1	135	407
Grand Total	13	50	0	0	63	2	616	116	0	734	3	4	1	0	8	62	217	17	2	298	1103
Apprch %	20.6	79.4	0	0		0.3	83.9	15.8	0		37.5	50	12.5	0		20.8	72.8	5.7	0.7		
Total %	1.2	4.5	0	0	5.7	0.2	55.8	10.5	0	66.5	0.3	0.4	0.1	0	0.7	5.6	19.7	1.5	0.2	27	
Lights	13	49	0	0	62	2	605	115	0	722	2	4	1	0	7	62	210	15	2	289	1080
% Lights	100	98	0	0	98.4	100	98.2	99.1	0	98.4	66.7	100	100	0	87.5	100	96.8	88.2	100	97	97.9
Buses	0	1	0	0	1	0	4	1	0	5	1	0	0	0	1	0	5	2	0	7	14
% Buses	0	2	0	0	1.6	0	0.6	0.9	0	0.7	33.3	0	0	0	12.5	0	2.3	11.8	0	2.3	1.3
Trucks	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	2	0	0	2	9
% Trucks	0	0	0	0	0	0	1.1	0	0	1	0	0	0	0	0	0	0.9	0	0	0.7	0.8

Start Time	6TH AVE Southbound				GIGLING RD Westbound				6TH AVE Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	6	0	8	1	126	17	144	1	1	0	2	4	28	1	33	187
07:30 AM	6	8	0	14	1	121	17	139	0	0	0	0	13	33	3	49	202
07:45 AM	2	13	0	15	0	100	26	126	0	0	0	0	14	37	5	56	197
08:00 AM	3	9	0	12	0	61	15	76	1	0	0	1	10	35	0	45	134
Total Volume	13	36	0	49	2	408	75	485	2	1	0	3	41	133	9	183	720
% App. Total	26.5	73.5	0		0.4	84.1	15.5		66.7	33.3	0		22.4	72.7	4.9		
PHF	.542	.692	.000	.817	.500	.810	.721	.842	.500	.250	.000	.375	.732	.899	.450	.817	.891

Traffic Data Service

San Jose, CA
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File Name : 15AM FINAL
 Site Code : 00000015
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Traffic Data Service

San Jose, CA
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File Name : 15AM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	6TH AVE Southbound					GIGLING RD Westbound					6TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	100	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

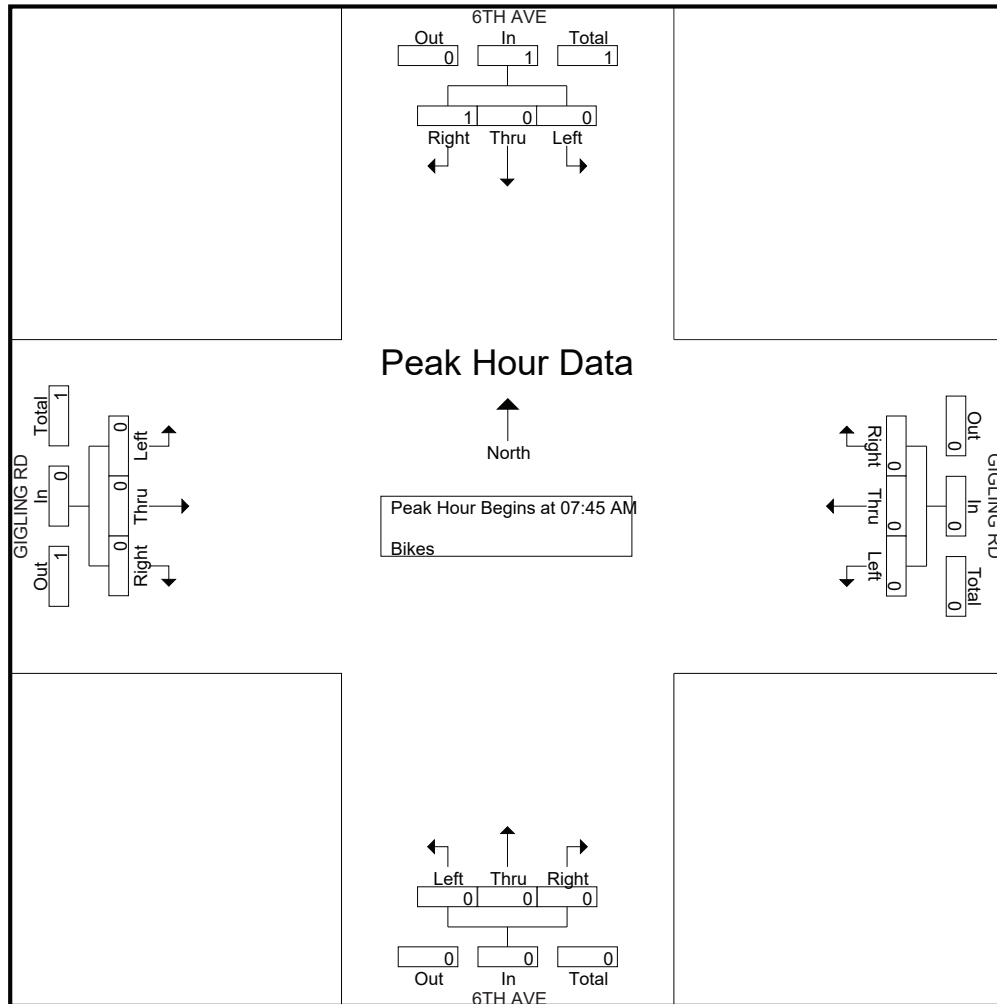
Start Time	6TH AVE Southbound					GIGLING RD Westbound					6TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	100	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45 AM

Traffic Data Service

San Jose, CA
(408) 622-4787
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File Name : 15AM FINAL
Site Code : 00000015
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 15PM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

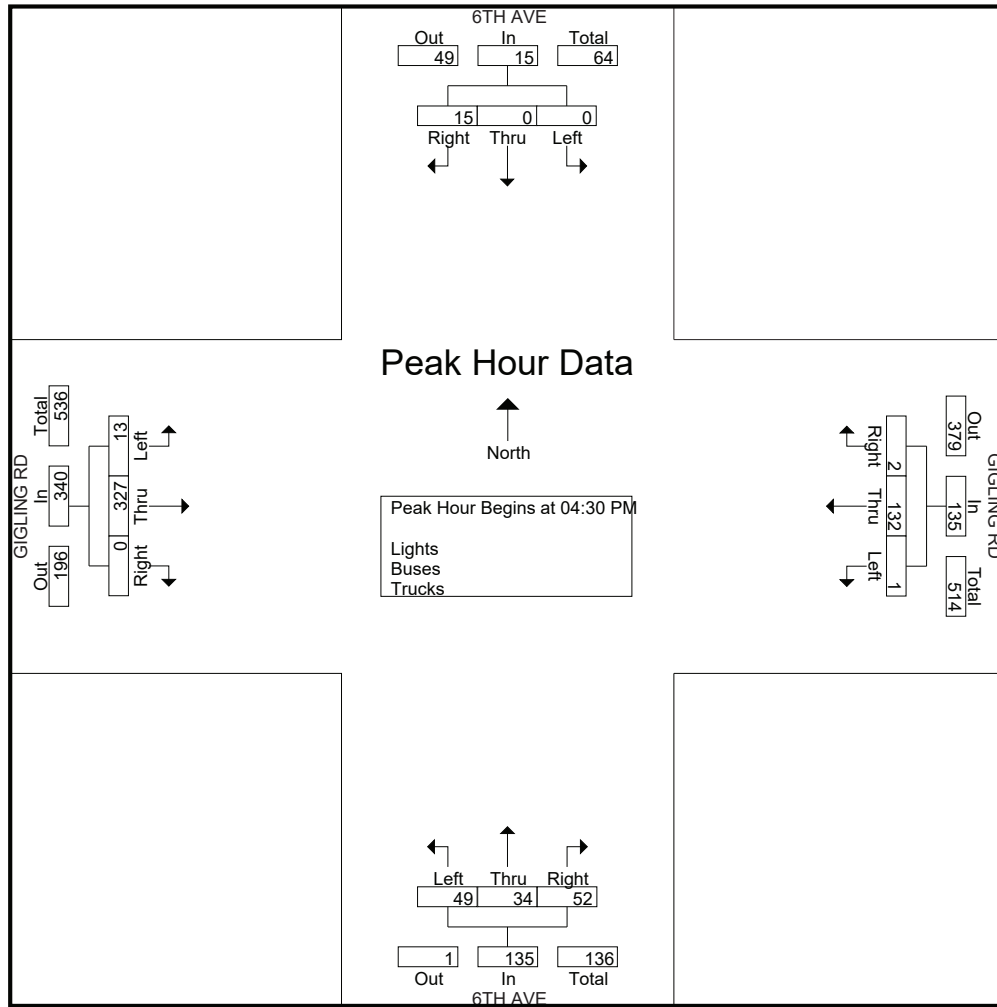
Start Time	6TH AVE Southbound					GIGLING RD Westbound					6TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	0	0	0	1	0	30	0	0	30	11	8	9	0	28	1	61	3	1	66	125
04:15 PM	1	0	0	0	1	0	22	0	0	22	8	2	13	0	23	0	57	3	0	60	106
04:30 PM	1	0	0	0	1	0	28	1	0	29	20	10	12	0	42	0	66	1	0	67	139
04:45 PM	3	0	0	0	3	1	36	0	0	37	12	5	14	0	31	0	85	5	1	91	162
Total	6	0	0	0	6	1	116	1	0	118	51	25	48	0	124	1	269	12	2	284	532
05:00 PM	7	0	0	0	7	0	35	0	0	35	15	13	12	0	40	0	78	5	0	83	165
05:15 PM	4	0	0	0	4	1	33	0	0	34	5	6	11	0	22	0	98	2	0	100	160
05:30 PM	3	0	0	0	3	1	33	0	0	34	5	2	10	0	17	0	82	1	0	83	137
05:45 PM	0	0	0	0	0	0	31	0	0	31	2	1	4	0	7	0	57	2	0	59	97
Total	14	0	0	0	14	2	132	0	0	134	27	22	37	0	86	0	315	10	0	325	559
Grand Total	20	0	0	0	20	3	248	1	0	252	78	47	85	0	210	1	584	22	2	609	1091
Apprch %	100	0	0	0		1.2	98.4	0.4	0		37.1	22.4	40.5	0		0.2	95.9	3.6	0.3		
Total %	1.8	0	0	0	1.8	0.3	22.7	0.1	0	23.1	7.1	4.3	7.8	0	19.2	0.1	53.5	2	0.2	55.8	
Lights	20	0	0	0	20	3	241	1	0	245	78	47	85	0	210	1	568	21	2	592	1067
% Lights	100	0	0	0	100	100	97.2	100	0	97.2	100	100	100	0	100	100	97.3	95.5	100	97.2	97.8
Buses	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10	1	0	11	15
% Buses	0	0	0	0	0	0	1.6	0	0	1.6	0	0	0	0	0	0	1.7	4.5	0	1.8	1.4
Trucks	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	6	0	0	6	9
% Trucks	0	0	0	0	0	0	1.2	0	0	1.2	0	0	0	0	0	0	1	0	0	1	0.8

Start Time	6TH AVE Southbound				GIGLING RD Westbound				6TH AVE Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	0	0	1	0	28	1	29	20	10	12	42	0	66	1	67	139
04:45 PM	3	0	0	3	1	36	0	37	12	5	14	31	0	85	5	90	161
05:00 PM	7	0	0	7	0	35	0	35	15	13	12	40	0	78	5	83	165
05:15 PM	4	0	0	4	1	33	0	34	5	6	11	22	0	98	2	100	160
Total Volume	15	0	0	15	2	132	1	135	52	34	49	135	0	327	13	340	625
% App. Total	100	0	0		1.5	97.8	0.7		38.5	25.2	36.3		0	96.2	3.8		
PHF	.536	.000	.000	.536	.500	.917	.250	.912	.650	.654	.875	.804	.000	.834	.650	.850	.947

Traffic Data Service

San Jose, CA
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File Name : 15PM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
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Traffic Data Service

San Jose, CA
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File Name : 15PM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	6TH AVE Southbound					GIGLING RD Westbound					6TH AVE Northbound					GIGLING RD Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	3
Grand Total	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	3
Apprch %	0	0	0	0		0	0	0	0		0	100	0	0		0	100	0	0			
Total %	0	0	0	0		0	0	0	0		0	66.7	0	0	66.7	0	33.3	0	0	33.3		

Start Time	6TH AVE Southbound				GIGLING RD Westbound				6TH AVE Northbound				GIGLING RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	0	3
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.250	.000	.250		.375

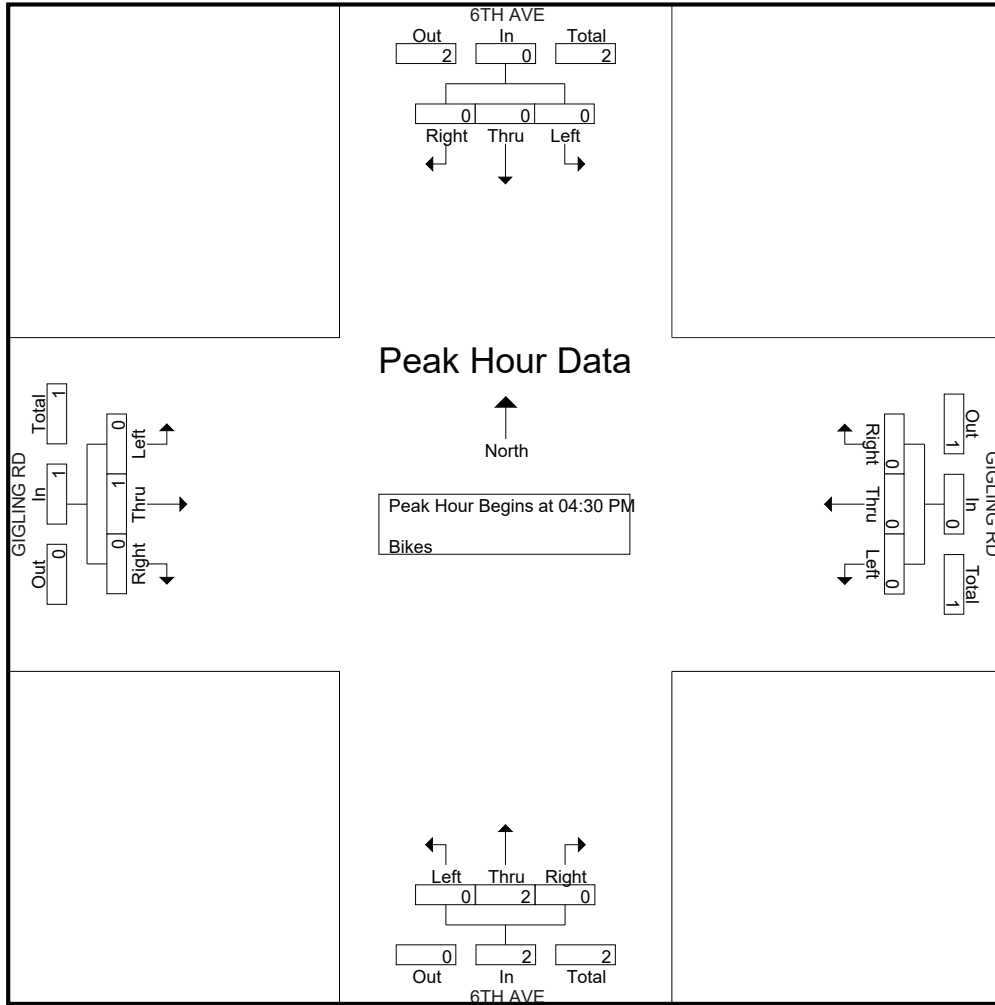
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

San Jose, CA
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File Name : 15PM FINAL
 Site Code : 00000015
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

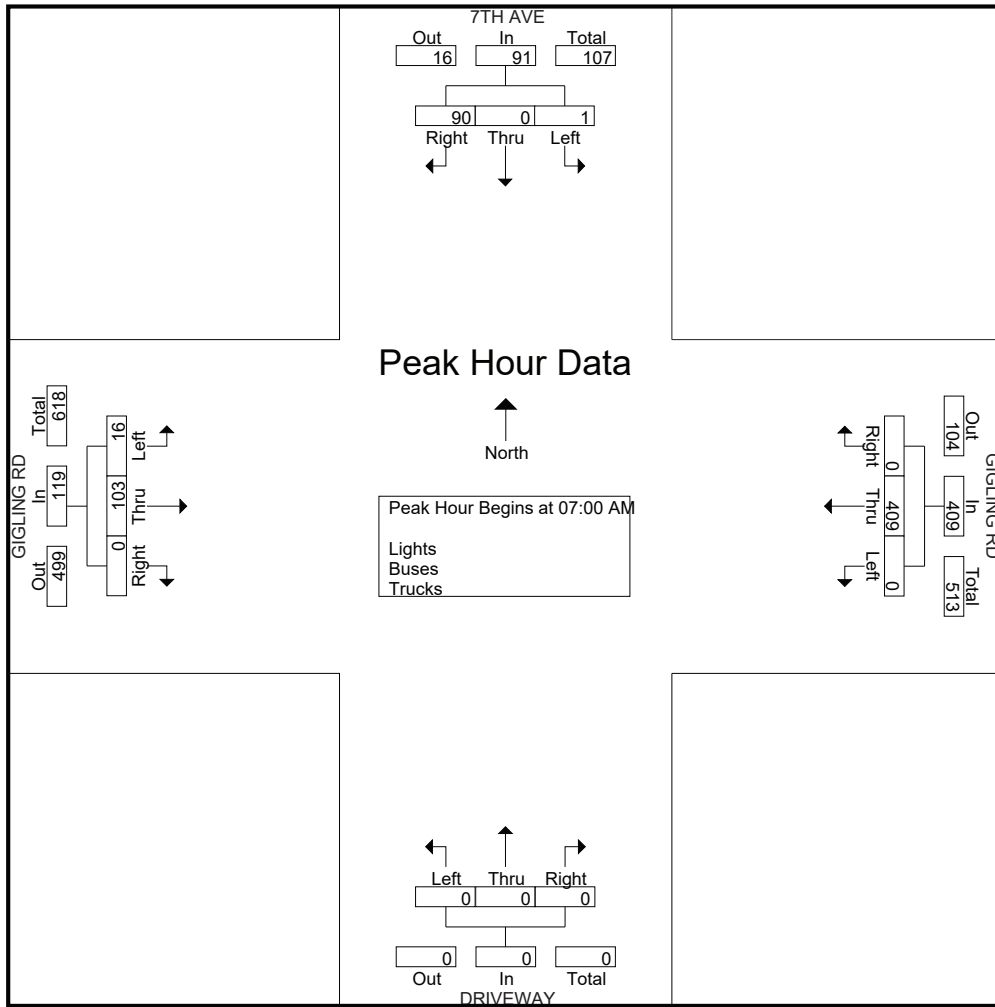
Start Time	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	6	0	0	0	6	0	76	0	0	76	0	0	0	0	0	0	21	2	0	23	105
07:15 AM	26	0	0	0	26	0	125	0	0	125	0	0	0	0	0	0	27	1	0	28	179
07:30 AM	27	0	0	0	27	0	108	0	0	108	0	0	0	0	0	0	27	5	0	32	167
07:45 AM	31	0	1	0	32	0	100	0	0	100	0	0	0	0	0	0	28	8	0	36	168
Total	90	0	1	0	91	0	409	0	0	409	0	0	0	0	0	0	103	16	0	119	619
08:00 AM	16	0	0	1	17	0	52	0	0	52	0	0	0	0	0	0	29	8	0	37	106
08:15 AM	16	0	1	0	17	0	54	0	0	54	0	0	0	0	0	0	27	1	0	28	99
08:30 AM	16	0	3	0	19	0	42	0	0	42	0	0	0	0	0	0	18	2	0	20	81
08:45 AM	6	0	0	0	6	0	30	0	0	30	0	0	0	0	0	0	14	1	0	15	51
Total	54	0	4	1	59	0	178	0	0	178	0	0	0	0	0	0	88	12	0	100	337
Grand Total	144	0	5	1	150	0	587	0	0	587	0	0	0	0	0	0	191	28	0	219	956
Apprch %	96	0	3.3	0.7		0	100	0	0		0	0	0	0	0	0	87.2	12.8	0		
Total %	15.1	0	0.5	0.1	15.7	0	61.4	0	0	61.4	0	0	0	0	0	0	20	2.9	0	22.9	
Lights	136	0	2	1	139	0	584	0	0	584	0	0	0	0	0	0	185	26	0	211	934
% Lights	94.4	0	40	100	92.7	0	99.5	0	0	99.5	0	0	0	0	0	0	96.9	92.9	0	96.3	97.7
Buses	2	0	1	0	3	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	11
% Buses	1.4	0	20	0	2	0	0.3	0	0	0.3	0	0	0	0	0	0	2.6	3.6	0	2.7	1.2
Trucks	6	0	2	0	8	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	11
% Trucks	4.2	0	40	0	5.3	0	0.2	0	0	0.2	0	0	0	0	0	0	0.5	3.6	0	0.9	1.2

Start Time	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	6	0	0	6	0	76	0	76	0	0	0	0	0	0	21	2	23	105
07:15 AM	26	0	0	26	0	125	0	125	0	0	0	0	0	0	27	1	28	179
07:30 AM	27	0	0	27	0	108	0	108	0	0	0	0	0	0	27	5	32	167
07:45 AM	31	0	1	32	0	100	0	100	0	0	0	0	0	0	28	8	36	168
Total Volume	90	0	1	91	0	409	0	409	0	0	0	0	0	0	103	16	119	619
% App. Total	98.9	0	1.1		0	100	0		0	0	0		0	86.6	13.4			
PHF	.726	.000	.250	.711	.000	.818	.000	.818	.000	.000	.000	.000	.000	.000	.920	.500	.826	.865

Traffic Data Service

San Jose, CA
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File Name : 16AM FINAL
 Site Code : 00000016
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 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 16AM FINAL
 Site Code : 00000016
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

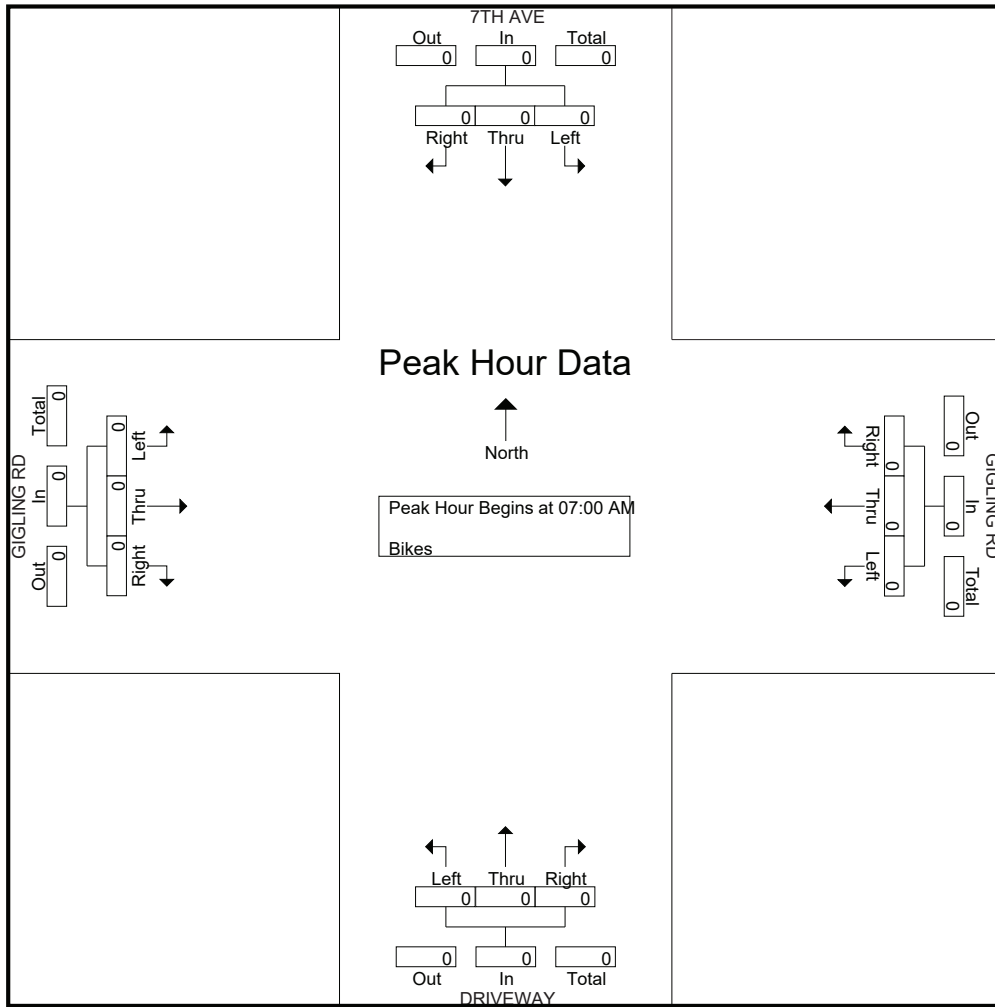
Start Time	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

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File Name : 16AM FINAL
Site Code : 00000016
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

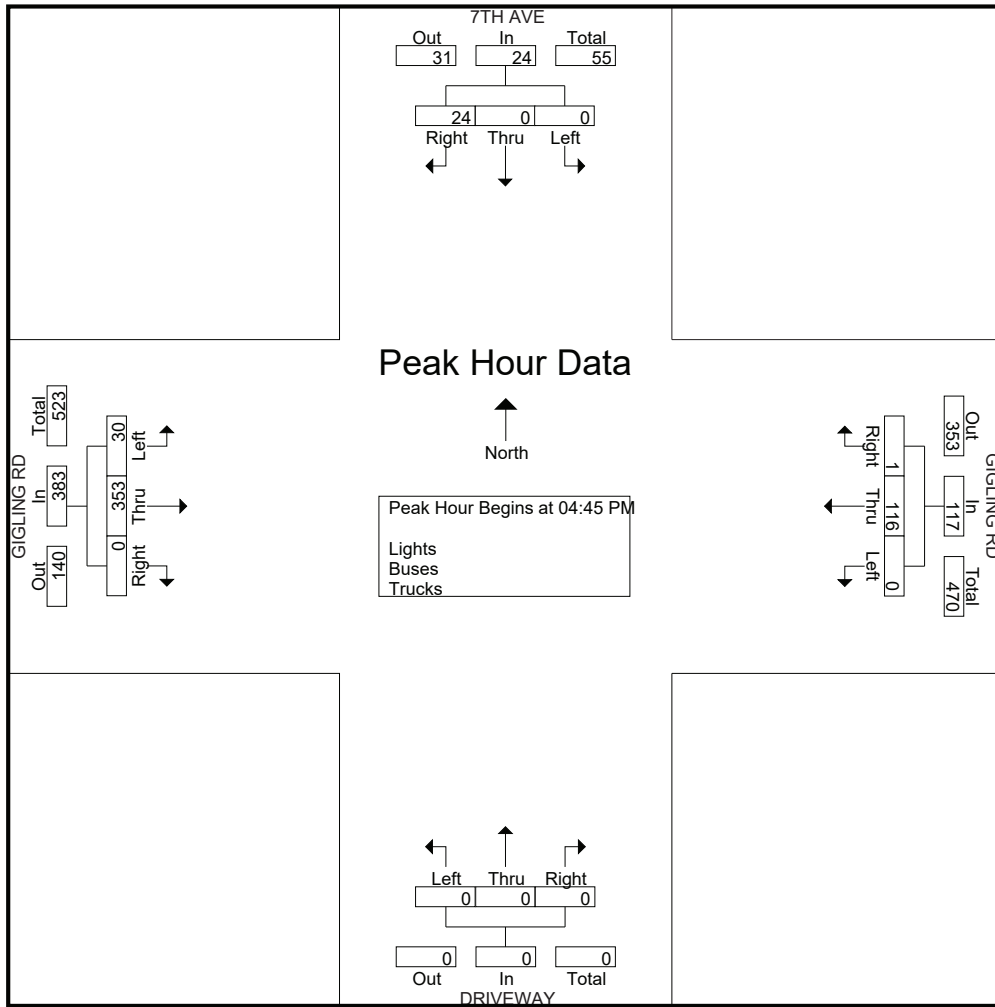
Start Time	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	3	0	1	0	4	1	28	0	0	29	0	0	0	0	0	0	59	9	0	68	101
04:15 PM	6	0	0	0	6	0	15	0	0	15	0	0	0	0	0	0	61	7	0	68	89
04:30 PM	4	0	0	0	4	0	25	1	0	26	0	0	0	0	0	0	75	8	0	83	113
04:45 PM	7	0	0	0	7	1	30	0	0	31	0	0	0	0	0	0	86	11	0	97	135
Total	20	0	1	0	21	2	98	1	0	101	0	0	0	0	0	0	281	35	0	316	438
05:00 PM	7	0	0	0	7	0	27	0	0	27	0	0	0	0	0	0	86	8	0	94	128
05:15 PM	6	0	0	0	6	0	29	0	1	30	0	0	0	0	0	0	100	2	0	102	138
05:30 PM	4	0	0	0	4	0	30	0	0	30	0	0	0	0	0	0	81	9	0	90	124
05:45 PM	7	0	3	0	10	0	23	0	0	23	0	0	0	0	0	0	53	4	0	57	90
Total	24	0	3	0	27	0	109	0	1	110	0	0	0	0	0	0	320	23	0	343	480
Grand Total	44	0	4	0	48	2	207	1	1	211	0	0	0	0	0	0	601	58	0	659	918
Apprch %	91.7	0	8.3	0		0.9	98.1	0.5	0.5		0	0	0	0		0	91.2	8.8	0		
Total %	4.8	0	0.4	0	5.2	0.2	22.5	0.1	0.1	23	0	0	0	0	0	0	65.5	6.3	0	71.8	
Lights	41	0	4	0	45	1	204	1	1	207	0	0	0	0	0	0	589	53	0	642	894
% Lights	93.2	0	100	0	93.8	50	98.6	100	100	98.1	0	0	0	0	0	0	98	91.4	0	97.4	97.4
Buses	2	0	0	0	2	0	2	0	0	2	0	0	0	0	0	0	7	2	0	9	13
% Buses	4.5	0	0	0	4.2	0	1	0	0	0.9	0	0	0	0	0	0	1.2	3.4	0	1.4	1.4
Trucks	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	0	5	3	0	8	11
% Trucks	2.3	0	0	0	2.1	50	0.5	0	0	0.9	0	0	0	0	0	0	0.8	5.2	0	1.2	1.2

Start Time	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	0	0	7	1	30	0	31	0	0	0	0	0	86	11	97	135
05:00 PM	7	0	0	7	0	27	0	27	0	0	0	0	0	86	8	94	128
05:15 PM	6	0	0	6	0	29	0	29	0	0	0	0	0	100	2	102	137
05:30 PM	4	0	0	4	0	30	0	30	0	0	0	0	0	81	9	90	124
Total Volume	24	0	0	24	1	116	0	117	0	0	0	0	0	353	30	383	524
% App. Total	100	0	0		0.9	99.1	0		0	0	0		0	92.2	7.8		
PHF	.857	.000	.000	.857	.250	.967	.000	.944	.000	.000	.000	.000	.000	.883	.682	.939	.956

Traffic Data Service

San Jose, CA
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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 16PM FINAL
 Site Code : 00000016
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

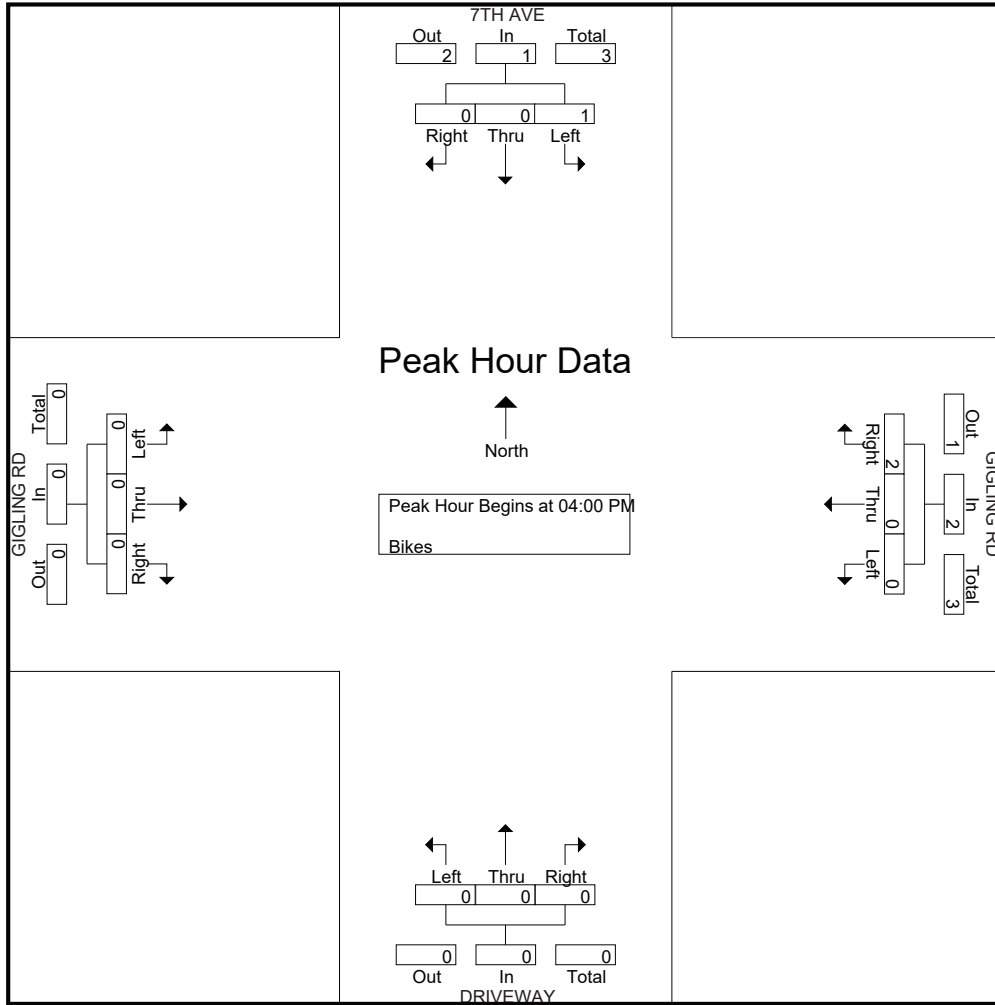
Start Time	7TH AVE Southbound					GIGLING RD Westbound					DRIVEWAY Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	4
Apprch %	0	0	100	0		100	0	0	0		0	0	0	0		0	0	100	0		
Total %	0	0	25	0	25	50	0	0	0	50	0	0	0	0	0	0	0	25	0	25	

Start Time	7TH AVE Southbound				GIGLING RD Westbound				DRIVEWAY Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	2	0	0	2	0	0	0	0	0	0	0	0	3
% App. Total	0	0	100		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.250	.250	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.750

Traffic Data Service

San Jose, CA
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File Name : 16PM FINAL
Site Code : 00000016
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

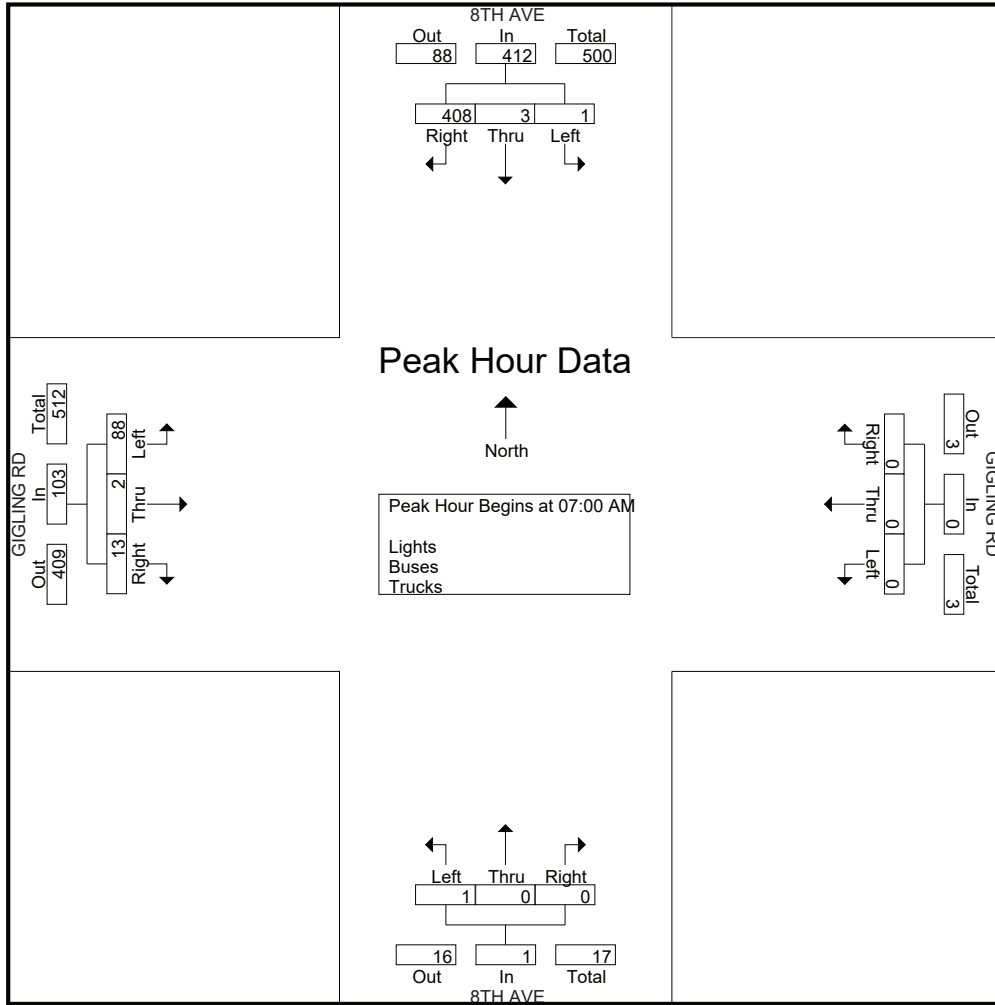
Start Time	8TH AVE Southbound					GIGLING RD Westbound					8TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	78	0	1	0	79	0	0	0	0	0	0	0	0	0	0	4	1	15	0	20	99
07:15 AM	125	0	0	0	125	0	0	0	0	0	0	0	0	0	0	6	1	19	0	26	151
07:30 AM	107	1	0	0	108	0	0	0	0	0	0	0	1	0	1	2	0	26	0	28	137
07:45 AM	98	2	0	0	100	0	0	0	0	0	0	0	0	0	0	1	0	28	0	29	129
Total	408	3	1	0	412	0	0	0	0	0	0	0	1	0	1	13	2	88	0	103	516
08:00 AM	51	0	0	1	52	0	0	0	0	0	0	0	0	0	0	0	0	27	0	27	79
08:15 AM	55	0	0	0	55	0	0	0	0	0	0	0	0	0	0	0	1	26	0	27	82
08:30 AM	42	1	1	0	44	0	0	0	0	0	0	0	0	0	0	1	0	19	0	20	64
08:45 AM	28	1	0	0	29	0	0	0	0	0	0	0	1	0	1	0	0	13	0	13	43
Total	176	2	1	1	180	0	0	0	0	0	0	0	1	0	1	1	1	85	0	87	268
Grand Total	584	5	2	1	592	0	0	0	0	0	0	0	2	0	2	14	3	173	0	190	784
Apprch %	98.6	0.8	0.3	0.2		0	0	0	0		0	0	100	0		7.4	1.6	91.1	0		
Total %	74.5	0.6	0.3	0.1	75.5	0	0	0	0	0	0	0	0.3	0	0.3	1.8	0.4	22.1	0	24.2	
Lights	581	5	2	1	589	0	0	0	0	0	0	0	2	0	2	14	2	165	0	181	772
% Lights	99.5	100	100	100	99.5	0	0	0	0	0	0	0	100	0	100	100	66.7	95.4	0	95.3	98.5
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	8
% Buses	0.3	0	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	3.5	0	3.2	1
Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	4
% Trucks	0.2	0	0	0	0.2	0	0	0	0	0	0	0	0	0	0	0	33.3	1.2	0	1.6	0.5

Start Time	8TH AVE Southbound				GIGLING RD Westbound				8TH AVE Northbound				GIGLING RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	78	0	1	79	0	0	0	0	0	0	0	0	0	4	1	15	20	99
07:15 AM	125	0	0	125	0	0	0	0	0	0	0	0	0	6	1	19	26	151
07:30 AM	107	1	0	108	0	0	0	0	0	0	1	1	2	0	26	28	137	
07:45 AM	98	2	0	100	0	0	0	0	0	0	0	0	1	0	28	29	129	
Total Volume	408	3	1	412	0	0	0	0	0	0	1	1	13	2	88	103	516	
% App. Total	99	0.7	0.2		0	0	0		0	0	100		12.6	1.9	85.4			
PHF	.816	.375	.250	.824	.000	.000	.000	.000	.000	.000	.250	.250	.542	.500	.786	.888	.854	

Traffic Data Service

San Jose, CA
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File Name : 17AM FINAL
 Site Code : 00000017
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Traffic Data Service

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File Name : 17AM FINAL
 Site Code : 00000017
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

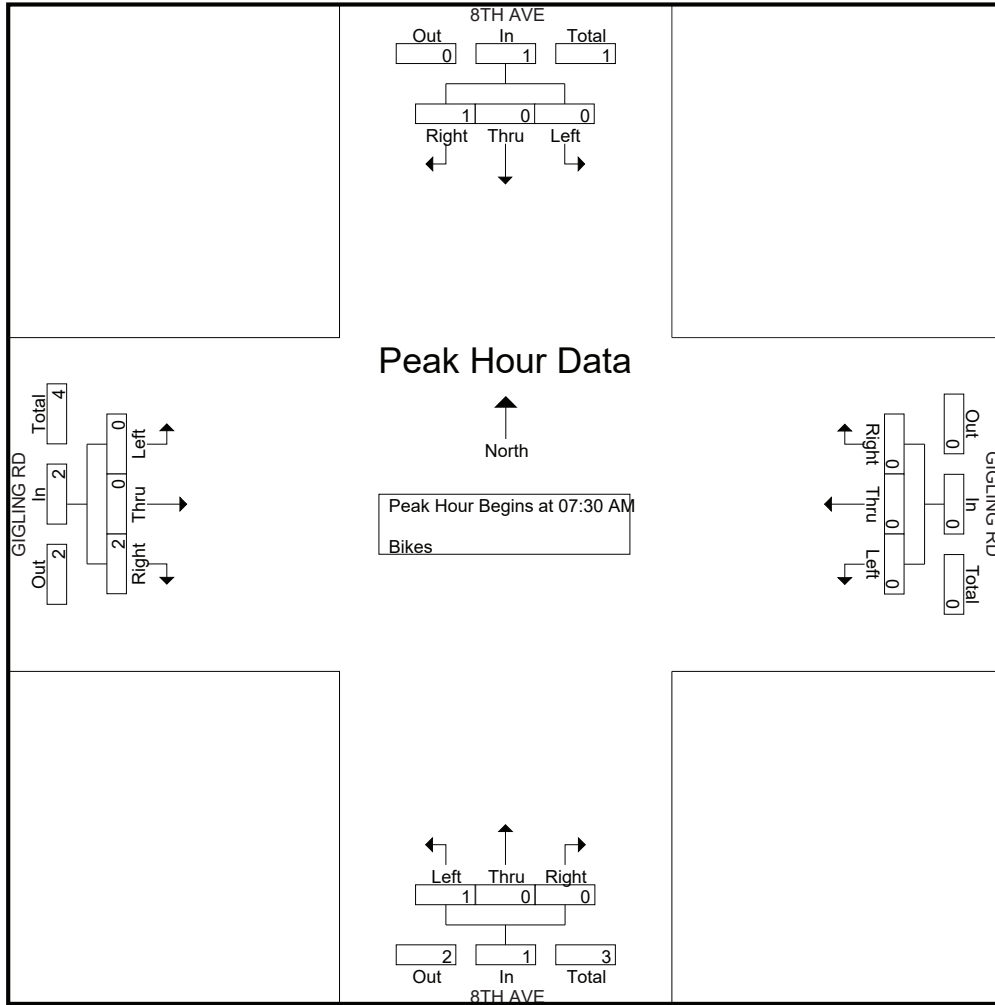
Start Time	8TH AVE Southbound					GIGLING RD Westbound					8TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	3
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	2	2	0	0	4	6
Apprch %	100	0	0	0		0	0	0	0		0	0	100	0		50	50	0	0		
Total %	16.7	0	0	0	16.7	0	0	0	0	0	0	0	16.7	0	16.7	33.3	33.3	0	0	66.7	

Start Time	8TH AVE Southbound				GIGLING RD Westbound				8TH AVE Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	1	0	0	1	0	0	0	0	0	0	1	1	2	0	0	2	4
% App. Total	100	0	0		0	0	0		0	0	100		100	0	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.250	.250	.250	.000	.000	.250	.500

Traffic Data Service

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File Name : 17AM FINAL
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Traffic Data Service

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File Name : 17PM FINAL
 Site Code : 00000017
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

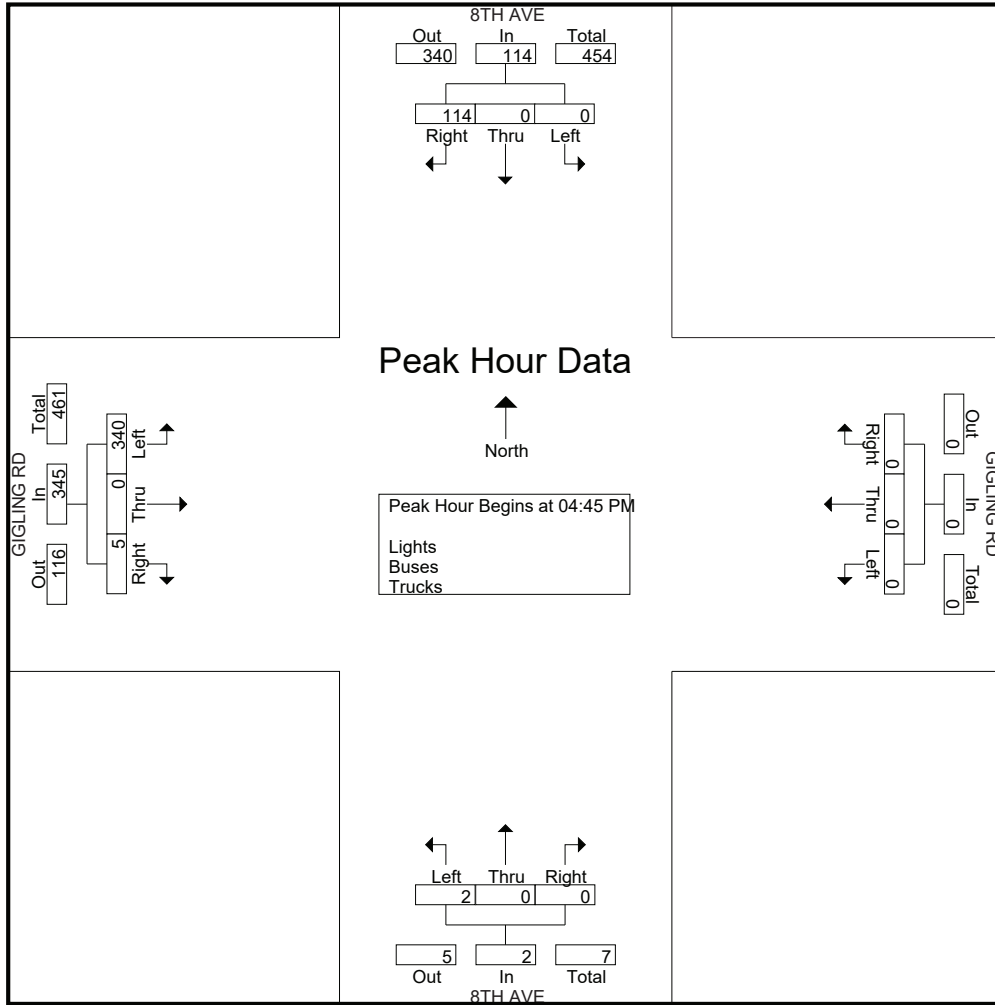
Start Time	8TH AVE Southbound					GIGLING RD Westbound					8TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	28	1	0	0	29	0	0	0	0	0	1	5	1	0	7	0	0	60	0	60	96
04:15 PM	14	0	0	0	14	0	0	0	0	0	0	17	1	0	18	0	0	59	0	59	91
04:30 PM	24	0	0	0	24	0	0	0	0	0	0	1	0	0	1	0	0	74	0	74	99
04:45 PM	30	0	0	0	30	0	0	0	0	0	0	0	1	0	1	0	0	83	0	83	114
Total	96	1	0	0	97	0	0	0	0	0	1	23	3	0	27	0	0	276	0	276	400
05:00 PM	26	0	0	0	26	0	0	0	0	0	0	0	1	0	1	1	0	81	0	82	109
05:15 PM	27	0	0	0	27	0	0	0	1	1	0	0	0	0	0	2	0	98	0	100	128
05:30 PM	31	0	0	0	31	0	0	0	0	0	0	0	0	0	0	2	0	78	0	80	111
05:45 PM	23	0	0	0	23	0	0	0	0	0	0	0	2	0	2	1	0	54	0	55	80
Total	107	0	0	0	107	0	0	0	1	1	0	0	3	0	3	6	0	311	0	317	428
Grand Total	203	1	0	0	204	0	0	0	1	1	1	23	6	0	30	6	0	587	0	593	828
Apprch %	99.5	0.5	0	0		0	0	0	100		3.3	76.7	20	0		1	0	99	0		
Total %	24.5	0.1	0	0	24.6	0	0	0	0.1	0.1	0.1	2.8	0.7	0	3.6	0.7	0	70.9	0	71.6	
Lights	200	1	0	0	201	0	0	0	1	1	1	23	6	0	30	6	0	575	0	581	813
% Lights	98.5	100	0	0	98.5	0	0	0	100	100	100	100	100	0	100	100	0	98	0	98	98.2
Buses	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	9
% Buses	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1.2	0	1.2	1.1
Trucks	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	6
% Trucks	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0.9	0	0.8	0.7

Start Time	8TH AVE Southbound				GIGLING RD Westbound				8TH AVE Northbound				GIGLING RD Eastbound				Int. Total	
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:45 PM																		
04:45 PM	30	0	0	30	0	0	0	0	0	0	0	1	1	0	0	83	83	114
05:00 PM	26	0	0	26	0	0	0	0	0	0	0	1	1	1	0	81	82	109
05:15 PM	27	0	0	27	0	0	0	0	0	0	0	0	0	2	0	98	100	127
05:30 PM	31	0	0	31	0	0	0	0	0	0	0	0	0	2	0	78	80	111
Total Volume	114	0	0	114	0	0	0	0	0	0	0	2	2	5	0	340	345	461
% App. Total	100	0	0		0	0	0				0	100		1.4	0	98.6		
PHF	.919	.000	.000	.919	.000	.000	.000	.000	.000	.000	.000	.500	.500	.625	.000	.867	.863	.907

Traffic Data Service

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File Name : 17PM FINAL
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File Name : 17PM FINAL
 Site Code : 00000017
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

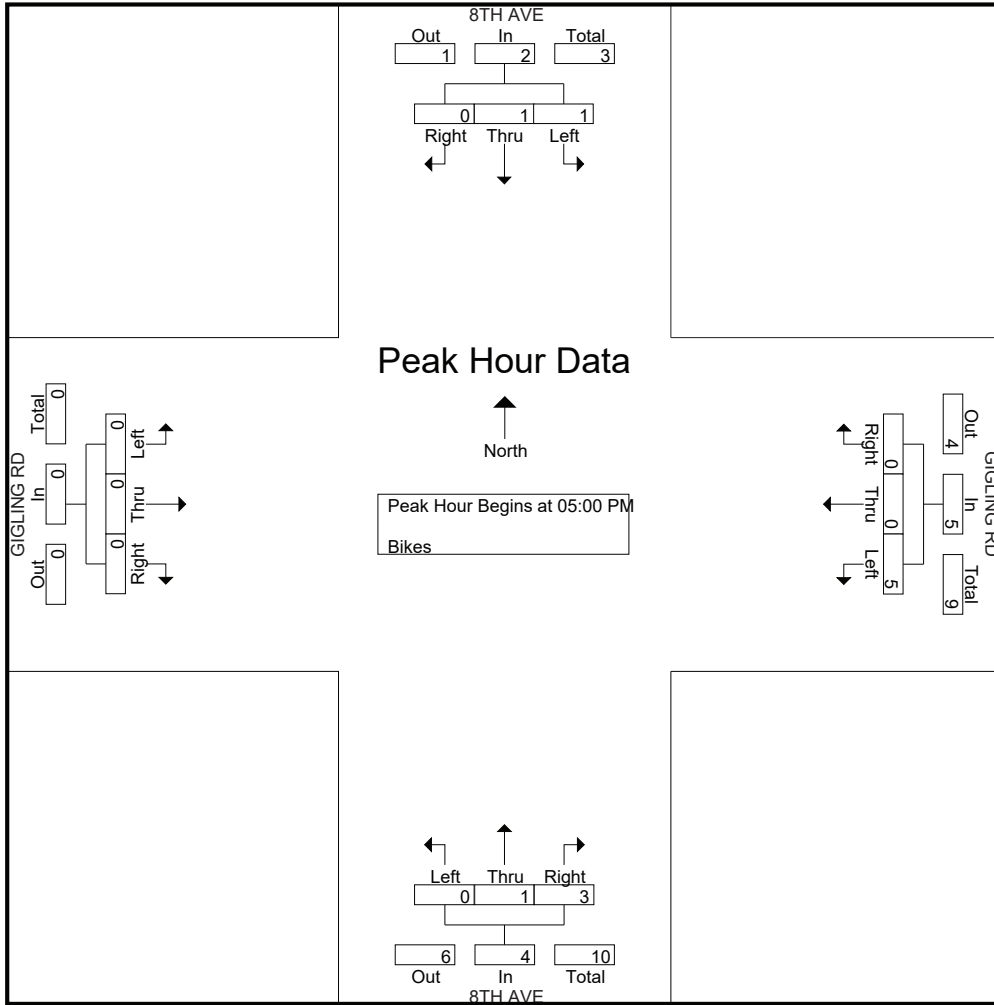
Start Time	8TH AVE Southbound					GIGLING RD Westbound					8TH AVE Northbound					GIGLING RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	0	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2
05:15 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	3	0	3	2	1	0	0	3	0	0	0	0	0	6
Total	0	1	1	0	2	0	0	5	0	5	3	1	0	1	5	0	0	0	0	0	12
Grand Total	0	1	1	0	2	0	0	5	0	5	6	1	1	1	9	0	0	0	0	0	16
Apprch %	0	50	50	0		0	0	100	0		66.7	11.1	11.1	11.1		0	0	0	0		
Total %	0	6.2	6.2	0	12.5	0	0	31.2	0	31.2	37.5	6.2	6.2	6.2	56.2	0	0	0	0	0	

Start Time	8TH AVE Southbound				GIGLING RD Westbound				8TH AVE Northbound				GIGLING RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2
05:15 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	3	3	2	1	0	3	0	0	0	0	6
Total Volume	0	1	1	2	0	0	5	5	3	1	0	4	0	0	0	0	11
% App. Total	0	50	50		0	0	100		75	25	0		0	0	0		
PHF	.000	.250	.250	.250	.000	.000	.417	.417	.375	.250	.000	.333	.000	.000	.000	.000	.458

Traffic Data Service

San Jose, CA
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File Name : 17PM FINAL
 Site Code : 00000017
 Start Date : 4/25/2018
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Traffic Data Service

San Jose, CA
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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	8	97	6	0	111	0	4	7	0	11	3	46	6	0	55	7	3	10	3	23	200
07:15 AM	23	191	10	3	227	2	7	20	1	30	17	50	13	0	80	20	8	14	2	44	381
07:30 AM	37	238	22	14	311	8	19	43	0	70	32	85	36	0	153	29	28	14	0	71	605
07:45 AM	66	186	35	13	300	11	28	42	1	82	49	103	61	0	213	30	35	13	5	83	678
Total	134	712	73	30	949	21	58	112	2	193	101	284	116	0	501	86	74	51	10	221	1864
08:00 AM	23	144	7	0	174	14	16	36	0	66	7	92	12	0	111	39	7	24	0	70	421
08:15 AM	9	172	8	1	190	2	3	10	0	15	9	53	9	0	71	7	4	6	2	19	295
08:30 AM	7	113	1	3	124	3	2	11	1	17	3	52	3	0	58	7	5	7	1	20	219
08:45 AM	11	82	3	2	98	5	3	8	2	18	2	51	7	2	62	6	1	7	2	16	194
Total	50	511	19	6	586	24	24	65	3	116	21	248	31	2	302	59	17	44	5	125	1129
Grand Total	184	1223	92	36	1535	45	82	177	5	309	122	532	147	2	803	145	91	95	15	346	2993
Apprch %	12	79.7	6	2.3		14.6	26.5	57.3	1.6		15.2	66.3	18.3	0.2		41.9	26.3	27.5	4.3		
Total %	6.1	40.9	3.1	1.2	51.3	1.5	2.7	5.9	0.2	10.3	4.1	17.8	4.9	0.1	26.8	4.8	3	3.2	0.5	11.6	
Lights	183	1191	92	36	1502	41	80	176	5	302	120	528	142	2	792	141	91	95	15	342	2938
% Lights	99.5	97.4	100	100	97.9	91.1	97.6	99.4	100	97.7	98.4	99.2	96.6	100	98.6	97.2	100	100	100	98.8	98.2
Buses	0	16	0	0	16	2	2	1	0	5	1	2	3	0	6	3	0	0	0	3	30
% Buses	0	1.3	0	0	1	4.4	2.4	0.6	0	1.6	0.8	0.4	2	0	0.7	2.1	0	0	0	0.9	1
Trucks	1	16	0	0	17	2	0	0	0	2	1	2	2	0	5	1	0	0	0	1	25
% Trucks	0.5	1.3	0	0	1.1	4.4	0	0	0	0.6	0.8	0.4	1.4	0	0.6	0.7	0	0	0	0.3	0.8

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:15 AM	23	191	10		224	2	7	20		29	17	50	13		80	20	8	14		42	375
07:30 AM	37	238	22		297	8	19	43		70	32	85	36		153	29	28	14		71	591
07:45 AM	66	186	35		287	11	28	42		81	49	103	61		213	30	35	13		78	659
08:00 AM	23	144	7		174	14	16	36		66	7	92	12		111	39	7	24		70	421
Total Volume	149	759	74		982	35	70	141		246	105	330	122		557	118	78	65		261	2046
% App. Total	15.2	77.3	7.5			14.2	28.5	57.3			18.9	59.2	21.9			45.2	29.9	24.9			
PHF	.564	.797	.529		.827	.625	.625	.820		.759	.536	.801	.500		.654	.756	.557	.677		.837	.776

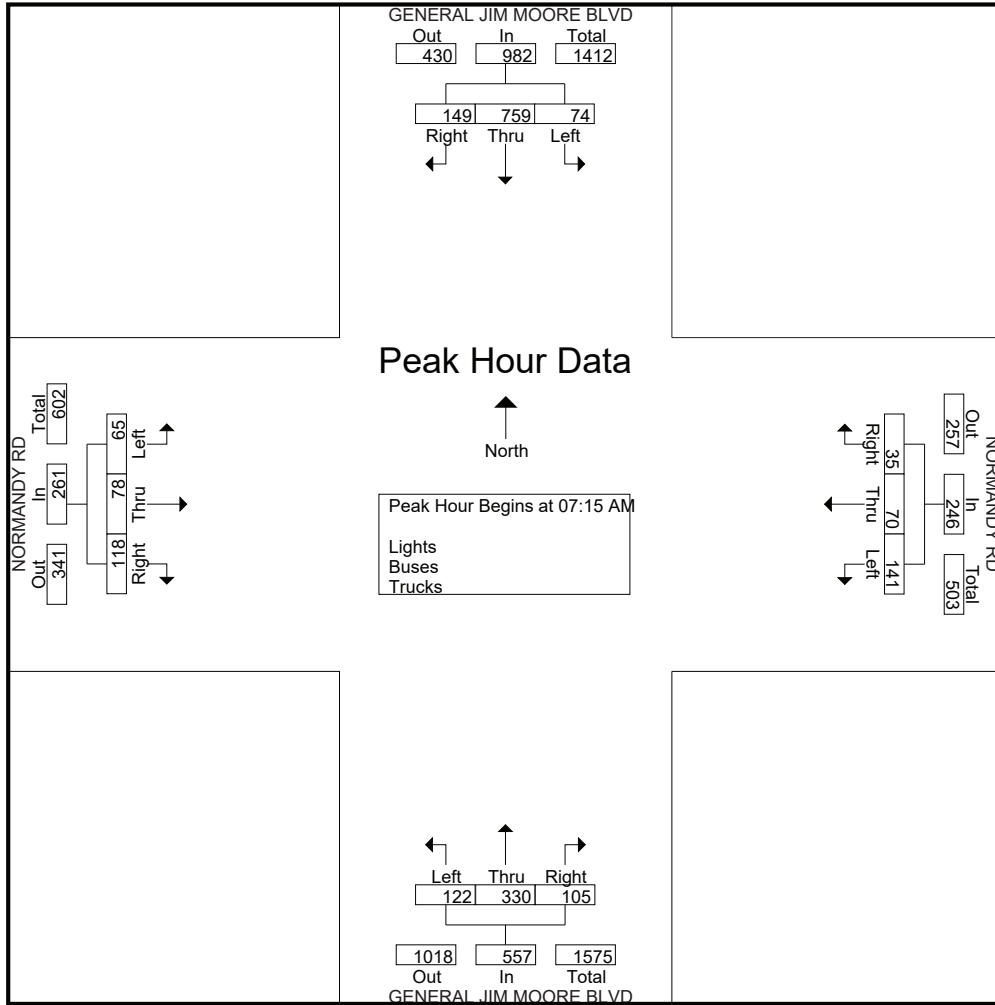
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

Traffic Data Service

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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	3
Apprch %	0	0	0	0		0	0	0	0		50	50	0	0		0	100	0	0		
Total %	0	0	0	0	0	0	0	0	0	0	33.3	33.3	0	0	66.7	0	33.3	0	0	33.3	

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
% App. Total	0	0	0	0		0	0	0	0		100	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250		.000	.250	.000	.250		.250

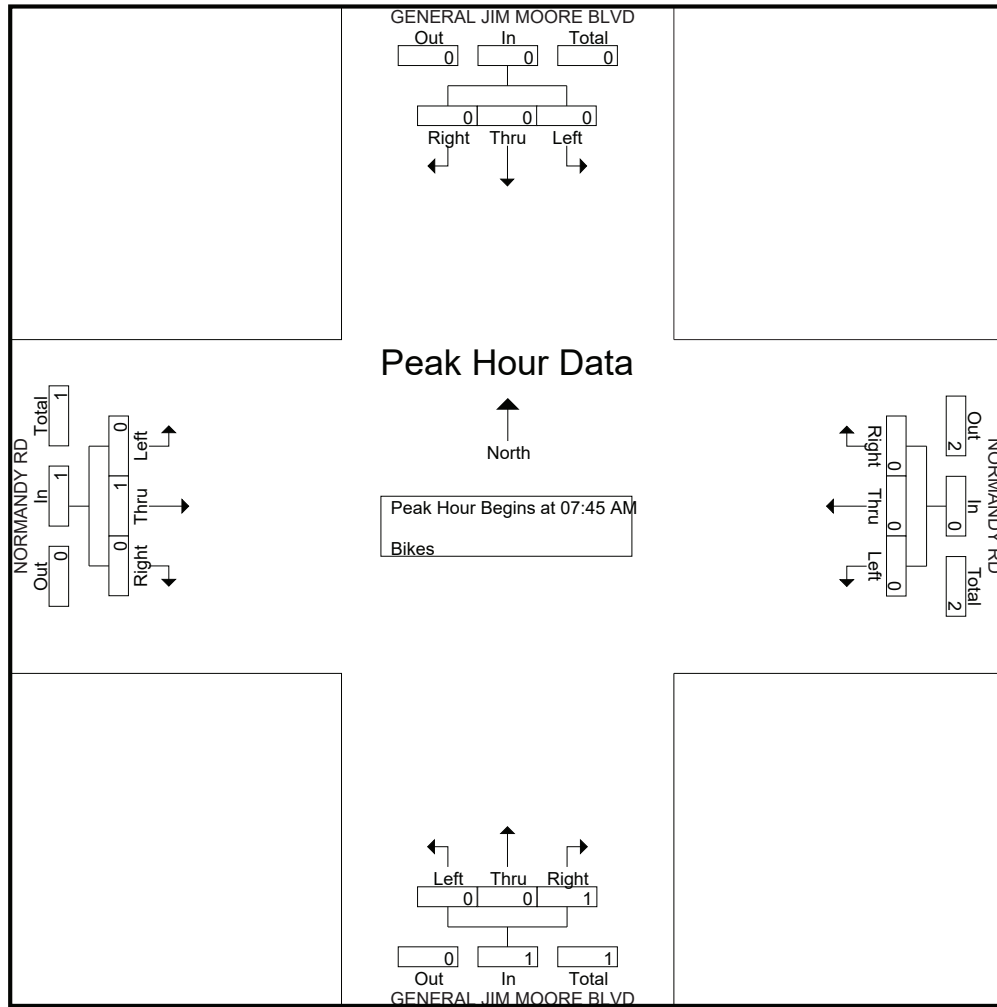
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45 AM

Traffic Data Service

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File Name : 18AM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
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Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	9	79	8	0	96	5	4	8	0	17	6	114	5	0	125	8	3	10	0	21	259
04:15 PM	9	63	5	2	79	3	9	12	0	24	9	118	12	0	139	7	9	7	0	23	265
04:30 PM	13	83	4	0	100	2	5	4	0	11	14	149	12	1	176	8	3	10	1	22	309
04:45 PM	8	102	9	0	119	2	1	13	0	16	14	171	13	0	198	8	7	5	1	21	354
Total	39	327	26	2	394	12	19	37	0	68	43	552	42	1	638	31	22	32	2	87	1187
05:00 PM	13	92	5	0	110	2	11	8	0	21	18	180	17	0	215	8	8	12	0	28	374
05:15 PM	11	87	8	0	106	1	5	15	0	21	19	206	11	0	236	11	7	15	0	33	396
05:30 PM	13	80	9	3	105	1	11	8	0	20	16	172	8	0	196	6	5	13	0	24	345
05:45 PM	12	65	11	4	92	1	8	6	0	15	16	145	12	0	173	12	8	10	0	30	310
Total	49	324	33	7	413	5	35	37	0	77	69	703	48	0	820	37	28	50	0	115	1425
Grand Total	88	651	59	9	807	17	54	74	0	145	112	1255	90	1	1458	68	50	82	2	202	2612
Apprch %	10.9	80.7	7.3	1.1		11.7	37.2	51	0		7.7	86.1	6.2	0.1		33.7	24.8	40.6	1		
Total %	3.4	24.9	2.3	0.3	30.9	0.7	2.1	2.8	0	5.6	4.3	48	3.4	0	55.8	2.6	1.9	3.1	0.1	7.7	
Lights	87	646	59	9	801	17	54	72	0	143	112	1242	88	1	1443	67	50	81	2	200	2587
% Lights	98.9	99.2	100	100	99.3	100	100	97.3	0	98.6	100	99	97.8	100	99	98.5	100	98.8	100	99	99
Buses	0	0	0	0	0	0	0	1	0	1	0	4	2	0	6	0	0	0	0	0	7
% Buses	0	0	0	0	0	0	0	1.4	0	0.7	0	0.3	2.2	0	0.4	0	0	0	0	0	0.3
Trucks	1	5	0	0	6	0	0	1	0	1	0	9	0	0	9	1	0	1	0	2	18
% Trucks	1.1	0.8	0	0	0.7	0	0	1.4	0	0.7	0	0.7	0	0	0.6	1.5	0	1.2	0	1	0.7

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:45 PM	8	102	9	119		2	1	13	16		14	171	13	198		8	7	5	20		353
05:00 PM	13	92	5	110		2	11	8	21		18	180	17	215		8	8	12	28		374
05:15 PM	11	87	8	106		1	5	15	21		19	206	11	236		11	7	15	33		396
05:30 PM	13	80	9	102		1	11	8	20		16	172	8	196		6	5	13	24		342
Total Volume	45	361	31	437		6	28	44	78		67	729	49	845		33	27	45	105		1465
% App. Total	10.3	82.6	7.1			7.7	35.9	56.4			7.9	86.3	5.8			31.4	25.7	42.9			
PHF	.865	.885	.861	.918		.750	.636	.733	.929		.882	.885	.721	.895		.750	.844	.750	.795		.925

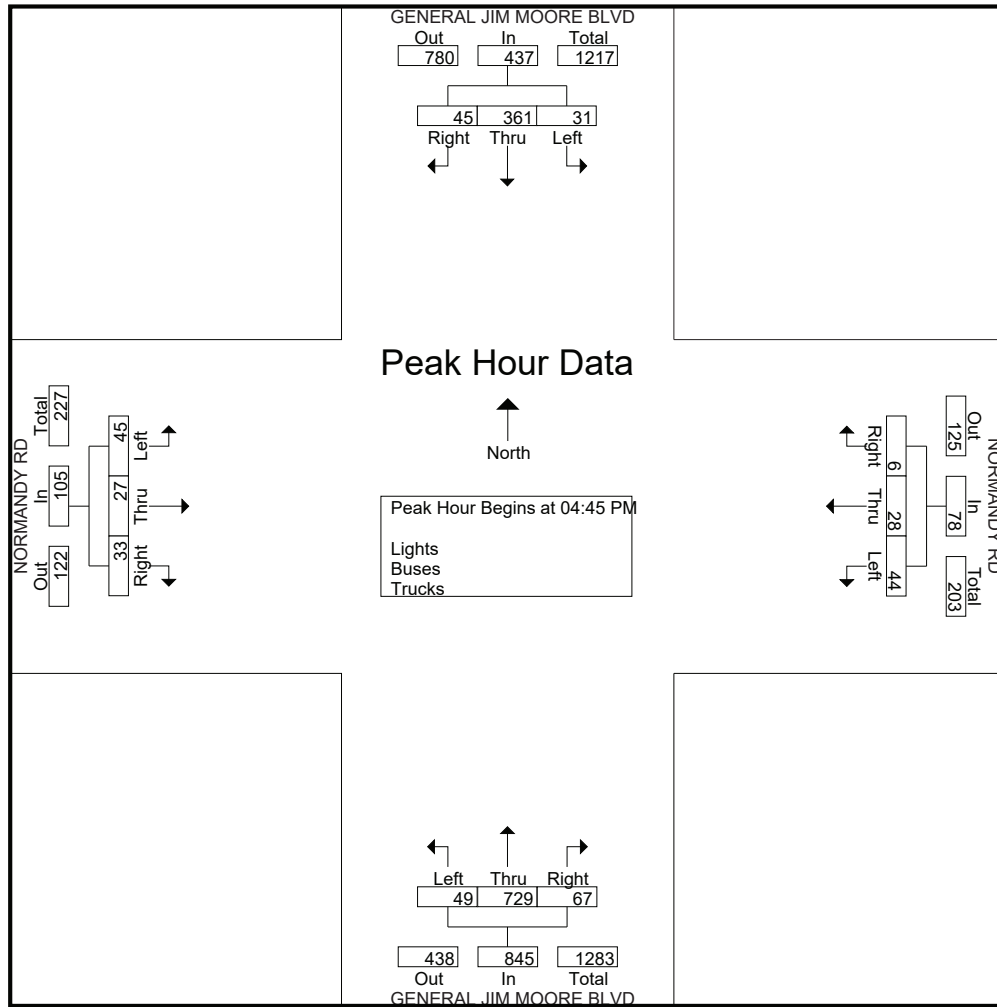
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Traffic Data Service

San Jose, CA
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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	0	1	0	1	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Apprch %	0	0	100	0		25	0	75	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	0	20	0	20	20	0	60	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Start Time	GENERAL JIM MOORE BLVD Southbound					NORMANDY RD Westbound					GENERAL JIM MOORE BLVD Northbound					NORMANDY RD Eastbound					Int. Total					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total						
04:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	0	0	1	0	1	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
% App. Total	0	0	100	0		25	0	75	0		0	0	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.000	.250	0	.250	.250	.000	.375	0	.500	.000	.000	.000	0	.000	.000	.000	.000	0	.000	.000	.000	.000	0	.625	

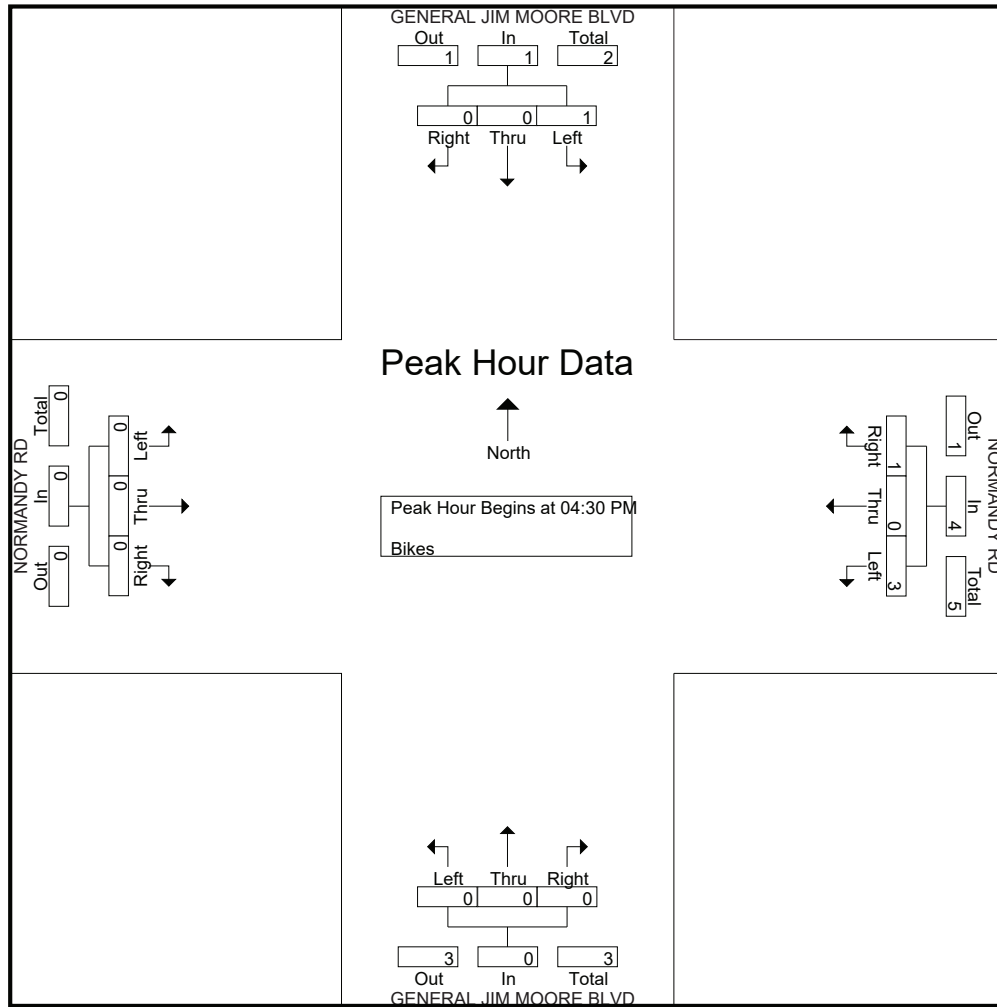
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:30 PM

Traffic Data Service

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File Name : 18PM FINAL
 Site Code : 00000018
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 19AM FINAL
 Site Code : 00000019
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	5	121	0	0	126	0	0	0	1	1	0	29	15	0	44	21	0	7	0	28	199
07:15 AM	19	239	0	0	258	0	0	0	0	0	0	57	17	0	74	60	0	14	2	76	408
07:30 AM	19	258	0	0	277	0	0	0	0	0	0	103	26	0	129	99	0	31	0	130	536
07:45 AM	42	230	0	1	273	0	0	0	0	0	1	122	48	0	171	111	0	34	0	145	589
Total	85	848	0	1	934	0	0	0	1	1	1	311	106	0	418	291	0	86	2	379	1732
08:00 AM	37	198	0	0	235	0	0	0	0	0	0	68	93	0	161	104	0	29	2	135	531
08:15 AM	37	188	0	0	225	0	0	0	0	0	0	46	54	0	100	116	0	20	0	136	461
08:30 AM	8	125	0	0	133	0	0	0	0	0	0	38	14	0	52	49	0	10	2	61	246
08:45 AM	9	102	0	0	111	0	0	0	0	0	0	49	11	0	60	21	0	6	1	28	199
Total	91	613	0	0	704	0	0	0	0	0	0	201	172	0	373	290	0	65	5	360	1437
Grand Total	176	1461	0	1	1638	0	0	0	1	1	1	512	278	0	791	581	0	151	7	739	3169
Apprch %	10.7	89.2	0	0.1		0	0	0	100		0.1	64.7	35.1	0		78.6	0	20.4	0.9		
Total %	5.6	46.1	0	0	51.7	0	0	0	0	0	0	16.2	8.8	0	25	18.3	0	4.8	0.2	23.3	
Lights	170	1431	0	1	1602	0	0	0	1	1	1	506	272	0	779	568	0	149	7	724	3106
% Lights	96.6	97.9	0	100	97.8	0	0	0	100	100	100	98.8	97.8	0	98.5	97.8	0	98.7	100	98	98
Buses	5	15	0	0	20	0	0	0	0	0	0	4	5	0	9	9	0	2	0	11	40
% Buses	2.8	1	0	0	1.2	0	0	0	0	0	0	0.8	1.8	0	1.1	1.5	0	1.3	0	1.5	1.3
Trucks	1	15	0	0	16	0	0	0	0	0	0	2	1	0	3	4	0	0	0	4	23
% Trucks	0.6	1	0	0	1	0	0	0	0	0	0	0.4	0.4	0	0.4	0.7	0	0	0	0.5	0.7

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:30 AM	19	258	0	0	277	0	0	0	0	0	0	103	26	129	99	0	31	0	130	536	
07:45 AM	42	230	0	0	272	0	0	0	0	0	1	122	48	171	111	0	34	145	588		
08:00 AM	37	198	0	0	235	0	0	0	0	0	0	68	93	161	104	0	29	0	133	529	
08:15 AM	37	188	0	0	225	0	0	0	0	0	0	46	54	100	116	0	20	0	136	461	
Total Volume	135	874	0	0	1009	0	0	0	0	0	1	339	221	561	430	0	114	0	544	2114	
% App. Total	13.4	86.6	0	0		0	0	0	0	0	0.2	60.4	39.4		79	0	21	0			
PHF	.804	.847	.000	.000	.911	.000	.000	.000	.000	.000	.250	.695	.594	.820	.927	.000	.838	.000	.938	.899	

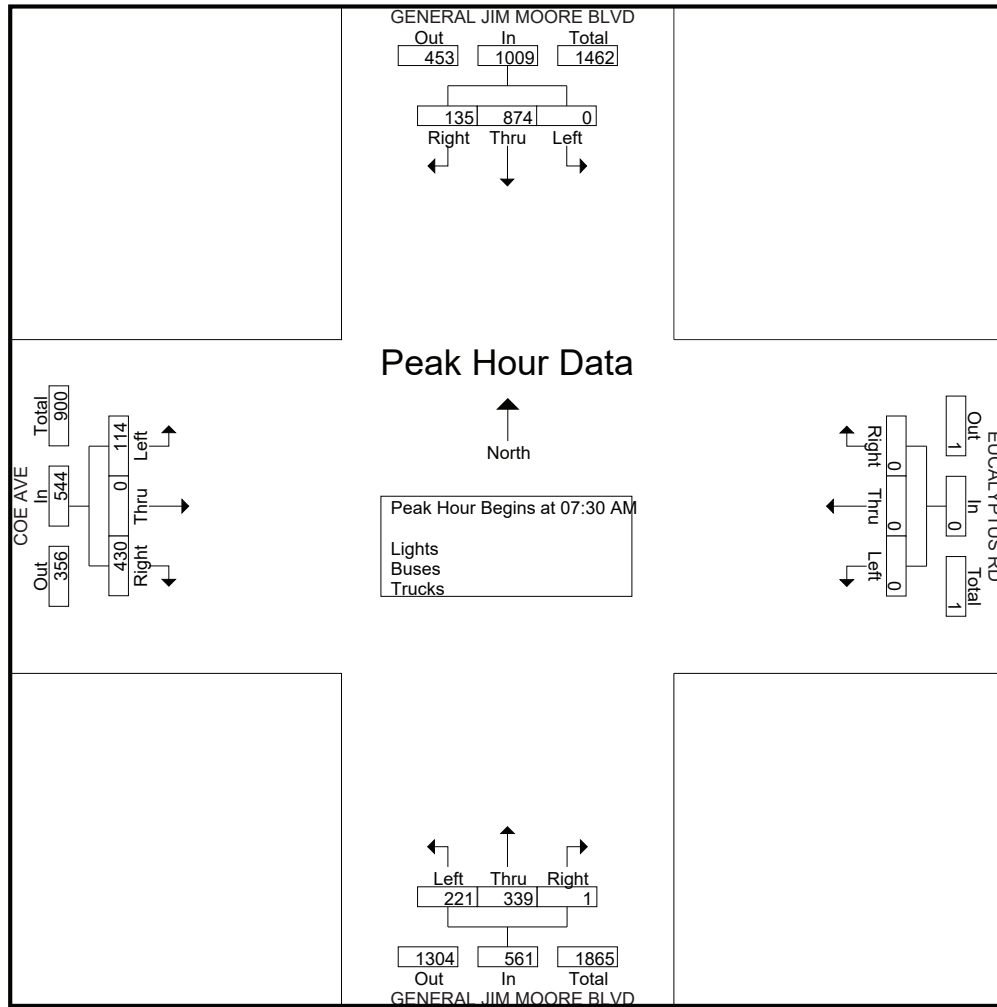
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

Traffic Data Service

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File Name : 19AM FINAL
 Site Code : 00000019
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 Page No : 2



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File Name : 19AM FINAL
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 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Total	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	4
Grand Total	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	5
Apprch %	0	100	0	0		0	0	0	0		25	75	0	0		0	0	0	0		
Total %	0	20	0	0	20	0	0	0	0	0	20	60	0	0	80	0	0	0	0	0	

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	2
Total Volume	0	1	0	0	1	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	4
% App. Total	0	100	0	0		0	0	0	0		33.3	66.7	0	0		0	0	0	0		
PHF	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.250	.500	.000	.000	.375	.000	.000	.000	.000	.000	.500

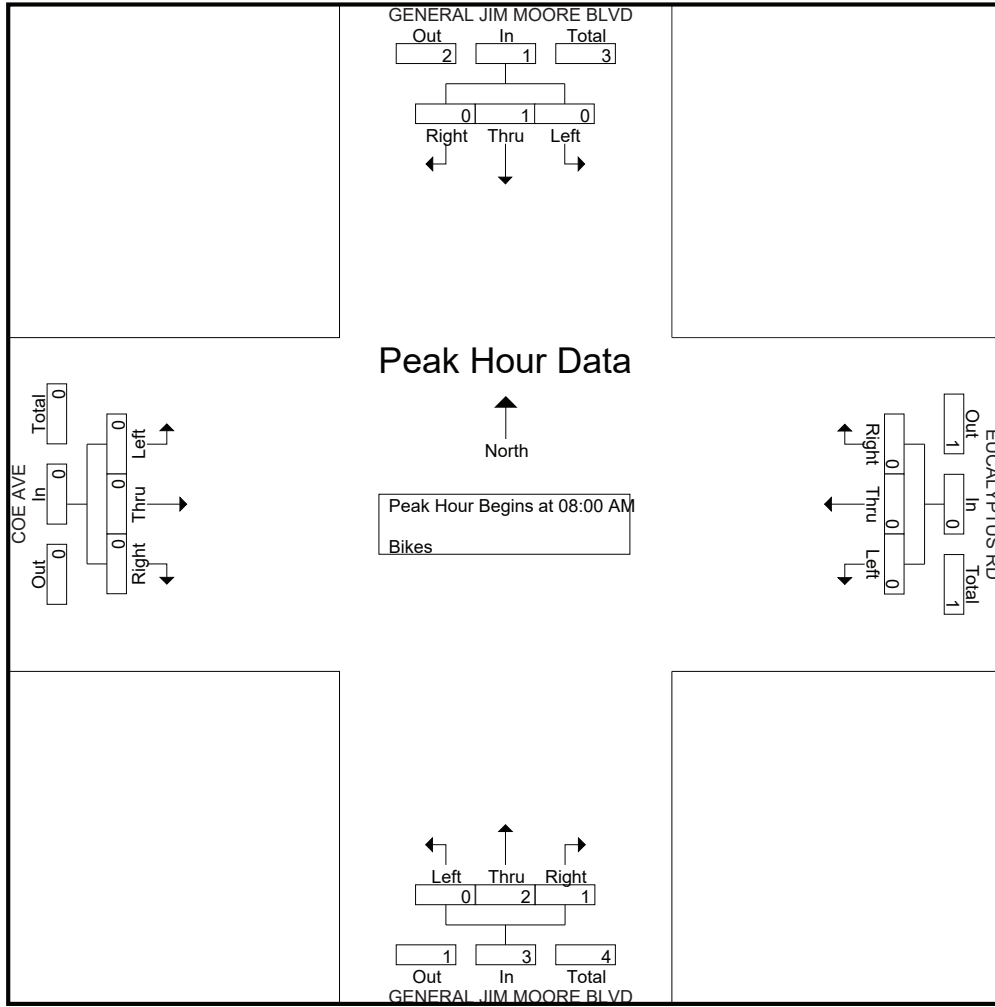
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 08:00 AM

Traffic Data Service

San Jose, CA
(408) 622-4787
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File Name : 19AM FINAL
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Traffic Data Service

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File Name : 19PM FINAL
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 Page No : 1

Groups Printed- Lights - Buses - Trucks

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	16	77	0	0	93	0	0	1	0	1	3	139	26	0	168	14	0	9	1	24	286
04:15 PM	12	54	0	0	66	0	1	0	0	1	1	130	40	3	174	13	0	2	0	15	256
04:30 PM	13	60	0	0	73	1	0	1	1	3	2	170	28	0	200	14	1	19	0	34	310
04:45 PM	20	89	0	3	112	2	1	0	2	5	0	197	35	3	235	17	0	12	0	29	381
Total	61	280	0	3	344	3	2	2	3	10	6	636	129	6	777	58	1	42	1	102	1233
05:00 PM	20	83	1	2	106	0	0	0	3	3	1	203	42	1	247	22	0	10	0	32	388
05:15 PM	22	80	1	1	104	0	0	3	0	3	1	227	39	0	267	38	1	20	1	60	434
05:30 PM	23	56	0	2	81	0	0	0	0	0	1	211	37	2	251	20	0	10	0	30	362
05:45 PM	21	62	1	1	85	0	0	1	2	3	1	139	26	3	169	17	0	18	0	35	292
Total	86	281	3	6	376	0	0	4	5	9	4	780	144	6	934	97	1	58	1	157	1476
Grand Total	147	561	3	9	720	3	2	6	8	19	10	1416	273	12	1711	155	2	100	2	259	2709
Apprch %	20.4	77.9	0.4	1.2		15.8	10.5	31.6	42.1		0.6	82.8	16	0.7		59.8	0.8	38.6	0.8		
Total %	5.4	20.7	0.1	0.3	26.6	0.1	0.1	0.2	0.3	0.7	0.4	52.3	10.1	0.4	63.2	5.7	0.1	3.7	0.1	9.6	
Lights	144	555	3	9	711	3	2	6	8	19	10	1404	272	12	1698	154	2	99	2	257	2685
% Lights	98	98.9	100	100	98.8	100	100	100	100	100	100	99.2	99.6	100	99.2	99.4	100	99	100	99.2	99.1
Buses	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	1	0	1	0	2	5
% Buses	0.7	0	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0.6	0	1	0	0.8	0.2
Trucks	2	6	0	0	8	0	0	0	0	0	0	10	1	0	11	0	0	0	0	0	19
% Trucks	1.4	1.1	0	0	1.1	0	0	0	0	0	0	0.7	0.4	0	0.6	0	0	0	0	0	0.7

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:45 PM	20	89	0	0	109	2	1	0	0	3	0	197	35	232	17	0	12	0	29	373	
05:00 PM	20	83	1	1	104	0	0	0	0	0	1	203	42	246	22	0	10	0	32	382	
05:15 PM	22	80	1	1	103	0	0	3	0	3	1	227	39	267	38	1	20	0	59	432	
05:30 PM	23	56	0	0	79	0	0	0	0	0	1	211	37	249	20	0	10	0	30	358	
Total Volume	85	308	2	2	395	2	1	3	0	6	3	838	153	994	97	1	52	0	150	1545	
% App. Total	21.5	78	0.5	0.5		33.3	16.7	50			0.3	84.3	15.4		64.7	0.7	34.7				
PHF	.924	.865	.500	.500		.250	.250	.250	.500		.750	.923	.911	.931	.638	.250	.650		.636	.894	

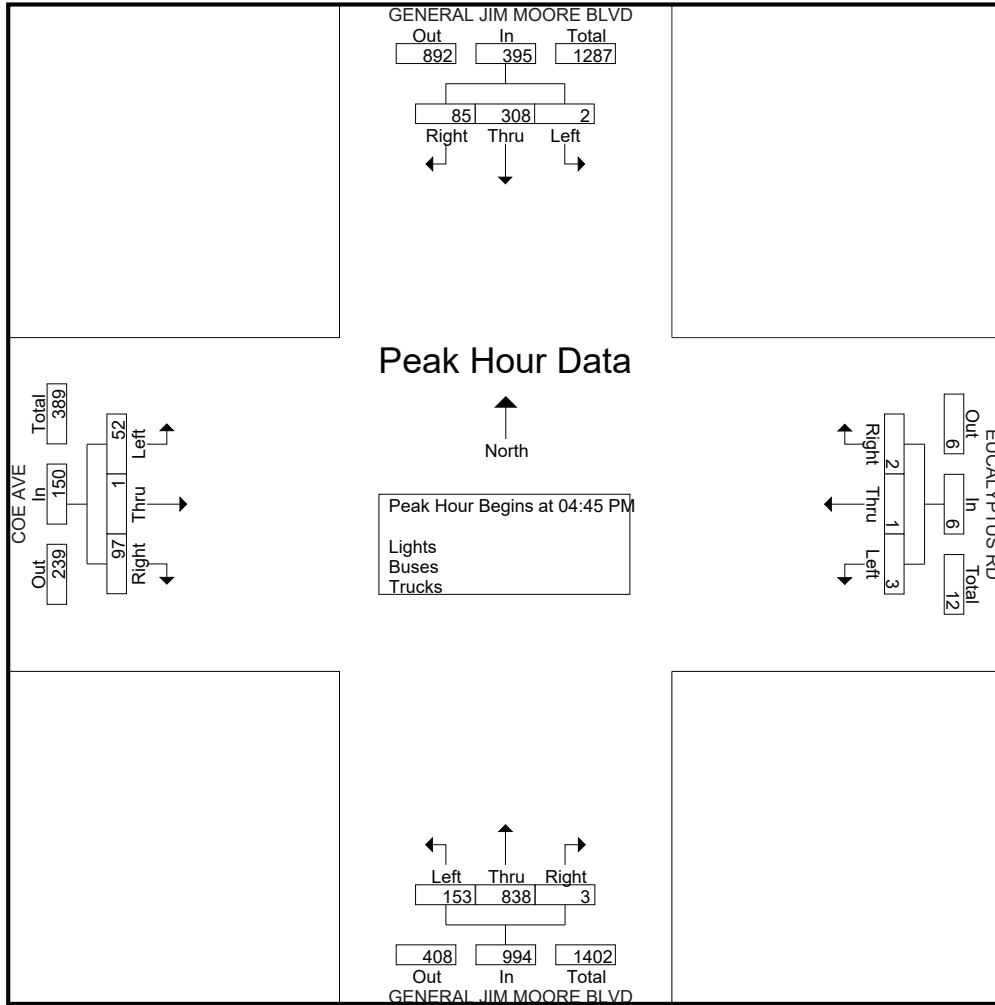
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
Grand Total	0	3	0	0	3	0	0	1	0	1	0	1	1	0	2	0	0	0	0	0	6
Apprch %	0	100	0	0		0	0	100	0		0	50	50	0		0	0	0	0		
Total %	0	50	0	0	50	0	0	16.7	0	16.7	0	16.7	16.7	0	33.3	0	0	0	0	0	

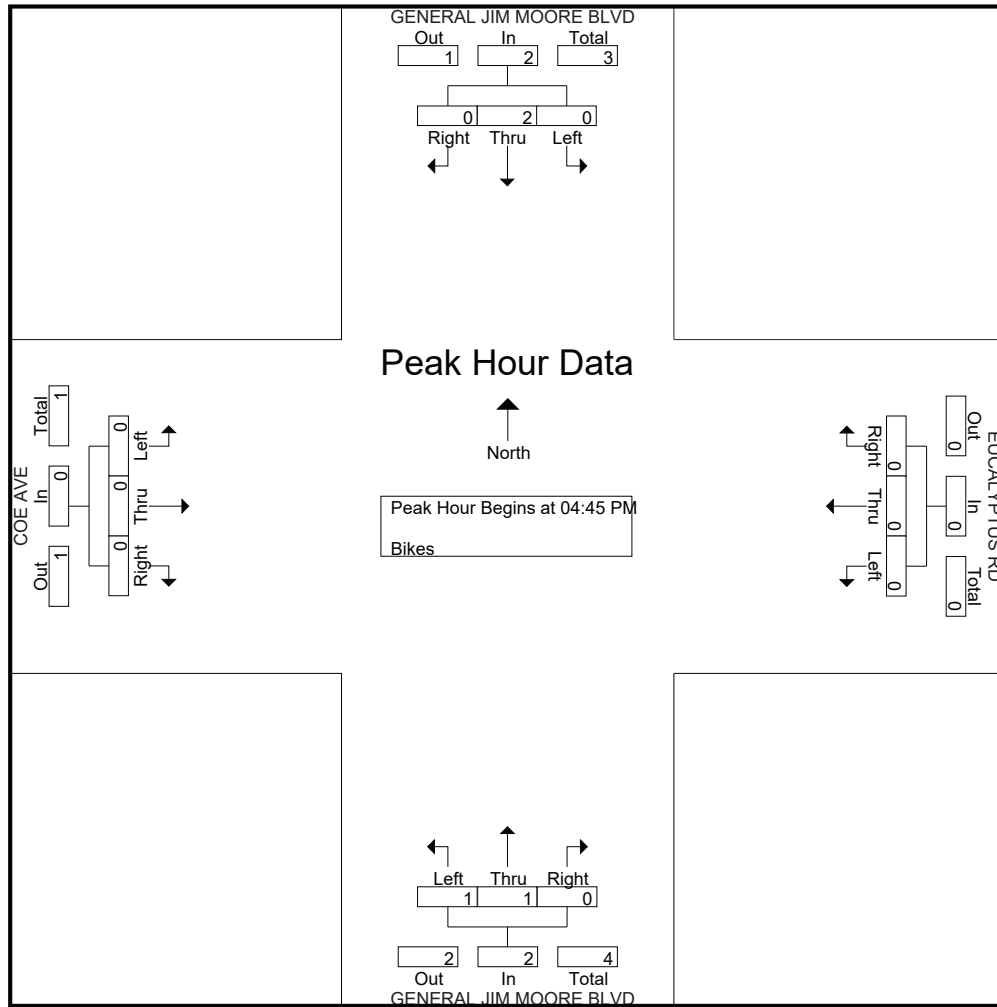
Start Time	GENERAL JIM MOORE BLVD Southbound					EUCALYPTUS RD Westbound					GENERAL JIM MOORE BLVD Northbound					COE AVE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Total Volume	0	2	0	0	2	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	4
% App. Total	0	100	0	0		0	0	0	0		0	50	50	0		0	0	0	0		
PHF	.000	.500	.000	.000	.500	.000	.000	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.000	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

Traffic Data Service

San Jose, CA
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File Name : 19PM FINAL
 Site Code : 00000019
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 20AM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

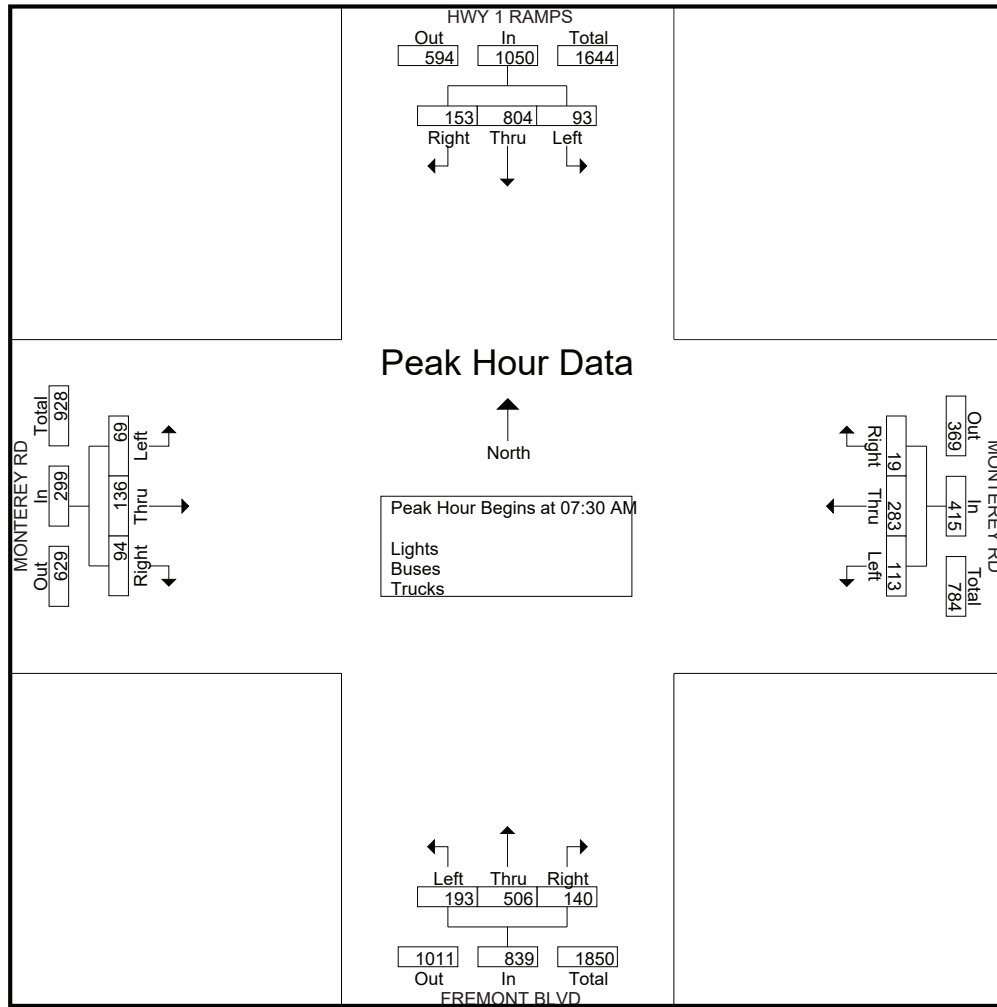
Start Time	HWY 1 RAMPS Southbound					MONTEREY RD Westbound					FREMONT BLVD Northbound					MONTEREY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	49	179	15	0	243	15	78	17	0	110	11	94	29	3	137	7	8	14	0	29	519
07:15 AM	51	187	19	0	257	7	66	20	0	93	11	109	49	6	175	8	25	16	1	50	575
07:30 AM	41	174	30	0	245	4	78	22	0	104	30	130	49	3	212	22	39	19	3	83	644
07:45 AM	40	197	36	0	273	7	70	29	0	106	59	142	53	1	255	21	46	18	5	90	724
Total	181	737	100	0	1018	33	292	88	0	413	111	475	180	13	779	58	118	67	9	252	2462
08:00 AM	35	216	19	0	270	2	64	29	0	95	28	127	39	5	199	18	30	16	4	68	632
08:15 AM	37	217	8	1	263	6	71	33	0	110	23	107	52	4	186	33	21	16	1	71	630
08:30 AM	34	191	6	1	232	7	57	32	0	96	12	124	50	8	194	21	25	27	0	73	595
08:45 AM	37	207	6	1	251	5	59	35	0	99	18	103	45	1	167	21	25	19	1	66	583
Total	143	831	39	3	1016	20	251	129	0	400	81	461	186	18	746	93	101	78	6	278	2440
Grand Total	324	1568	139	3	2034	53	543	217	0	813	192	936	366	31	1525	151	219	145	15	530	4902
Apprch %	15.9	77.1	6.8	0.1		6.5	66.8	26.7	0		12.6	61.4	24	2		28.5	41.3	27.4	2.8		
Total %	6.6	32	2.8	0.1	41.5	1.1	11.1	4.4	0	16.6	3.9	19.1	7.5	0.6	31.1	3.1	4.5	3	0.3	10.8	
Lights	312	1515	138	3	1968	52	538	211	0	801	184	887	359	31	1461	147	216	136	15	514	4744
% Lights	96.3	96.6	99.3	100	96.8	98.1	99.1	97.2	0	98.5	95.8	94.8	98.1	100	95.8	97.4	98.6	93.8	100	97	96.8
Buses	6	7	0	0	13	0	2	2	0	4	5	9	2	0	16	1	1	4	0	6	39
% Buses	1.9	0.4	0	0	0.6	0	0.4	0.9	0	0.5	2.6	1	0.5	0	1	0.7	0.5	2.8	0	1.1	0.8
Trucks	6	46	1	0	53	1	3	4	0	8	3	40	5	0	48	3	2	5	0	10	119
% Trucks	1.9	2.9	0.7	0	2.6	1.9	0.6	1.8	0	1	1.6	4.3	1.4	0	3.1	2	0.9	3.4	0	1.9	2.4

Start Time	HWY 1 RAMPS Southbound				MONTEREY RD Westbound				FREMONT BLVD Northbound				MONTEREY RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	41	174	30	245	4	78	22	104	30	130	49	209	22	39	19	80	638
07:45 AM	40	197	36	273	7	70	29	106	59	142	53	254	21	46	18	85	718
08:00 AM	35	216	19	270	2	64	29	95	28	127	39	194	18	30	16	64	623
08:15 AM	37	217	8	262	6	71	33	110	23	107	52	182	33	21	16	70	624
Total Volume	153	804	93	1050	19	283	113	415	140	506	193	839	94	136	69	299	2603
% App. Total	14.6	76.6	8.9		4.6	68.2	27.2		16.7	60.3	23		31.4	45.5	23.1		
PHF	.933	.926	.646	.962	.679	.907	.856	.943	.593	.891	.910	.826	.712	.739	.908	.879	.906

Traffic Data Service

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File Name : 20AM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 20AM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

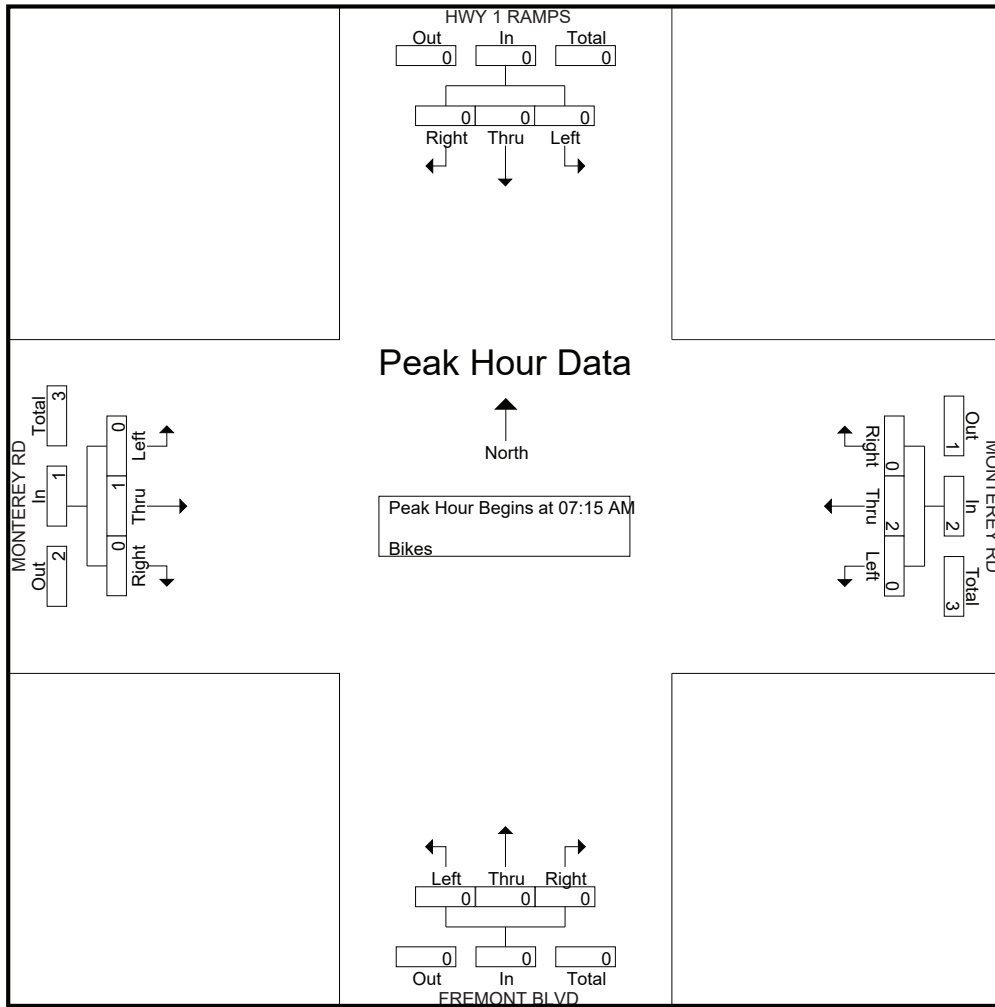
Start Time	HWY 1 RAMPS Southbound					MONTEREY RD Westbound					FREMONT BLVD Northbound					MONTEREY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	2
Grand Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4
Apprch %	0	0	0	0		0	100	0	0		0	0	0	0		50	50	0	0		
Total %	0	0	0	0		0	50	0	0	50	0	0	0	0		25	25	0	0	50	

Start Time	HWY 1 RAMPS Southbound				MONTEREY RD Westbound				FREMONT BLVD Northbound				MONTEREY RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.375

Traffic Data Service

San Jose, CA
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File Name : 20AM FINAL
Site Code : 00000020
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

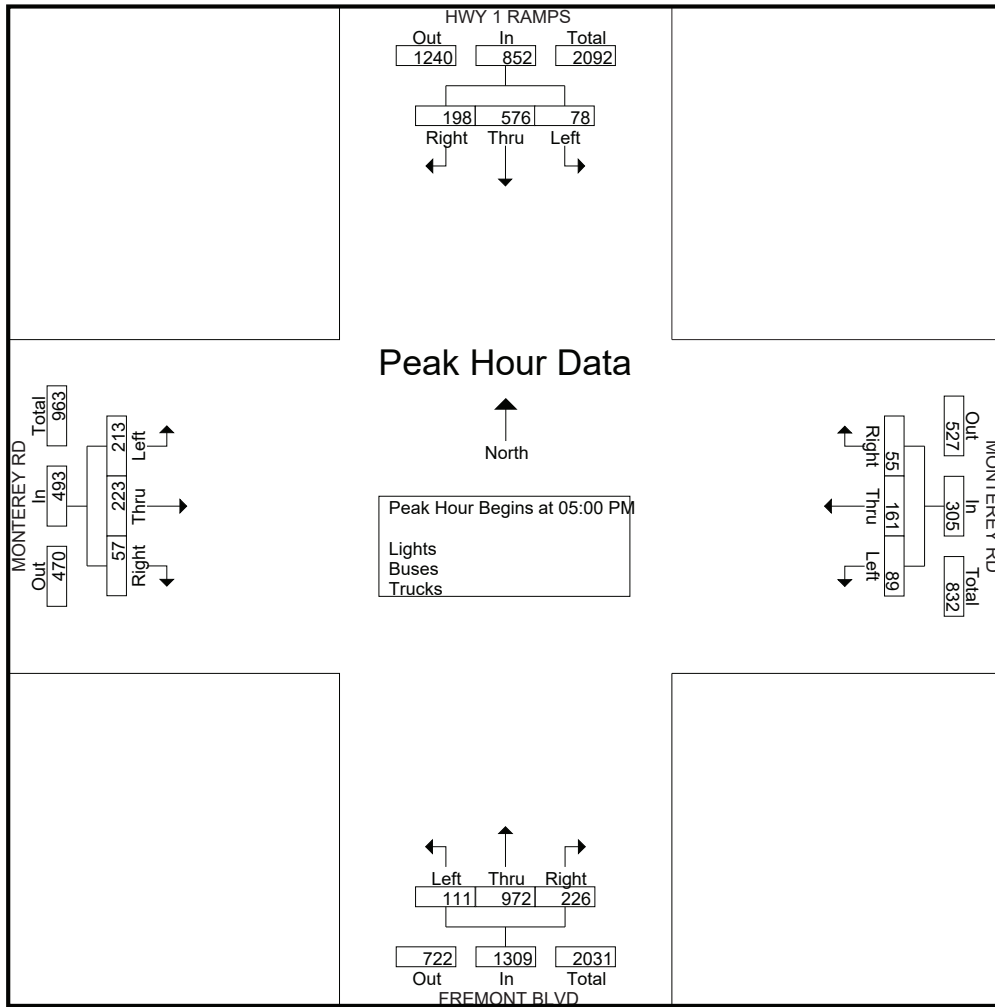
Start Time	HWY 1 RAMPS Southbound					MONTEREY RD Westbound					FREMONT BLVD Northbound					MONTEREY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	63	164	13	0	240	15	24	15	0	54	43	250	36	2	331	19	41	52	0	112	737
04:15 PM	46	147	20	0	213	14	38	20	0	72	38	211	34	0	283	20	51	62	1	134	702
04:30 PM	42	141	15	0	198	19	39	18	0	76	38	222	46	6	312	13	42	55	1	111	697
04:45 PM	49	148	14	0	211	14	32	16	0	62	50	238	35	2	325	19	37	36	5	97	695
Total	200	600	62	0	862	62	133	69	0	264	169	921	151	10	1251	71	171	205	7	454	2831
05:00 PM	39	183	12	0	234	12	45	17	0	74	46	269	31	0	346	9	50	50	0	109	763
05:15 PM	51	128	26	0	205	12	41	23	0	76	60	248	22	3	333	14	43	49	2	108	722
05:30 PM	52	129	18	0	199	15	32	18	0	65	61	230	24	1	316	13	71	66	1	151	731
05:45 PM	56	136	22	1	215	16	43	31	0	90	59	225	34	0	318	21	59	48	3	131	754
Total	198	576	78	1	853	55	161	89	0	305	226	972	111	4	1313	57	223	213	6	499	2970
Grand Total	398	1176	140	1	1715	117	294	158	0	569	395	1893	262	14	2564	128	394	418	13	953	5801
Apprch %	23.2	68.6	8.2	0.1		20.6	51.7	27.8	0		15.4	73.8	10.2	0.5		13.4	41.3	43.9	1.4		
Total %	6.9	20.3	2.4	0	29.6	2	5.1	2.7	0	9.8	6.8	32.6	4.5	0.2	44.2	2.2	6.8	7.2	0.2	16.4	
Lights	391	1159	140	1	1691	116	292	158	0	566	391	1869	260	14	2534	127	390	414	13	944	5735
% Lights	98.2	98.6	100	100	98.6	99.1	99.3	100	0	99.5	99	98.7	99.2	100	98.8	99.2	99	99	100	99.1	98.9
Buses	6	4	0	0	10	0	2	0	0	2	0	4	1	0	5	0	4	4	0	8	25
% Buses	1.5	0.3	0	0	0.6	0	0.7	0	0	0.4	0	0.2	0.4	0	0.2	0	1	1	0	0.8	0.4
Trucks	1	13	0	0	14	1	0	0	0	1	4	20	1	0	25	1	0	0	0	1	41
% Trucks	0.3	1.1	0	0	0.8	0.9	0	0	0	0.2	1	1.1	0.4	0	1	0.8	0	0	0	0.1	0.7

Start Time	HWY 1 RAMPS Southbound				MONTEREY RD Westbound				FREMONT BLVD Northbound				MONTEREY RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	39	183	12	234	12	45	17	74	46	269	31	346	9	50	50	109	763
05:15 PM	51	128	26	205	12	41	23	76	60	248	22	330	14	43	49	106	717
05:30 PM	52	129	18	199	15	32	18	65	61	230	24	315	13	71	66	150	729
05:45 PM	56	136	22	214	16	43	31	90	59	225	34	318	21	59	48	128	750
Total Volume	198	576	78	852	55	161	89	305	226	972	111	1309	57	223	213	493	2959
% App. Total	23.2	67.6	9.2		18	52.8	29.2		17.3	74.3	8.5		11.6	45.2	43.2		
PHF	.884	.787	.750	.910	.859	.894	.718	.847	.926	.903	.816	.946	.679	.785	.807	.822	.970

Traffic Data Service

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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	HWY 1 RAMPS Southbound					MONTEREY RD Westbound					FREMONT BLVD Northbound					MONTEREY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Grand Total	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
Apprch %	66.7	33.3	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
Total %	40	20	0	0	60	0	0	0	0	0	0	0	0	0	0	0	40	0	0	40	

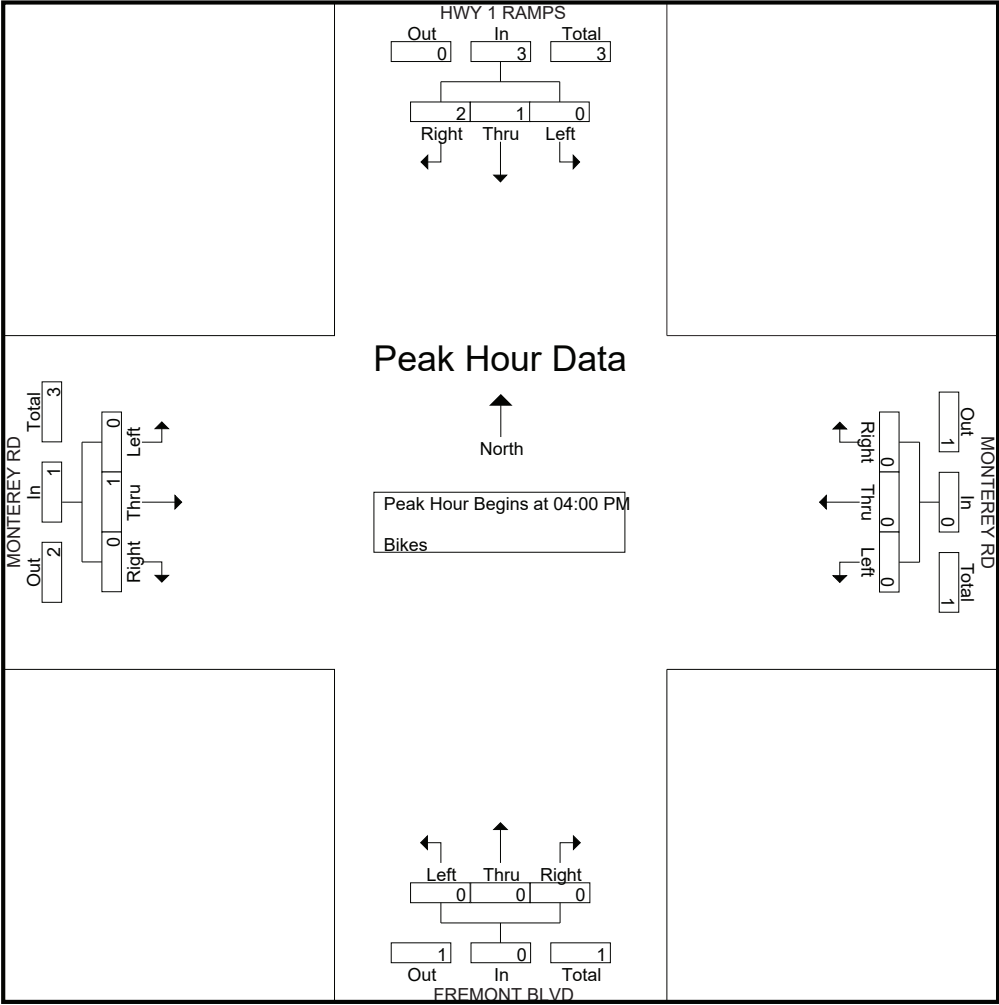
Start Time	HWY 1 RAMPS Southbound					MONTEREY RD Westbound					FREMONT BLVD Northbound					MONTEREY RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total Volume	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
% App. Total	66.7	33.3	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.500	.250	.000	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.500

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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 tdsbay@cs.com

File Name : 20PM FINAL
 Site Code : 00000020
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

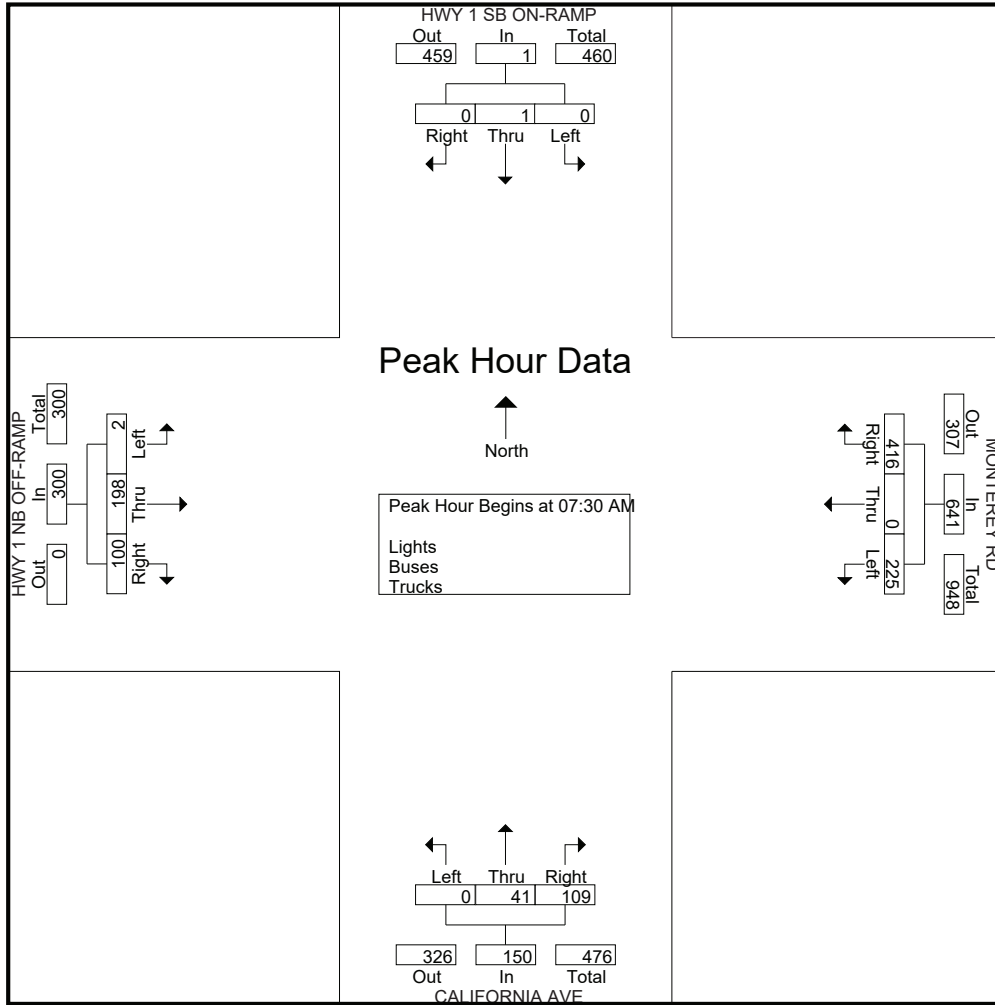
Start Time	HWY 1 SB ON-RAMP Southbound					MONTEREY RD Westbound					CALIFORNIA AVE Northbound					HWY 1 NB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	102	0	53	0	155	19	17	0	0	36	16	13	1	0	30	221
07:15 AM	0	0	0	0	0	107	0	55	0	162	23	17	0	0	40	14	27	0	0	41	243
07:30 AM	0	0	0	0	0	118	0	52	0	170	28	6	0	0	34	13	48	0	0	61	265
07:45 AM	0	0	0	0	0	111	0	54	0	165	33	8	0	1	42	22	53	0	0	75	282
Total	0	0	0	0	0	438	0	214	0	652	103	48	0	1	152	65	141	1	0	207	1011
08:00 AM	0	1	0	0	1	90	0	62	3	155	23	12	0	0	35	31	50	0	0	81	272
08:15 AM	0	0	0	0	0	97	0	57	0	154	25	15	0	1	41	34	47	2	0	83	278
08:30 AM	0	0	1	0	1	90	0	57	0	147	36	13	0	0	49	29	35	2	0	66	263
08:45 AM	0	0	1	0	1	97	0	47	0	144	33	18	0	1	52	23	34	0	0	57	254
Total	0	1	2	0	3	374	0	223	3	600	117	58	0	2	177	117	166	4	0	287	1067
Grand Total	0	1	2	0	3	812	0	437	3	1252	220	106	0	3	329	182	307	5	0	494	2078
Apprch %	0	33.3	66.7	0		64.9	0	34.9	0.2		66.9	32.2	0	0.9		36.8	62.1	1	0		
Total %	0	0	0.1	0	0.1	39.1	0	21	0.1	60.3	10.6	5.1	0	0.1	15.8	8.8	14.8	0.2	0	23.8	
Lights	0	1	2	0	3	801	0	421	3	1225	209	103	0	3	315	174	300	5	0	479	2022
% Lights	0	100	100	0	100	98.6	0	96.3	100	97.8	95	97.2	0	100	95.7	95.6	97.7	100	0	97	97.3
Buses	0	0	0	0	0	2	0	7	0	9	4	0	0	0	4	5	1	0	0	6	19
% Buses	0	0	0	0	0	0.2	0	1.6	0	0.7	1.8	0	0	0	1.2	2.7	0.3	0	0	1.2	0.9
Trucks	0	0	0	0	0	9	0	9	0	18	7	3	0	0	10	3	6	0	0	9	37
% Trucks	0	0	0	0	0	1.1	0	2.1	0	1.4	3.2	2.8	0	0	3	1.6	2	0	0	1.8	1.8

Start Time	HWY 1 SB ON-RAMP Southbound				MONTEREY RD Westbound				CALIFORNIA AVE Northbound				HWY 1 NB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	118	0	52	170	28	6	0	34	13	48	0	61	265
07:45 AM	0	0	0	0	111	0	54	165	33	8	0	41	22	53	0	75	281
08:00 AM	0	1	0	1	90	0	62	152	23	12	0	35	31	50	0	81	269
08:15 AM	0	0	0	0	97	0	57	154	25	15	0	40	34	47	2	83	277
Total Volume	0	1	0	1	416	0	225	641	109	41	0	150	100	198	2	300	1092
% App. Total	0	100	0		64.9	0	35.1		72.7	27.3	0		33.3	66	0.7		
PHF	.000	.250	.000	.250	.881	.000	.907	.943	.826	.683	.000	.915	.735	.934	.250	.904	.972

Traffic Data Service

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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

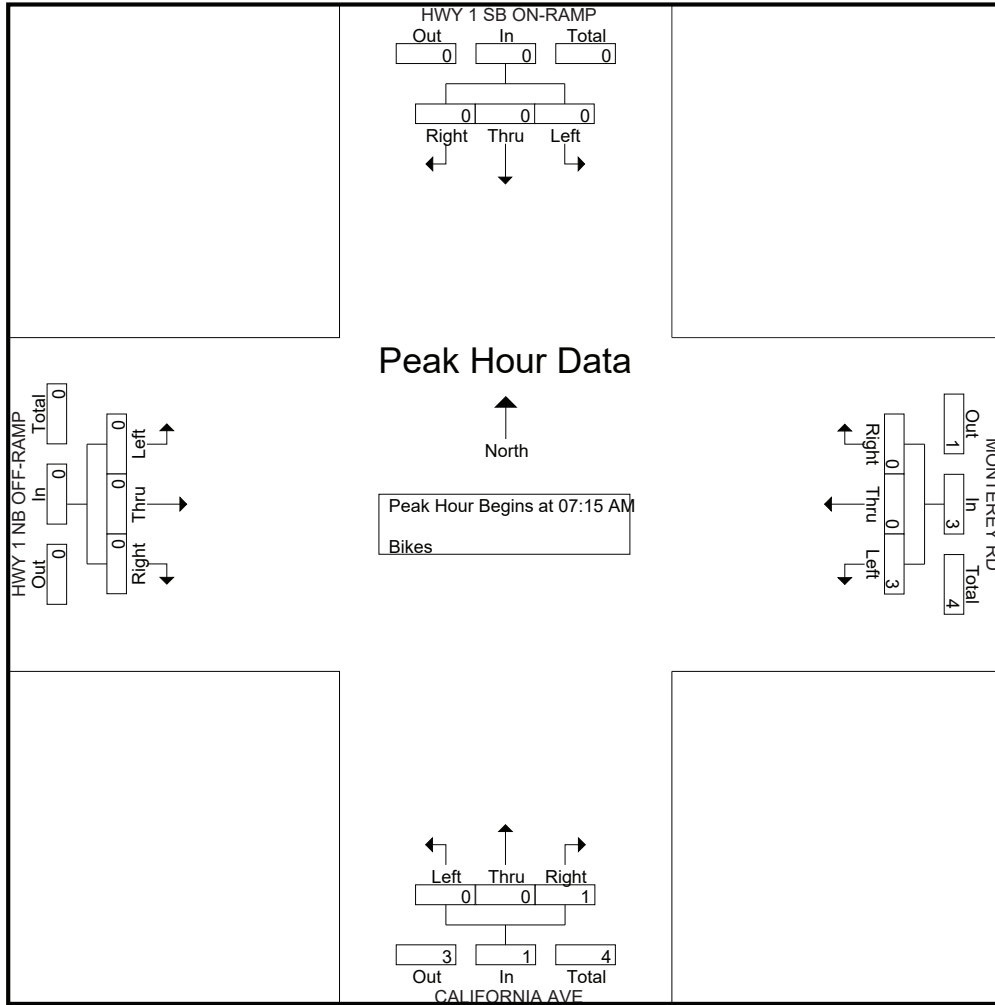
Start Time	HWY 1 SB ON-RAMP Southbound					MONTEREY RD Westbound					CALIFORNIA AVE Northbound					HWY 1 NB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	3
Grand Total	0	0	0	0	0	0	0	3	0	3	3	0	0	0	3	0	0	0	0	0	6
Apprch %	0	0	0	0		0	0	100	0		100	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	50	0	50	50	0	0	0	50	0	0	0	0		

Start Time	HWY 1 SB ON-RAMP Southbound				MONTEREY RD Westbound				CALIFORNIA AVE Northbound				HWY 1 NB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	3	3	1	0	0	1	0	0	0	0	4
% App. Total	0	0	0		0	0	100		100	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.750	.250	.000	.000	.250	.000	.000	.000	.000	1.00

Traffic Data Service

San Jose, CA
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File Name : 21AM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 21PM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

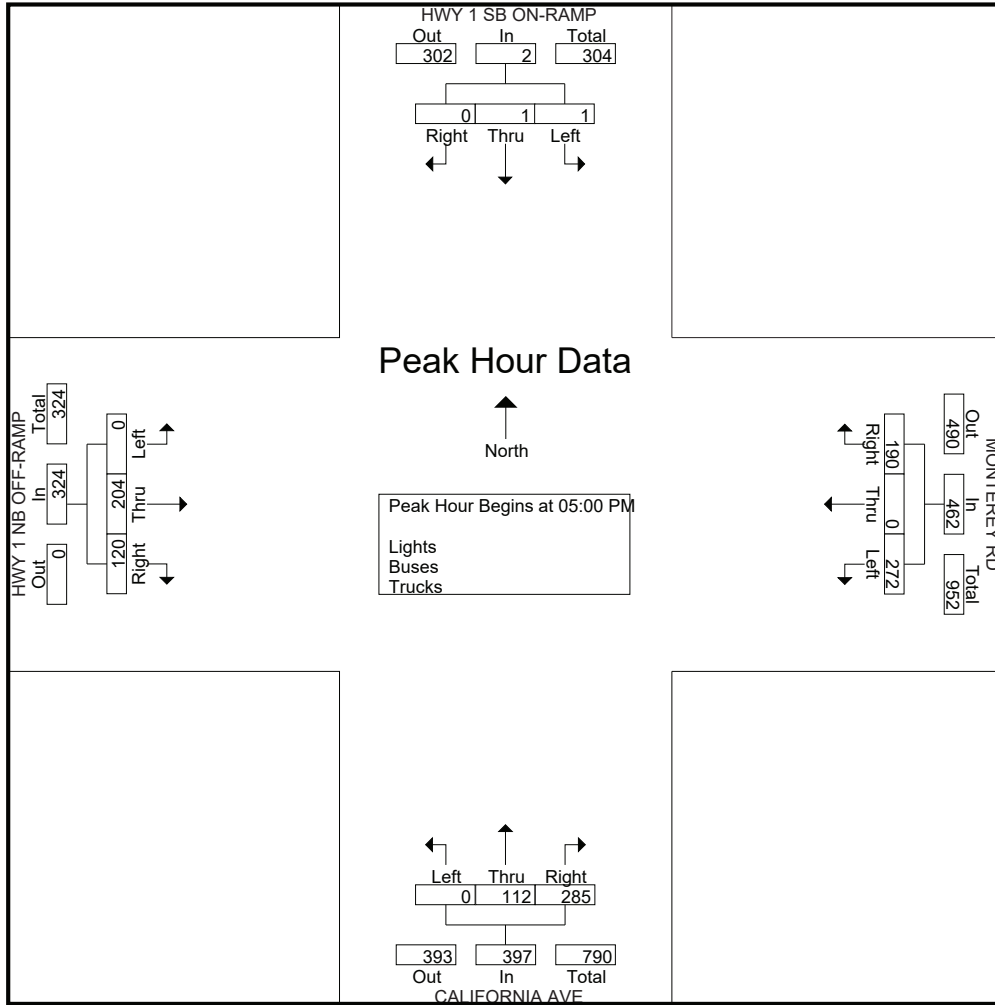
Start Time	HWY 1 SB ON-RAMP Southbound					MONTEREY RD Westbound					CALIFORNIA AVE Northbound					HWY 1 NB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	44	0	74	0	118	67	23	0	1	91	31	45	0	0	76	285
04:15 PM	0	0	0	0	0	60	0	57	0	117	85	32	0	0	117	35	51	0	0	86	320
04:30 PM	0	0	0	0	0	65	0	52	1	118	75	32	0	1	108	17	35	0	0	52	278
04:45 PM	0	0	1	0	1	47	0	69	0	116	55	30	0	2	87	28	35	0	0	63	267
Total	0	0	1	0	1	216	0	252	1	469	282	117	0	4	403	111	166	0	0	277	1150
05:00 PM	0	1	0	0	1	53	0	60	0	113	65	34	0	0	99	22	49	0	0	71	284
05:15 PM	0	0	0	0	0	45	0	71	0	116	69	23	0	3	95	24	39	0	0	63	274
05:30 PM	0	0	1	0	1	43	0	61	0	104	80	28	0	0	108	29	62	0	0	91	304
05:45 PM	0	0	0	0	0	49	0	80	0	129	71	27	0	0	98	45	54	0	0	99	326
Total	0	1	1	0	2	190	0	272	0	462	285	112	0	3	400	120	204	0	0	324	1188
Grand Total	0	1	2	0	3	406	0	524	1	931	567	229	0	7	803	231	370	0	0	601	2338
Apprch %	0	33.3	66.7	0		43.6	0	56.3	0.1		70.6	28.5	0	0.9		38.4	61.6	0	0		
Total %	0	0	0.1	0	0.1	17.4	0	22.4	0	39.8	24.3	9.8	0	0.3	34.3	9.9	15.8	0	0	25.7	
Lights	0	1	2	0	3	403	0	516	1	920	562	224	0	7	793	229	366	0	0	595	2311
% Lights	0	100	100	0	100	99.3	0	98.5	100	98.8	99.1	97.8	0	100	98.8	99.1	98.9	0	0	99	98.8
Buses	0	0	0	0	0	2	0	7	0	9	5	4	0	0	9	1	3	0	0	4	22
% Buses	0	0	0	0	0	0.5	0	1.3	0	1	0.9	1.7	0	0	1.1	0.4	0.8	0	0	0.7	0.9
Trucks	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1	1	1	0	0	2	5
% Trucks	0	0	0	0	0	0.2	0	0.2	0	0.2	0	0.4	0	0	0.1	0.4	0.3	0	0	0.3	0.2

Start Time	HWY 1 SB ON-RAMP Southbound				MONTEREY RD Westbound				CALIFORNIA AVE Northbound				HWY 1 NB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	1	0	1	53	0	60	113	65	34	0	99	22	49	0	71	284
05:15 PM	0	0	0	0	45	0	71	116	69	23	0	92	24	39	0	63	271
05:30 PM	0	0	1	1	43	0	61	104	80	28	0	108	29	62	0	91	304
05:45 PM	0	0	0	0	49	0	80	129	71	27	0	98	45	54	0	99	326
Total Volume	0	1	1	2	190	0	272	462	285	112	0	397	120	204	0	324	1185
% App. Total	0	50	50		41.1	0	58.9		71.8	28.2	0		37	63	0		
PHF	.000	.250	.250	.500	.896	.000	.850	.895	.891	.824	.000	.919	.667	.823	.000	.818	.909

Traffic Data Service

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File Name : 21PM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 21PM FINAL
 Site Code : 00000021
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	HWY 1 SB ON-RAMP Southbound					MONTEREY RD Westbound					CALIFORNIA AVE Northbound					HWY 1 NB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	0	0	0	0		0	0	100	0	100	0	0	0	0		0	0	0	0		

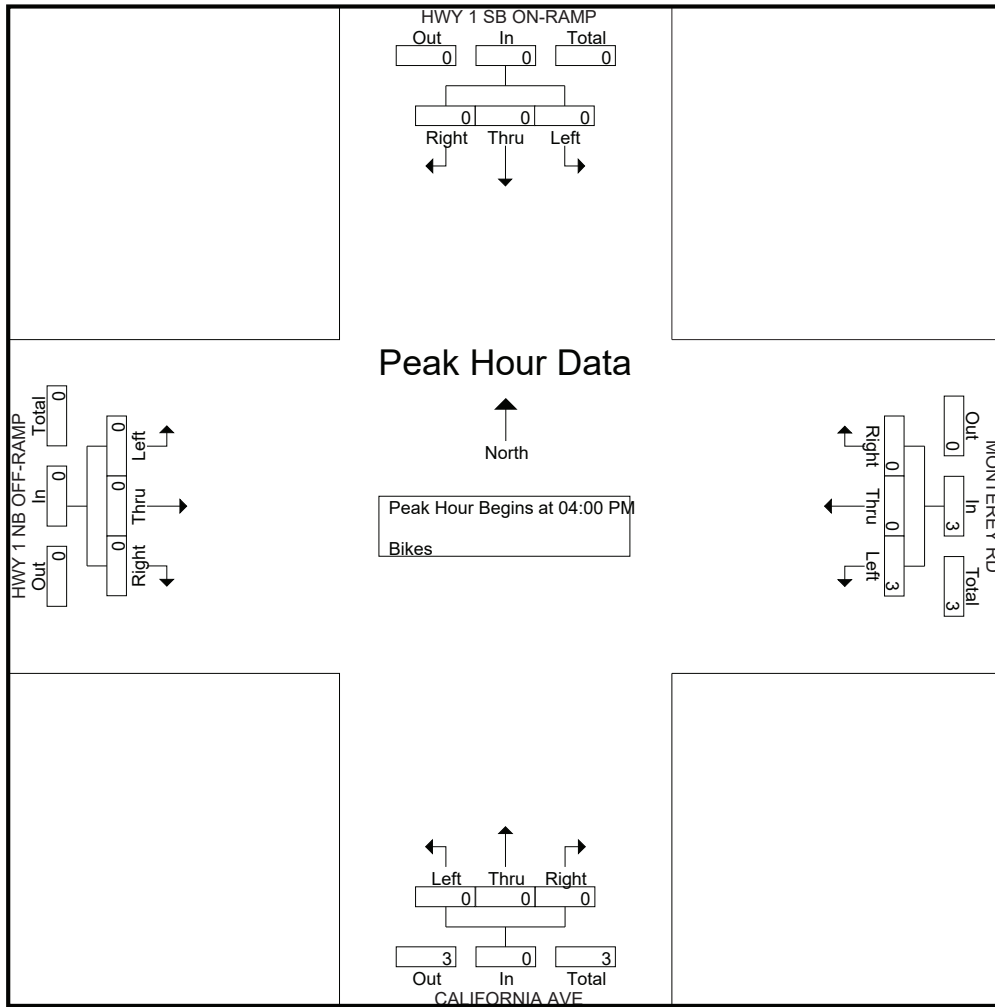
Start Time	HWY 1 SB ON-RAMP Southbound				MONTEREY RD Westbound				CALIFORNIA AVE Northbound				HWY 1 NB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	3
% App. Total	0	0	0		0	0	100		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.750	.750	.000	.000	.000	.000	.000	.000	.000	.000	.750

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 21PM FINAL
Site Code : 00000021
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 22AM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

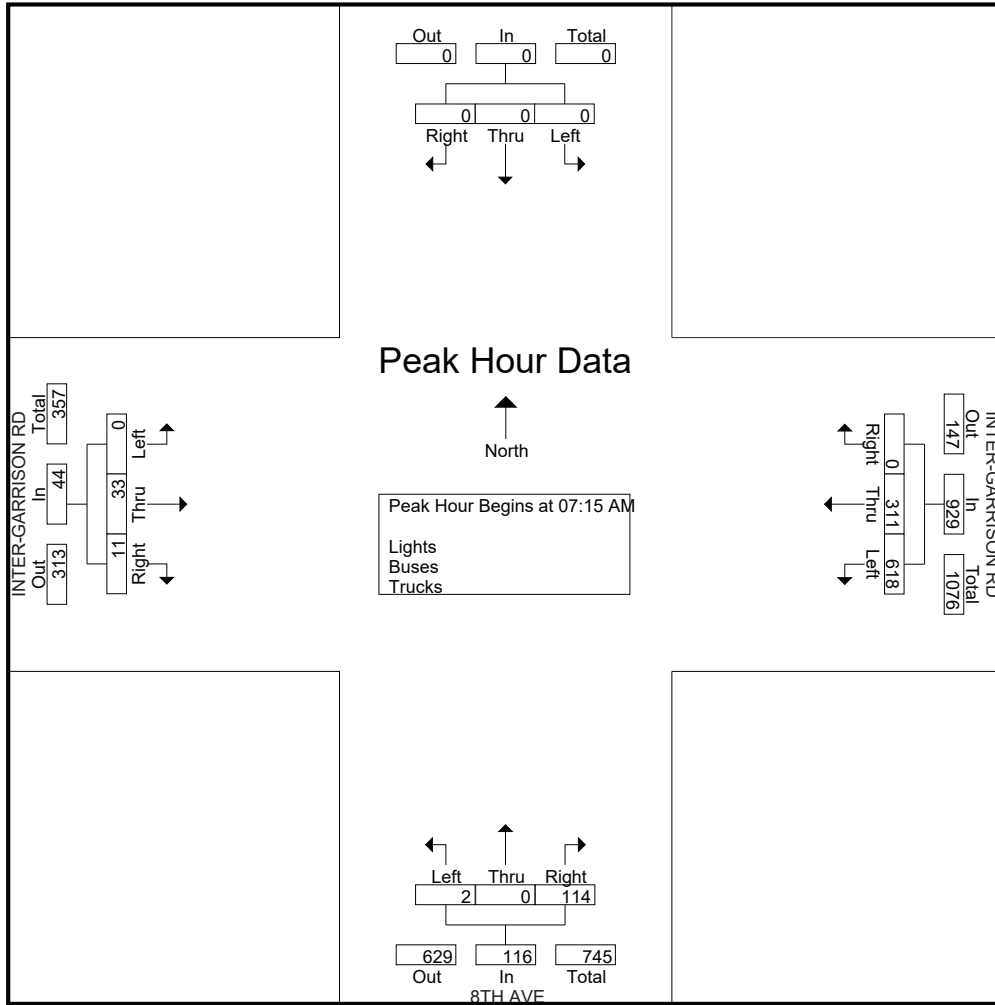
Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	25	145	0	170	13	0	0	0	13	2	5	0	0	7	190
07:15 AM	0	0	0	0	0	0	40	194	0	234	18	0	0	0	18	1	10	0	0	11	263
07:30 AM	0	0	0	0	0	0	73	181	0	254	28	0	0	0	28	2	5	0	0	7	289
07:45 AM	0	0	0	0	0	0	114	148	0	262	39	0	0	0	39	7	4	0	0	11	312
Total	0	0	0	0	0	0	252	668	0	920	98	0	0	0	98	12	24	0	0	36	1054
08:00 AM	0	0	0	0	0	0	84	95	0	179	29	0	2	0	31	1	14	0	0	15	225
08:15 AM	0	0	0	0	0	0	65	85	0	150	21	0	2	1	24	4	8	0	0	12	186
08:30 AM	0	0	0	0	0	0	40	60	0	100	18	0	3	0	21	4	11	0	0	15	136
08:45 AM	0	0	0	0	0	0	42	46	0	88	14	0	0	1	15	3	5	0	0	8	111
Total	0	0	0	0	0	0	231	286	0	517	82	0	7	2	91	12	38	0	0	50	658
Grand Total	0	0	0	0	0	0	483	954	0	1437	180	0	7	2	189	24	62	0	0	86	1712
Apprch %	0	0	0	0	0	0	33.6	66.4	0	95.2	0	3.7	1.1			27.9	72.1	0	0		
Total %	0	0	0	0	0	0	28.2	55.7	0	83.9	10.5	0	0.4	0.1	11	1.4	3.6	0	0	5	
Lights	0	0	0	0	0	0	467	948	0	1415	178	0	4	2	184	21	48	0	0	69	1668
% Lights	0	0	0	0	0	0	96.7	99.4	0	98.5	98.9	0	57.1	100	97.4	87.5	77.4	0	0	80.2	97.4
Buses	0	0	0	0	0	0	11	3	0	14	1	0	1	0	2	3	10	0	0	13	29
% Buses	0	0	0	0	0	0	2.3	0.3	0	1	0.6	0	14.3	0	1.1	12.5	16.1	0	0	15.1	1.7
Trucks	0	0	0	0	0	0	5	3	0	8	1	0	2	0	3	0	4	0	0	4	15
% Trucks	0	0	0	0	0	0	1	0.3	0	0.6	0.6	0	28.6	0	1.6	0	6.5	0	0	4.7	0.9

Start Time	Southbound				INTER-GARRISON RD Westbound				8TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	40	194	234	18	0	0	18	1	10	0	11	263
07:30 AM	0	0	0	0	0	73	181	254	28	0	0	28	2	5	0	7	289
07:45 AM	0	0	0	0	0	114	148	262	39	0	0	39	7	4	0	11	312
08:00 AM	0	0	0	0	0	84	95	179	29	0	2	31	1	14	0	15	225
Total Volume	0	0	0	0	0	311	618	929	114	0	2	116	11	33	0	44	1089
% App. Total	0	0	0	0	0	33.5	66.5		98.3	0	1.7		25	75	0		
PHF	.000	.000	.000	.000	.000	.682	.796	.886	.731	.000	.250	.744	.393	.589	.000	.733	.873

Traffic Data Service

San Jose, CA
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File Name : 22AM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
 tdsbay@cs.com

File Name : 22AM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	2
Apprch %	0	0	0	0	0	0	100	0	0	100	0	0	0	0	0	100	0	0	0	0	
Total %	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	50	0	0	0	50	

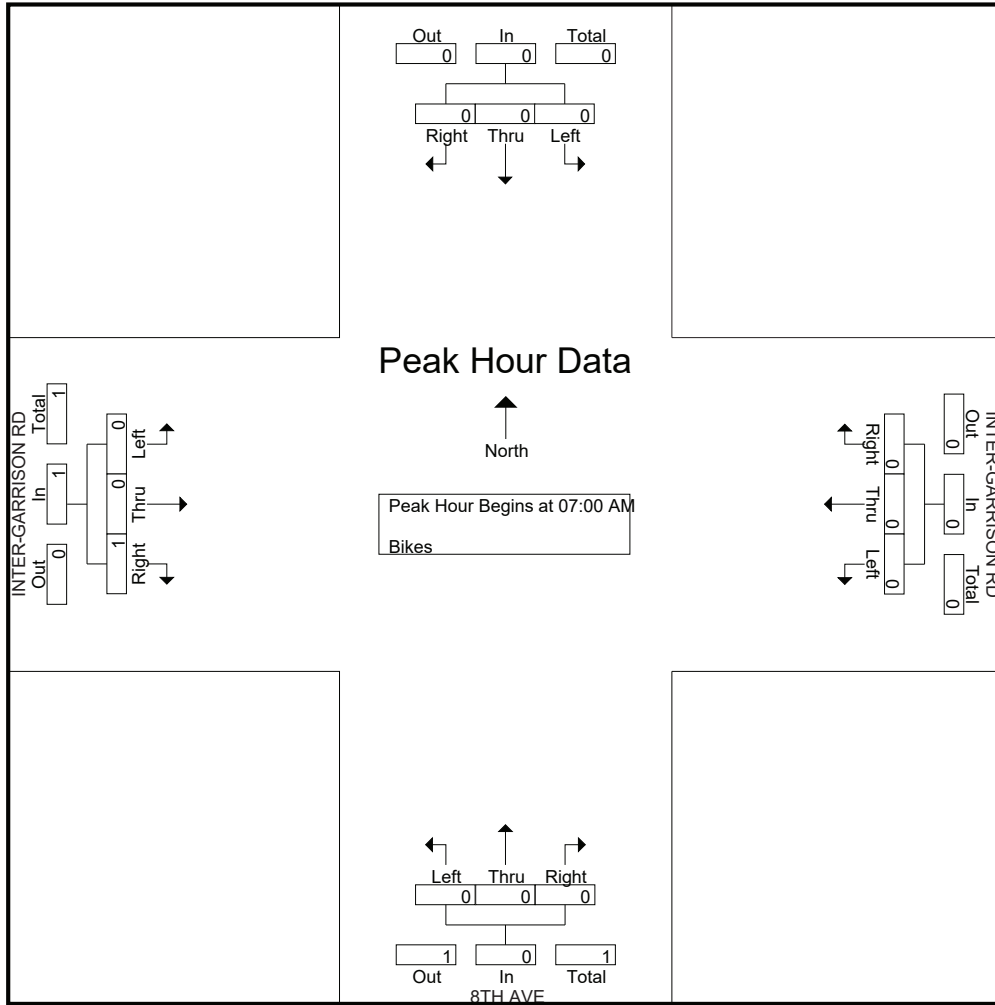
Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.250

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:00 AM

Traffic Data Service

San Jose, CA
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File Name : 22AM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
 (408) 622-4787
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File Name : 22PM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

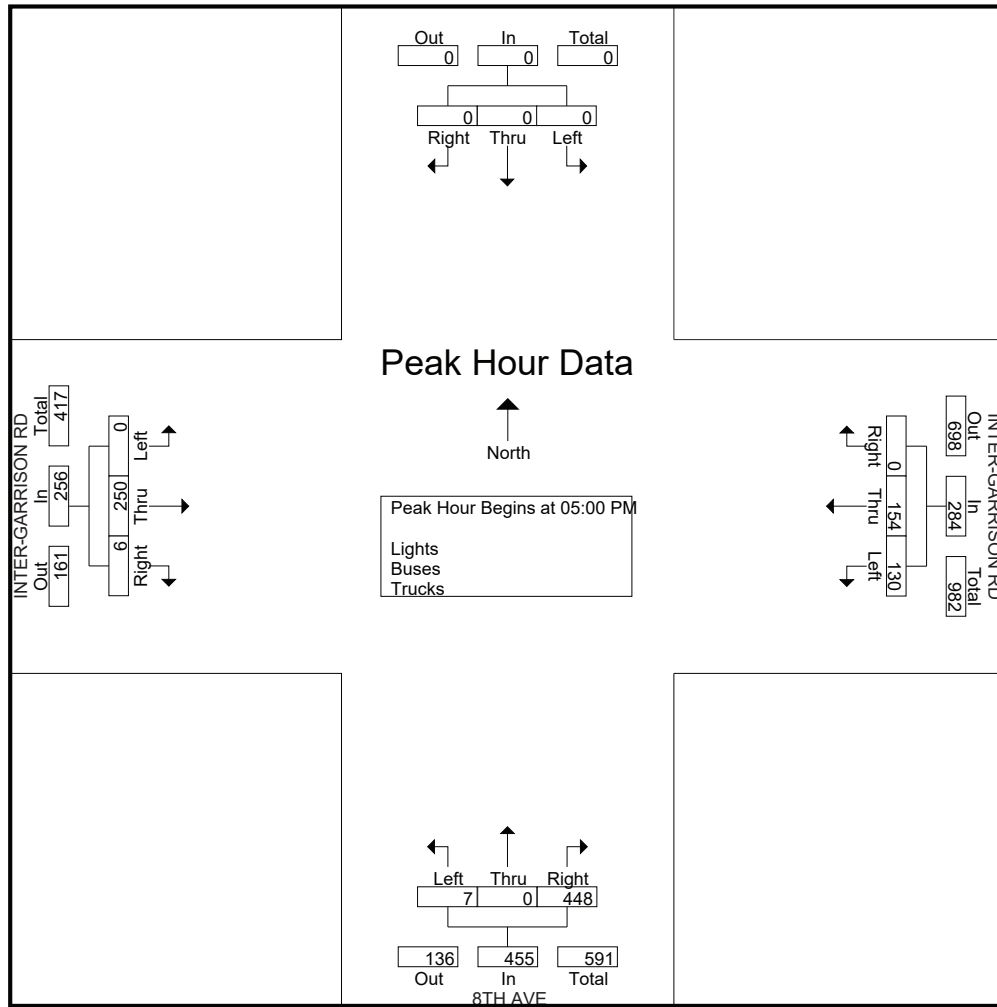
Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	24	24	0	48	83	0	3	2	88	1	43	0	0	44	180
04:15 PM	0	0	0	0	0	0	12	24	1	37	68	0	2	2	72	1	35	0	0	36	145
04:30 PM	0	0	0	0	0	0	14	28	0	42	104	0	3	0	107	2	27	0	0	29	178
04:45 PM	0	0	0	0	0	0	21	19	0	40	122	0	3	0	125	0	29	0	0	29	194
Total	0	0	0	0	0	0	71	95	1	167	377	0	11	4	392	4	134	0	0	138	697
05:00 PM	0	0	0	0	0	0	16	24	0	40	135	0	1	1	137	1	75	0	0	76	253
05:15 PM	0	0	0	0	0	0	26	39	0	65	116	0	3	1	120	2	64	0	0	66	251
05:30 PM	0	0	0	0	0	0	51	39	0	90	110	0	2	1	113	0	54	0	0	54	257
05:45 PM	0	0	0	0	0	0	61	28	0	89	87	0	1	2	90	3	57	0	0	60	239
Total	0	0	0	0	0	0	154	130	0	284	448	0	7	5	460	6	250	0	0	256	1000
Grand Total	0	0	0	0	0	0	225	225	1	451	825	0	18	9	852	10	384	0	0	394	1697
Apprch %	0	0	0	0	0	0	49.9	49.9	0.2	99.8	96.8	0	2.1	1.1	99.8	2.5	97.5	0	0	99.8	
Total %	0	0	0	0	0	0	13.3	13.3	0.1	26.6	48.6	0	1.1	0.5	50.2	0.6	22.6	0	0	23.2	
Lights	0	0	0	0	0	0	215	222	1	438	822	0	18	9	849	10	371	0	0	381	1668
% Lights	0	0	0	0	0	0	95.6	98.7	100	97.1	99.6	0	100	100	99.6	100	96.6	0	0	96.7	98.3
Buses	0	0	0	0	0	0	10	0	0	10	2	0	0	0	2	0	12	0	0	12	24
% Buses	0	0	0	0	0	0	4.4	0	0	2.2	0.2	0	0	0	0.2	0	3.1	0	0	3	1.4
Trucks	0	0	0	0	0	0	0	3	0	3	1	0	0	0	1	0	1	0	0	1	5
% Trucks	0	0	0	0	0	0	0	1.3	0	0.7	0.1	0	0	0	0.1	0	0.3	0	0	0.3	0.3

Start Time	Southbound				INTER-GARRISON RD Westbound				8TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	16	24	40	135	0	1	136	1	75	0	76	252
05:15 PM	0	0	0	0	0	26	39	65	116	0	3	119	2	64	0	66	250
05:30 PM	0	0	0	0	0	51	39	90	110	0	2	112	0	54	0	54	256
05:45 PM	0	0	0	0	0	61	28	89	87	0	1	88	3	57	0	60	237
Total Volume	0	0	0	0	0	154	130	284	448	0	7	455	6	250	0	256	995
% App. Total	0	0	0	0	0	54.2	45.8		98.5	0	1.5		2.3	97.7	0		
PHF	.000	.000	.000	.000	.000	.631	.833	.789	.830	.000	.583	.836	.500	.833	.000	.842	.972

Traffic Data Service

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File Name : 22PM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

San Jose, CA
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File Name : 22PM FINAL
 Site Code : 00000022
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	4
Apprch %	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	100	0	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	25	0	0	0	25	0	75	0	0	75	

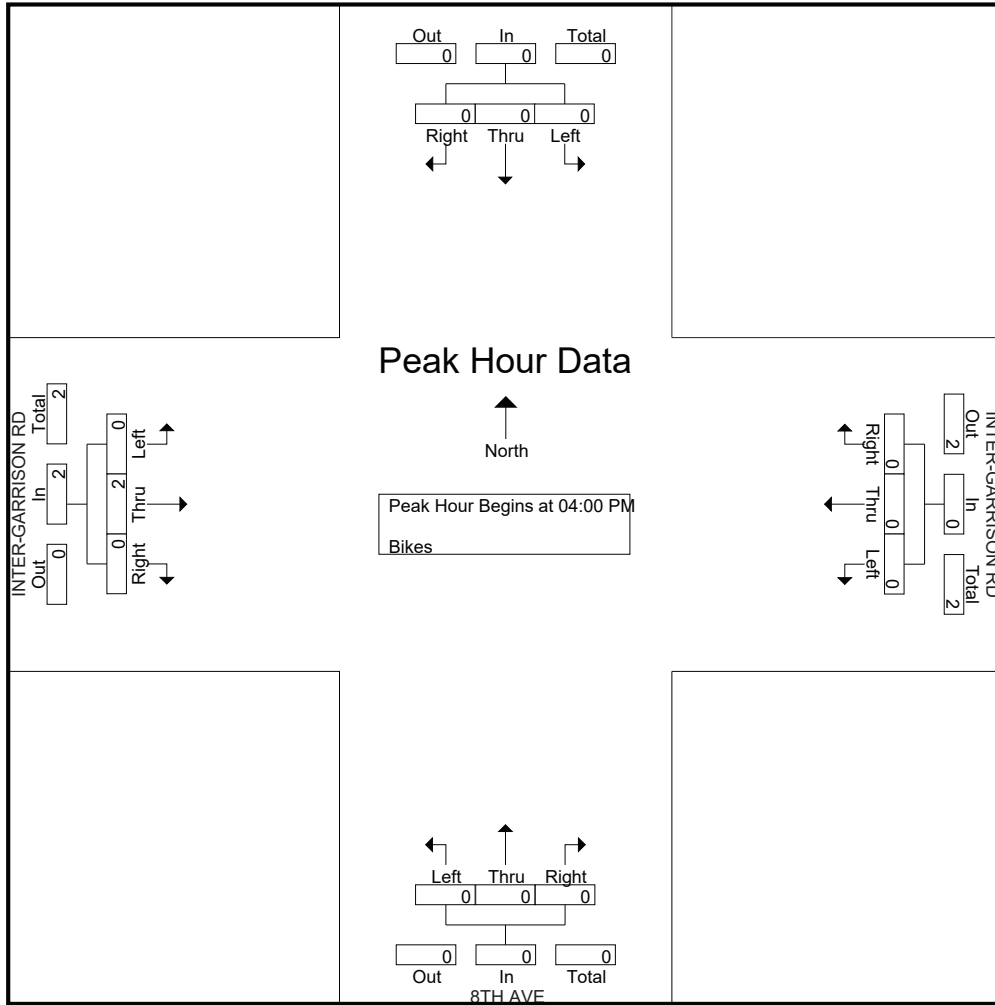
Start Time	Southbound					INTER-GARRISON RD Westbound					8TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

San Jose, CA
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File Name : 22PM FINAL
Site Code : 00000022
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

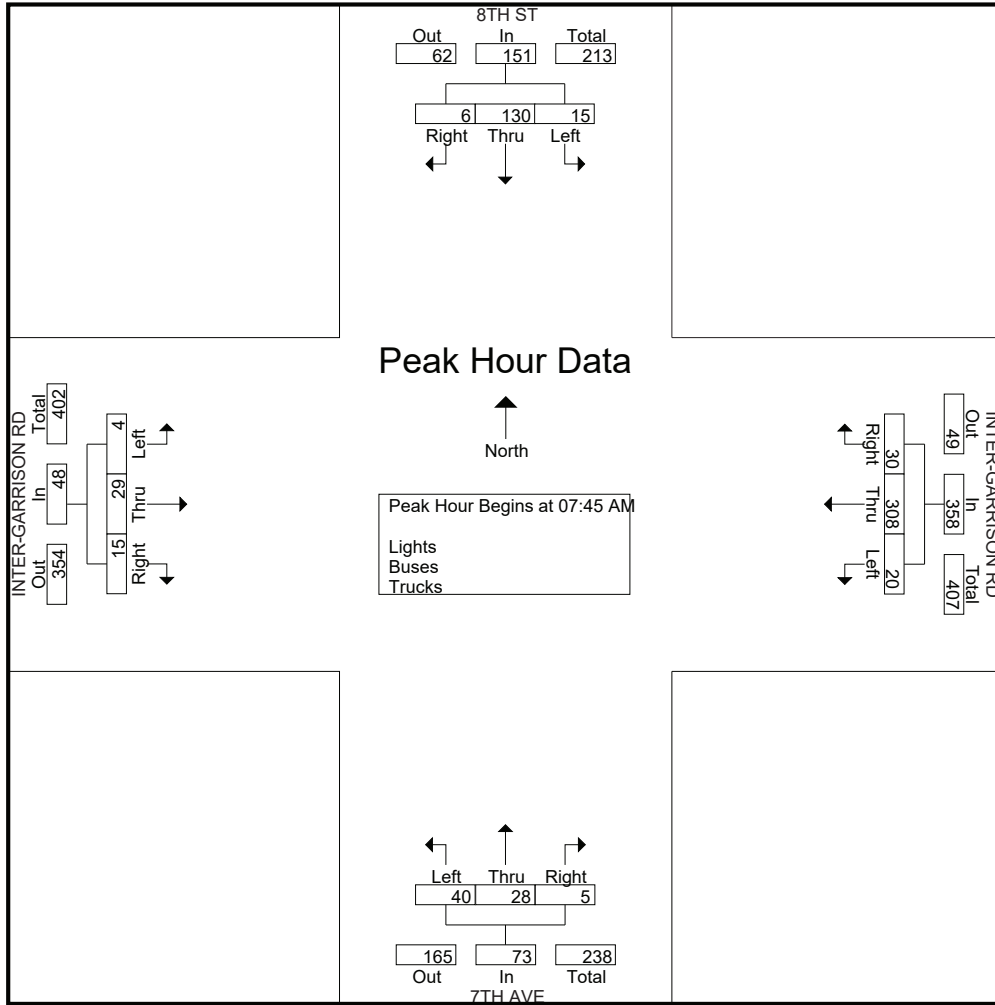
Start Time	8TH ST Southbound					INTER-GARRISON RD Westbound					7TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	17	1	0	18	0	17	5	0	22	0	3	2	0	5	2	6	0	0	8	53
07:15 AM	0	11	3	0	14	2	20	5	0	27	1	3	3	0	7	1	5	0	0	6	54
07:30 AM	0	31	4	0	35	3	31	7	0	41	1	3	4	0	8	3	6	0	0	9	93
07:45 AM	1	42	2	0	45	3	78	7	0	88	1	10	6	1	18	1	3	0	0	4	155
Total	1	101	10	0	112	8	146	24	0	178	3	19	15	1	38	7	20	0	0	27	355
08:00 AM	2	38	6	0	46	11	104	5	0	120	0	9	9	1	19	4	6	1	0	11	196
08:15 AM	0	30	2	0	32	8	68	3	0	79	2	8	10	1	21	4	12	2	0	18	150
08:30 AM	3	20	5	0	28	8	58	5	0	71	2	1	15	0	18	6	8	1	0	15	132
08:45 AM	1	16	3	0	20	7	26	4	0	37	1	3	9	0	13	3	9	0	0	12	82
Total	6	104	16	0	126	34	256	17	0	307	5	21	43	2	71	17	35	4	0	56	560
Grand Total	7	205	26	0	238	42	402	41	0	485	8	40	58	3	109	24	55	4	0	83	915
Apprch %	2.9	86.1	10.9	0		8.7	82.9	8.5	0		7.3	36.7	53.2	2.8		28.9	66.3	4.8	0		
Total %	0.8	22.4	2.8	0	26	4.6	43.9	4.5	0	53	0.9	4.4	6.3	0.3	11.9	2.6	6	0.4	0	9.1	
Lights	6	194	22	0	222	37	396	33	0	466	2	31	52	3	88	23	47	4	0	74	850
% Lights	85.7	94.6	84.6	0	93.3	88.1	98.5	80.5	0	96.1	25	77.5	89.7	100	80.7	95.8	85.5	100	0	89.2	92.9
Buses	0	1	0	0	1	1	4	7	0	12	6	1	2	0	9	0	7	0	0	7	29
% Buses	0	0.5	0	0	0.4	2.4	1	17.1	0	2.5	75	2.5	3.4	0	8.3	0	12.7	0	0	8.4	3.2
Trucks	1	10	4	0	15	4	2	1	0	7	0	8	4	0	12	1	1	0	0	2	36
% Trucks	14.3	4.9	15.4	0	6.3	9.5	0.5	2.4	0	1.4	0	20	6.9	0	11	4.2	1.8	0	0	2.4	3.9

Start Time	8TH ST Southbound				INTER-GARRISON RD Westbound				7TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	42	2	45	3	78	7	88	1	10	6	17	1	3	0	4	154
08:00 AM	2	38	6	46	11	104	5	120	0	9	9	18	4	6	1	11	195
08:15 AM	0	30	2	32	8	68	3	79	2	8	10	20	4	12	2	18	149
08:30 AM	3	20	5	28	8	58	5	71	2	1	15	18	6	8	1	15	132
Total Volume	6	130	15	151	30	308	20	358	5	28	40	73	15	29	4	48	630
% App. Total	4	86.1	9.9		8.4	86	5.6		6.8	38.4	54.8		31.2	60.4	8.3		
PHF	.500	.774	.625	.821	.682	.740	.714	.746	.625	.700	.667	.913	.625	.604	.500	.667	.808

Traffic Data Service

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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 23AM FINAL
 Site Code : 00000023
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

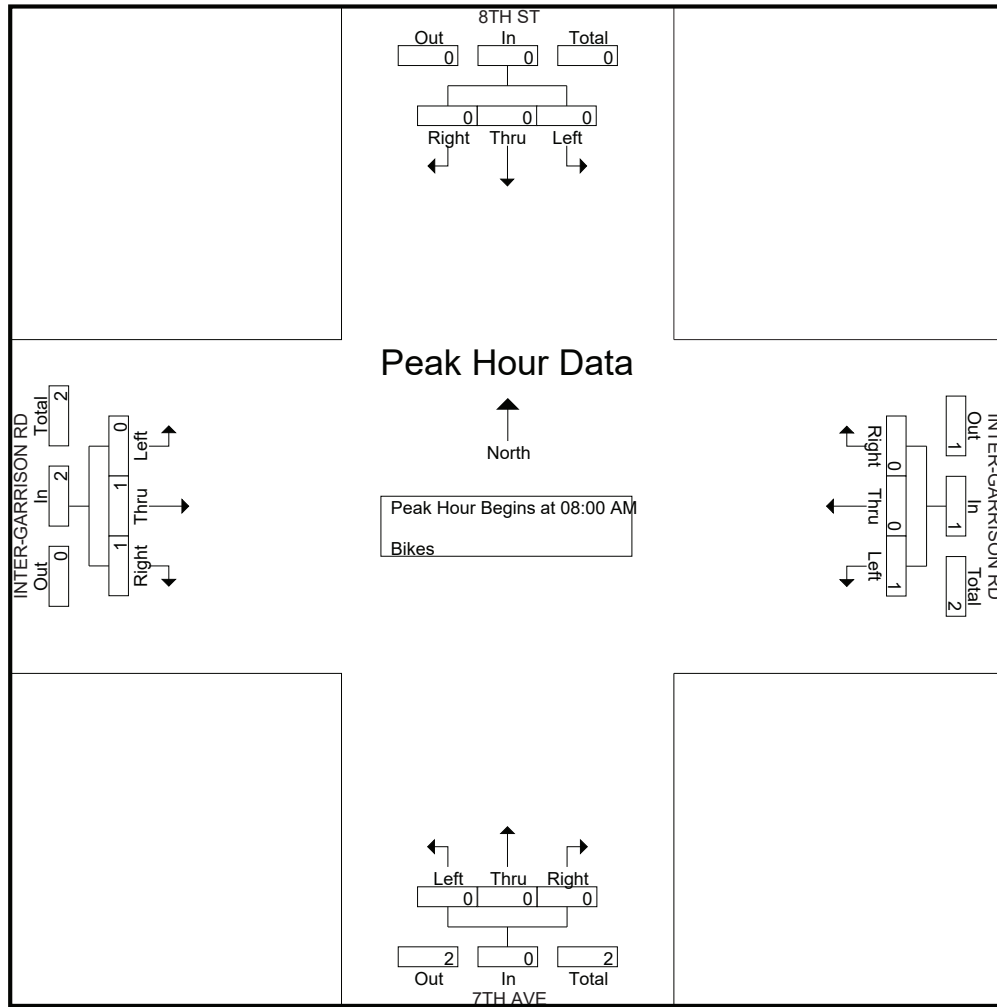
Start Time	8TH ST Southbound					INTER-GARRISON RD Westbound					7TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	2
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	0	0	2	3
Grand Total	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	1	1	0	0	2	5
Apprch %	0	0	0	0		0	66.7	33.3	0		0	0	0	0		50	50	0	0		
Total %	0	0	0	0		0	40	20	0	60	0	0	0	0		20	20	0	0	40	

Start Time	8TH ST Southbound				INTER-GARRISON RD Westbound				7TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
Total Volume	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	2	3
% App. Total	0	0	0		0	0	100		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250	.250	.000	.250	.375

Traffic Data Service

San Jose, CA
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File Name : 23AM FINAL
Site Code : 00000023
Start Date : 4/25/2018
Page No : 2



Traffic Data Service

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File Name : 23PM FINAL
 Site Code : 00000023
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

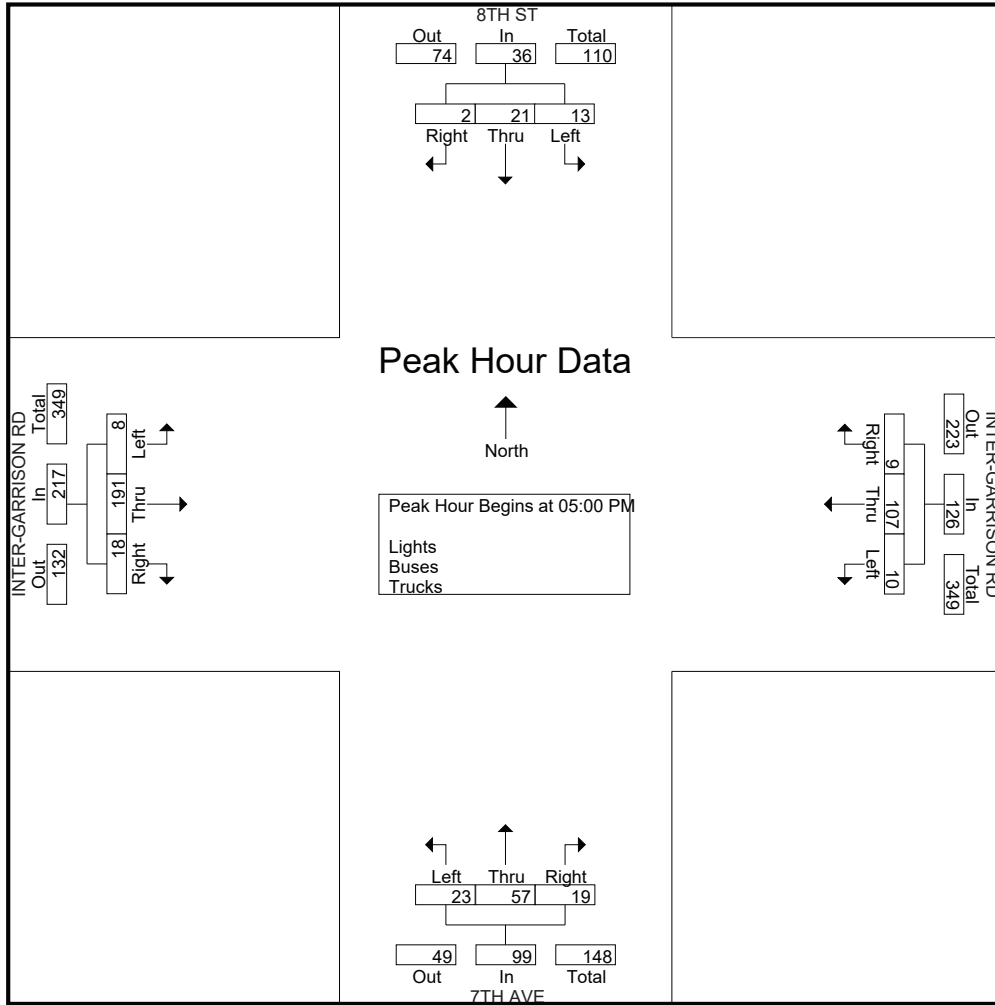
Start Time	8TH ST Southbound					INTER-GARRISON RD Westbound					7TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	18	5	0	23	2	30	10	0	42	2	21	21	0	44	13	41	6	0	60	169
04:15 PM	1	14	4	0	19	7	18	0	0	25	8	15	6	2	31	8	30	1	0	39	114
04:30 PM	1	6	6	1	14	1	9	2	0	12	2	16	9	0	27	2	23	1	0	26	79
04:45 PM	0	5	2	1	8	3	13	2	0	18	1	21	3	0	25	3	30	0	0	33	84
Total	2	43	17	2	64	13	70	14	0	97	13	73	39	2	127	26	124	8	0	158	446
05:00 PM	0	7	2	0	9	4	18	1	0	23	3	17	5	0	25	4	28	6	0	38	95
05:15 PM	2	7	4	0	13	3	11	3	0	17	5	15	4	3	27	3	69	0	1	73	130
05:30 PM	0	5	4	0	9	0	28	5	0	33	7	16	6	1	30	6	49	2	0	57	129
05:45 PM	0	2	3	0	5	2	50	1	0	53	4	9	8	0	21	5	45	0	0	50	129
Total	2	21	13	0	36	9	107	10	0	126	19	57	23	4	103	18	191	8	1	218	483
Grand Total	4	64	30	2	100	22	177	24	0	223	32	130	62	6	230	44	315	16	1	376	929
Apprch %	4	64	30	2		9.9	79.4	10.8	0		13.9	56.5	27	2.6		11.7	83.8	4.3	0.3		
Total %	0.4	6.9	3.2	0.2	10.8	2.4	19.1	2.6	0	24	3.4	14	6.7	0.6	24.8	4.7	33.9	1.7	0.1	40.5	
Lights	4	63	30	2	99	22	174	18	0	214	24	129	61	6	220	44	310	16	1	371	904
% Lights	100	98.4	100	100	99	100	98.3	75	0	96	75	99.2	98.4	100	95.7	100	98.4	100	100	98.7	97.3
Buses	0	1	0	0	1	0	3	6	0	9	8	1	0	0	9	0	4	0	0	4	23
% Buses	0	1.6	0	0	1	0	1.7	25	0	4	25	0.8	0	0	3.9	0	1.3	0	0	1.1	2.5
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0.4	0	0.3	0	0	0.3	0.2

Start Time	8TH ST Southbound				INTER-GARRISON RD Westbound				7TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	7	2	9	4	18	1	23	3	17	5	25	4	28	6	38	95
05:15 PM	2	7	4	13	3	11	3	17	5	15	4	24	3	69	0	72	126
05:30 PM	0	5	4	9	0	28	5	33	7	16	6	29	6	49	2	57	128
05:45 PM	0	2	3	5	2	50	1	53	4	9	8	21	5	45	0	50	129
Total Volume	2	21	13	36	9	107	10	126	19	57	23	99	18	191	8	217	478
% App. Total	5.6	58.3	36.1		7.1	84.9	7.9		19.2	57.6	23.2		8.3	88	3.7		
PHF	.250	.750	.813	.692	.563	.535	.500	.594	.679	.838	.719	.853	.750	.692	.333	.753	.926

Traffic Data Service

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 Page No : 2



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 Site Code : 00000023
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 Page No : 1

Groups Printed- Bikes

Start Time	8TH ST Southbound					INTER-GARRISON RD Westbound					7TH AVE Northbound					INTER-GARRISON RD Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1	0	3	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	2	1	0	3	5
Apprch %	0	0	0	0		0	100	0	0		0	100	0	0		0	66.7	33.3	0		
Total %	0	0	0	0		0	20	0	0	20	0	20	0	0	20	0	40	20	0	60	

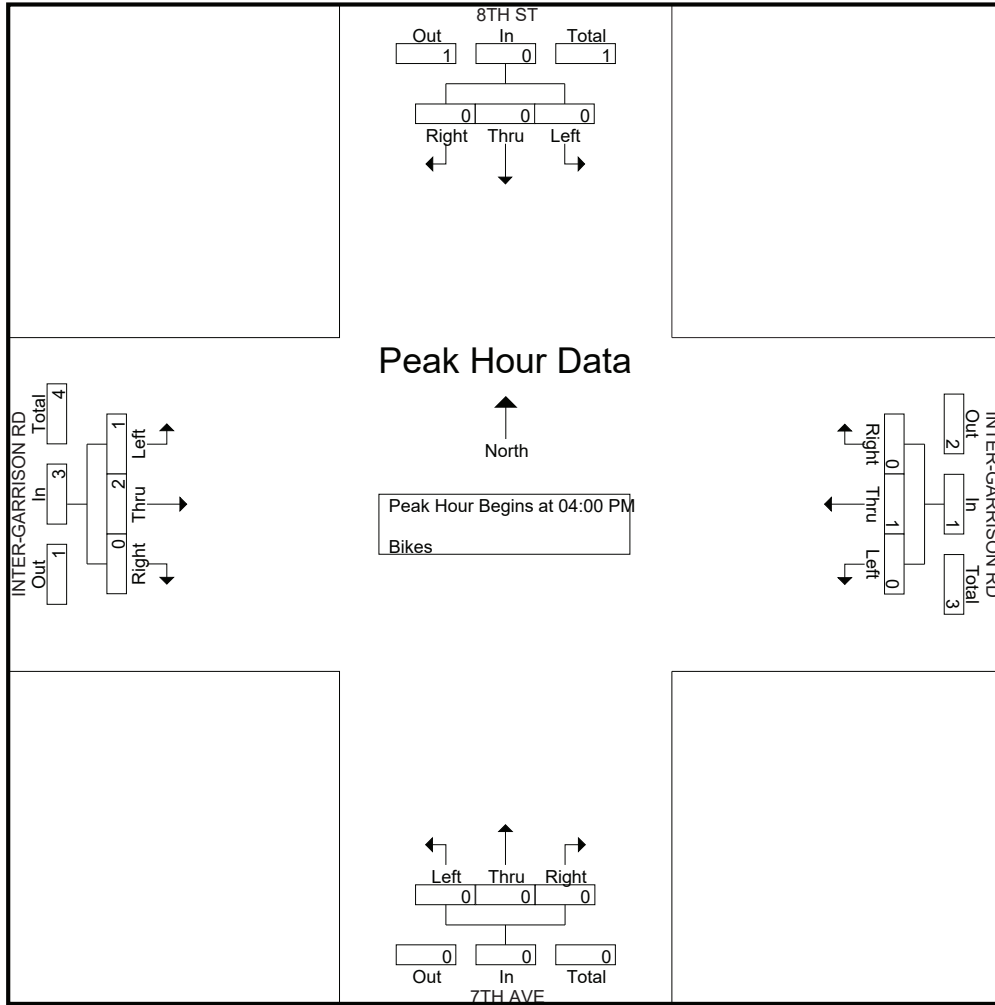
Start Time	8TH ST Southbound				INTER-GARRISON RD Westbound				7TH AVE Northbound				INTER-GARRISON RD Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
% App. Total	0	0	0		0	100	0		0	0	0		0	66.7	33.3		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.250	.750	1.00

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

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Page No : 2



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File Name : 24AM FINAL
 Site Code : 00000024
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 Page No : 1

Groups Printed- Lights - Buses - Trucks

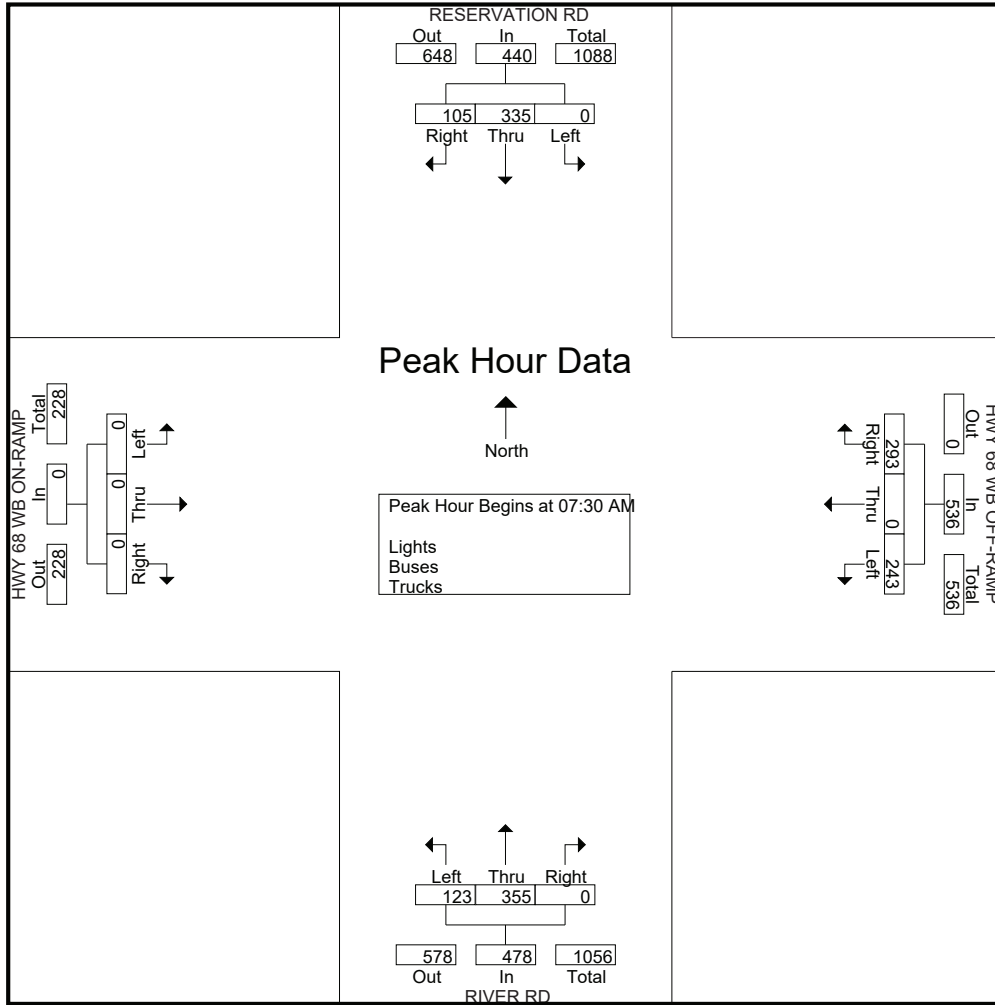
Start Time	RESERVATION RD Southbound					HWY 68 WB OFF-RAMP Westbound					RIVER RD Northbound					HWY 68 WB ON-RAMP Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
07:00 AM	28	57	0	0	85	72	0	23	0	95	0	90	47	0	137	0	0	0	0	0	0	317
07:15 AM	15	60	0	0	75	80	0	32	0	112	0	89	38	0	127	0	0	0	0	0	0	314
07:30 AM	28	91	0	0	119	75	0	42	0	117	0	104	37	0	141	0	0	0	0	0	0	377
07:45 AM	29	89	0	0	118	79	0	63	0	142	0	93	29	0	122	0	0	0	0	0	0	382
Total	100	297	0	0	397	306	0	160	0	466	0	376	151	0	527	0	0	0	0	0	0	1390
08:00 AM	24	92	0	0	116	63	0	80	0	143	0	77	29	0	106	0	0	0	0	0	0	365
08:15 AM	24	63	0	0	87	76	0	58	0	134	0	81	28	0	109	0	0	0	0	0	0	330
08:30 AM	26	52	0	0	78	55	0	46	0	101	0	58	25	0	83	0	0	0	0	0	0	262
08:45 AM	38	48	0	0	86	36	0	39	0	75	0	63	28	0	91	0	0	0	0	0	0	252
Total	112	255	0	0	367	230	0	223	0	453	0	279	110	0	389	0	0	0	0	0	0	1209
Grand Total	212	552	0	0	764	536	0	383	0	919	0	655	261	0	916	0	0	0	0	0	0	2599
Apprch %	27.7	72.3	0	0		58.3	0	41.7	0		0	71.5	28.5	0		0	0	0	0	0	0	
Total %	8.2	21.2	0	0	29.4	20.6	0	14.7	0	35.4	0	25.2	10	0	35.2	0	0	0	0	0	0	
Lights	205	523	0	0	728	516	0	366	0	882	0	647	257	0	904	0	0	0	0	0	0	2514
% Lights	96.7	94.7	0	0	95.3	96.3	0	95.6	0	96	0	98.8	98.5	0	98.7	0	0	0	0	0	0	96.7
Buses	2	4	0	0	6	5	0	3	0	8	0	0	3	0	3	0	0	0	0	0	0	17
% Buses	0.9	0.7	0	0	0.8	0.9	0	0.8	0	0.9	0	0	1.1	0	0.3	0	0	0	0	0	0	0.7
Trucks	5	25	0	0	30	15	0	14	0	29	0	8	1	0	9	0	0	0	0	0	0	68
% Trucks	2.4	4.5	0	0	3.9	2.8	0	3.7	0	3.2	0	1.2	0.4	0	1	0	0	0	0	0	0	2.6

Start Time	RESERVATION RD Southbound				HWY 68 WB OFF-RAMP Westbound				RIVER RD Northbound				HWY 68 WB ON-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	28	91	0	119	75	0	42	117	0	104	37	141	0	0	0	0	377
07:45 AM	29	89	0	118	79	0	63	142	0	93	29	122	0	0	0	0	382
08:00 AM	24	92	0	116	63	0	80	143	0	77	29	106	0	0	0	0	365
08:15 AM	24	63	0	87	76	0	58	134	0	81	28	109	0	0	0	0	330
Total Volume	105	335	0	440	293	0	243	536	0	355	123	478	0	0	0	0	1454
% App. Total	23.9	76.1	0		54.7	0	45.3		0	74.3	25.7		0	0	0		
PHF	.905	.910	.000	.924	.927	.000	.759	.937	.000	.853	.831	.848	.000	.000	.000	.000	.952

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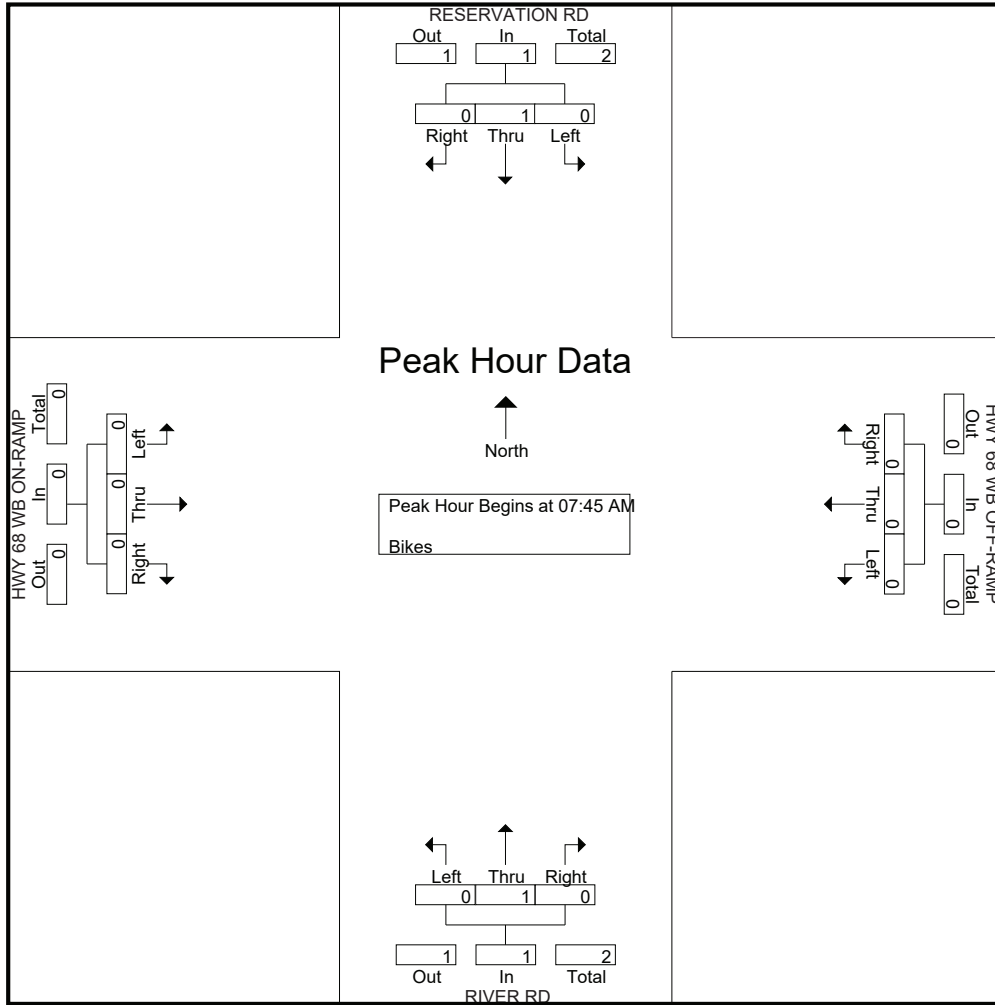
File Name : 24AM FINAL
 Site Code : 00000024
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 Page No : 2



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Start Date : 4/25/2018
Page No : 2



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File Name : 24PM FINAL
 Site Code : 00000024
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

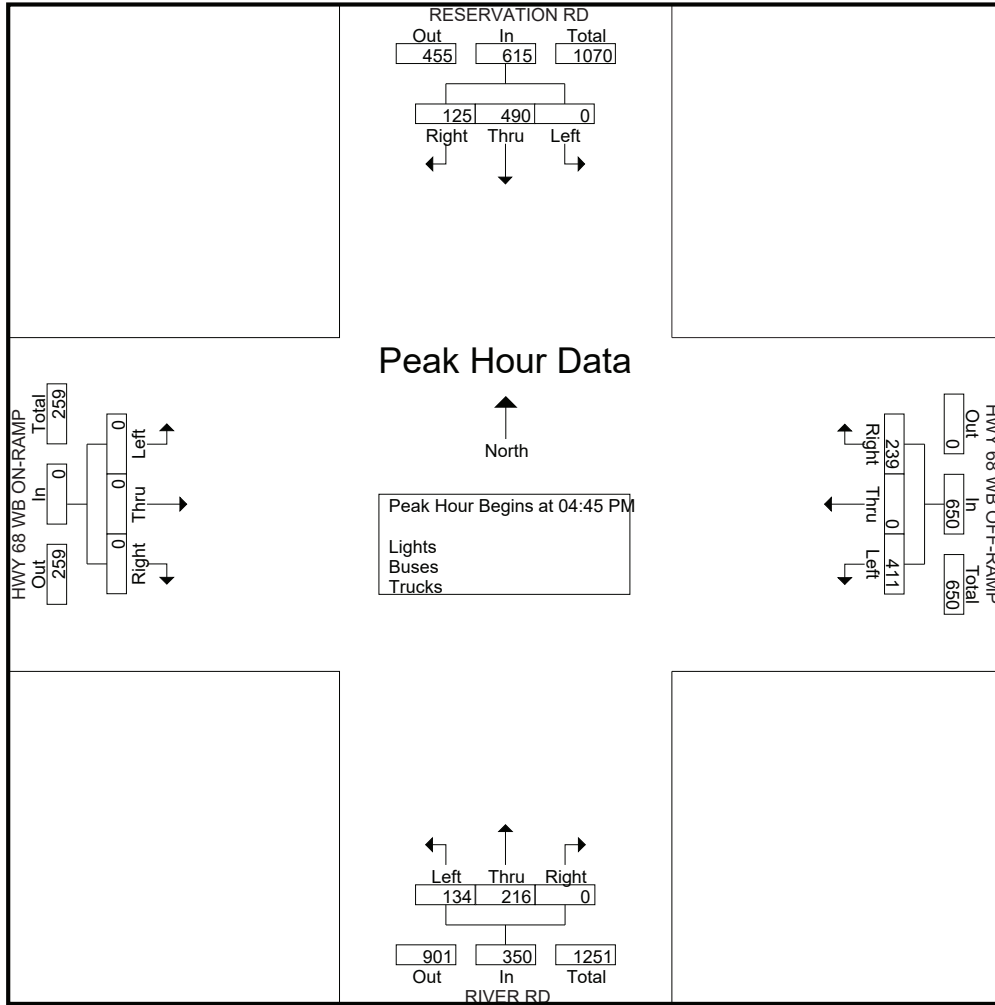
Start Time	RESERVATION RD Southbound					HWY 68 WB OFF-RAMP Westbound					RIVER RD Northbound					HWY 68 WB ON-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	39	113	0	0	152	52	0	88	0	140	0	51	30	0	81	0	0	0	0	0	373
04:15 PM	35	111	0	0	146	60	0	101	0	161	0	54	36	0	90	0	0	0	0	0	397
04:30 PM	31	120	0	0	151	53	0	86	0	139	0	49	38	0	87	0	0	0	0	0	377
04:45 PM	37	133	0	0	170	43	0	74	0	117	0	52	50	0	102	0	0	0	0	0	389
Total	142	477	0	0	619	208	0	349	0	557	0	206	154	0	360	0	0	0	0	0	1536
05:00 PM	27	129	0	1	157	53	0	118	0	171	0	61	28	0	89	0	0	0	1	1	418
05:15 PM	36	118	0	0	154	75	0	110	0	185	0	58	34	0	92	0	0	0	0	0	431
05:30 PM	25	110	0	0	135	68	0	109	0	177	0	45	22	0	67	0	0	0	0	0	379
05:45 PM	27	111	0	0	138	49	0	88	0	137	0	37	23	0	60	0	0	0	0	0	335
Total	115	468	0	1	584	245	0	425	0	670	0	201	107	0	308	0	0	0	1	1	1563
Grand Total	257	945	0	1	1203	453	0	774	0	1227	0	407	261	0	668	0	0	0	1	1	3099
Apprch %	21.4	78.6	0	0.1		36.9	0	63.1	0		0	60.9	39.1	0		0	0	0	100		
Total %	8.3	30.5	0	0	38.8	14.6	0	25	0	39.6	0	13.1	8.4	0	21.6	0	0	0	0	0	
Lights	254	905	0	1	1160	440	0	754	0	1194	0	392	260	0	652	0	0	0	1	1	3007
% Lights	98.8	95.8	0	100	96.4	97.1	0	97.4	0	97.3	0	96.3	99.6	0	97.6	0	0	0	100	100	97
Buses	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Buses	0.4	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2
Trucks	2	34	0	0	36	13	0	20	0	33	0	15	1	0	16	0	0	0	0	0	85
% Trucks	0.8	3.6	0	0	3	2.9	0	2.6	0	2.7	0	3.7	0.4	0	2.4	0	0	0	0	0	2.7

Start Time	RESERVATION RD Southbound				HWY 68 WB OFF-RAMP Westbound				RIVER RD Northbound				HWY 68 WB ON-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	37	133	0	170	43	0	74	117	0	52	50	102	0	0	0	0	389
05:00 PM	27	129	0	156	53	0	118	171	0	61	28	89	0	0	0	0	416
05:15 PM	36	118	0	154	75	0	110	185	0	58	34	92	0	0	0	0	431
05:30 PM	25	110	0	135	68	0	109	177	0	45	22	67	0	0	0	0	379
Total Volume	125	490	0	615	239	0	411	650	0	216	134	350	0	0	0	0	1615
% App. Total	20.3	79.7	0		36.8	0	63.2		0	61.7	38.3		0	0	0		
PHF	.845	.921	.000	.904	.797	.000	.871	.878	.000	.885	.670	.858	.000	.000	.000	.000	.937

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 Page No : 2



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File Name : 24PM FINAL
 Site Code : 00000024
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	RESERVATION RD Southbound					HWY 68 WB OFF-RAMP Westbound					RIVER RD Northbound					HWY 68 WB ON-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	100	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

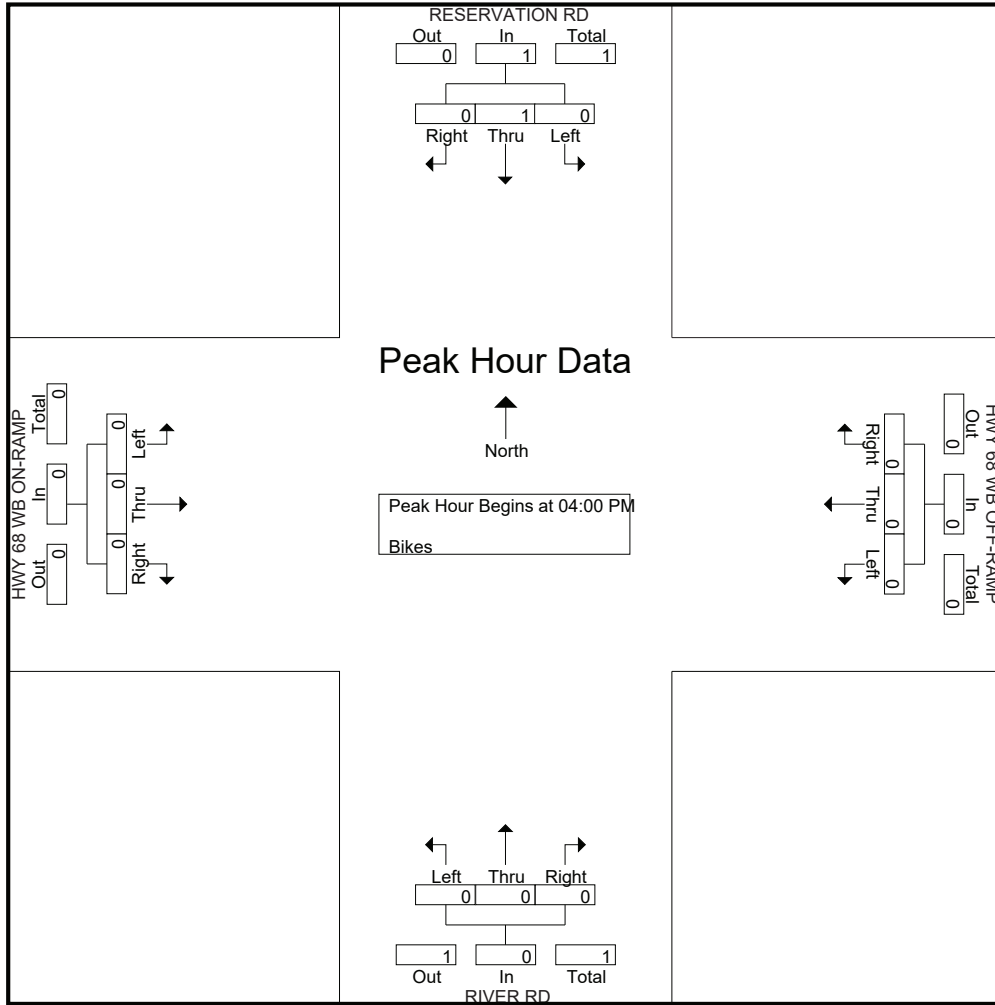
Start Time	RESERVATION RD Southbound				HWY 68 WB OFF-RAMP Westbound				RIVER RD Northbound				HWY 68 WB ON-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

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 Start Date : 4/25/2018
 Page No : 2



Traffic Data Service

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File Name : 25AM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

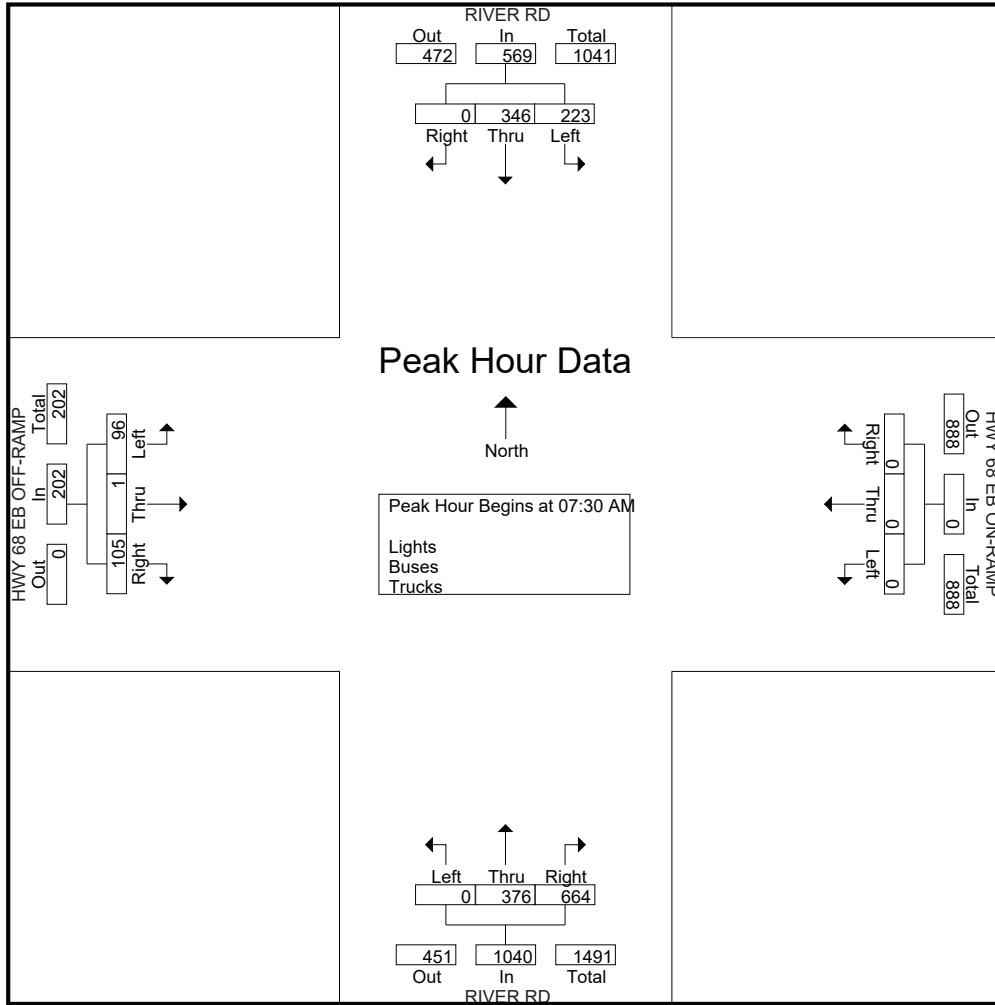
Start Time	RIVER RD Southbound					HWY 68 EB ON-RAMP Westbound					RIVER RD Northbound					HWY 68 EB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	53	27	0	80	0	0	0	0	0	64	117	0	0	181	30	0	19	0	49	310
07:15 AM	0	54	40	0	94	0	0	0	0	0	115	108	0	0	223	28	0	26	0	54	371
07:30 AM	0	65	59	0	124	0	0	0	0	0	201	109	0	0	310	30	0	26	0	56	490
07:45 AM	0	87	57	0	144	0	0	0	0	0	158	108	0	0	266	23	0	17	0	40	450
Total	0	259	183	0	442	0	0	0	0	0	538	442	0	0	980	111	0	88	0	199	1621
08:00 AM	0	118	65	0	183	0	0	0	0	0	160	85	0	0	245	24	1	19	0	44	472
08:15 AM	0	76	42	0	118	0	0	0	0	0	145	74	0	0	219	28	0	34	0	62	399
08:30 AM	0	62	35	0	97	0	0	0	0	0	62	62	0	1	125	29	0	24	1	54	276
08:45 AM	0	48	26	0	74	0	0	0	0	0	61	62	0	0	123	18	0	25	0	43	240
Total	0	304	168	0	472	0	0	0	0	0	428	283	0	1	712	99	1	102	1	203	1387
Grand Total	0	563	351	0	914	0	0	0	0	0	966	725	0	1	1692	210	1	190	1	402	3008
Apprch %	0	61.6	38.4	0		0	0	0	0		57.1	42.8	0	0.1		52.2	0.2	47.3	0.2		
Total %	0	18.7	11.7	0	30.4	0	0	0	0	0	32.1	24.1	0	0	56.2	7	0	6.3	0	13.4	
Lights	0	532	339	0	871	0	0	0	0	0	948	717	0	1	1666	205	1	190	1	397	2934
% Lights	0	94.5	96.6	0	95.3	0	0	0	0	0	98.1	98.9	0	100	98.5	97.6	100	100	100	98.8	97.5
Buses	0	5	2	0	7	0	0	0	0	0	7	3	0	0	10	2	0	0	0	2	19
% Buses	0	0.9	0.6	0	0.8	0	0	0	0	0	0.7	0.4	0	0	0.6	1	0	0	0	0.5	0.6
Trucks	0	26	10	0	36	0	0	0	0	0	11	5	0	0	16	3	0	0	0	3	55
% Trucks	0	4.6	2.8	0	3.9	0	0	0	0	0	1.1	0.7	0	0	0.9	1.4	0	0	0	0.7	1.8

Start Time	RIVER RD Southbound				HWY 68 EB ON-RAMP Westbound				RIVER RD Northbound				HWY 68 EB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	65	59	124	0	0	0	0	201	109	0	310	30	0	26	56	490
07:45 AM	0	87	57	144	0	0	0	0	158	108	0	266	23	0	17	40	450
08:00 AM	0	118	65	183	0	0	0	0	160	85	0	245	24	1	19	44	472
08:15 AM	0	76	42	118	0	0	0	0	145	74	0	219	28	0	34	62	399
Total Volume	0	346	223	569	0	0	0	0	664	376	0	1040	105	1	96	202	1811
% App. Total	0	60.8	39.2		0	0	0		63.8	36.2	0		52	0.5	47.5		
PHF	.000	.733	.858	.777	.000	.000	.000	.000	.826	.862	.000	.839	.875	.250	.706	.815	.924

Traffic Data Service

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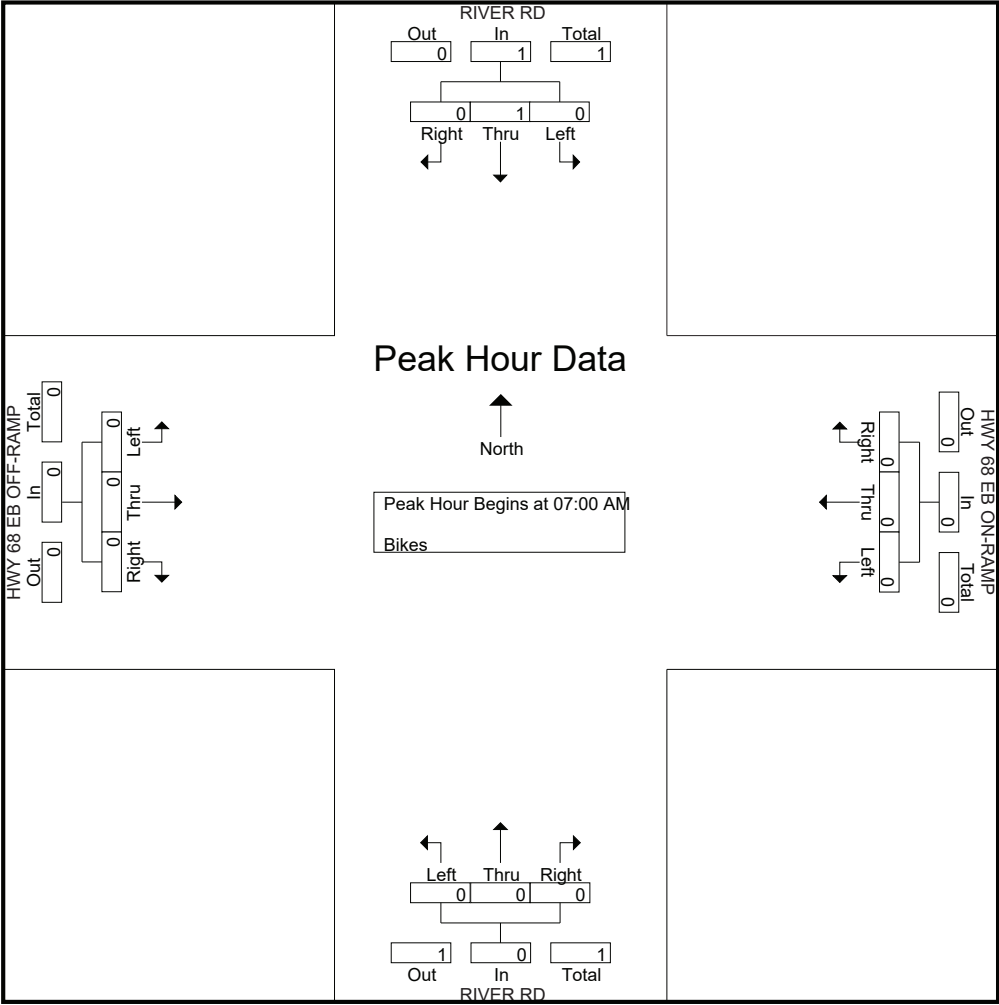
File Name : 25AM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 2



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File Name : 25PM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Lights - Buses - Trucks

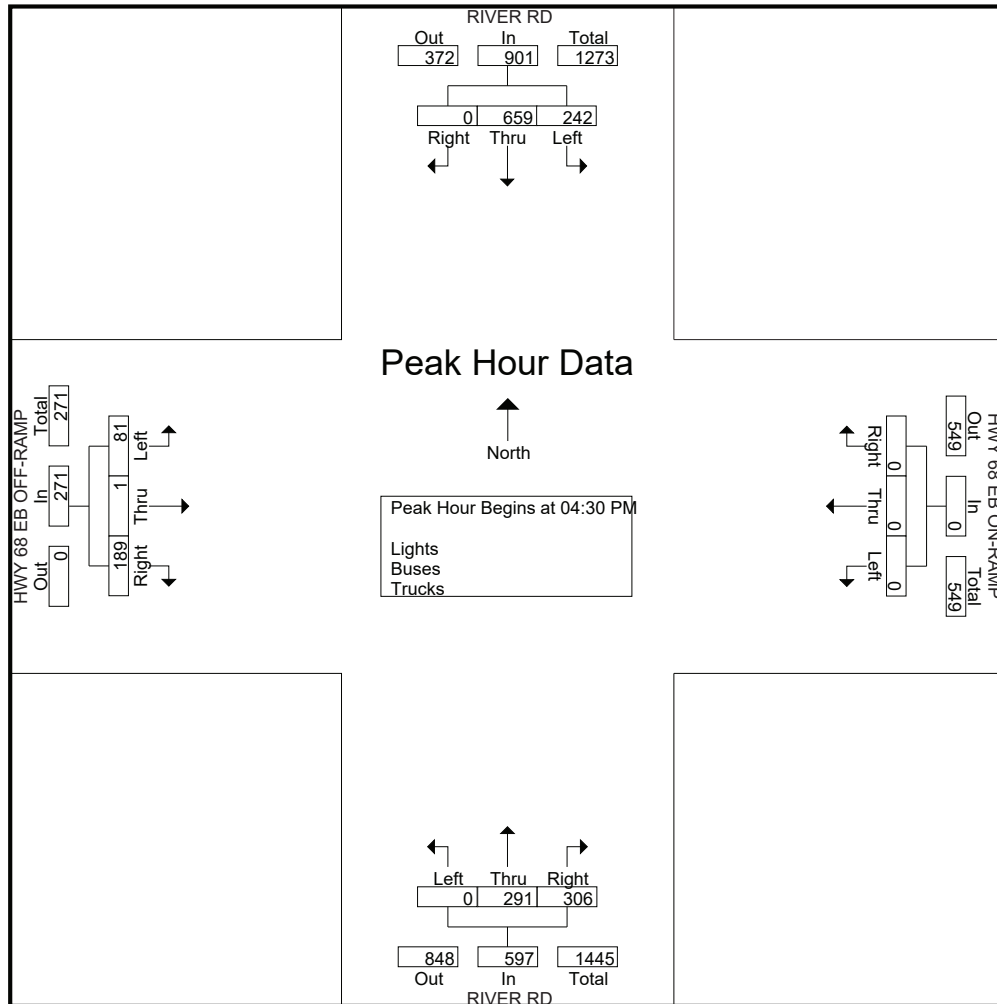
Start Time	RIVER RD Southbound					HWY 68 EB ON-RAMP Westbound					RIVER RD Northbound					HWY 68 EB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	135	63	0	198	0	0	0	0	0	54	57	0	0	111	47	0	26	0	73	382
04:15 PM	0	159	44	0	203	0	0	0	0	0	48	73	0	0	121	57	0	21	0	78	402
04:30 PM	0	153	65	0	218	0	0	0	0	0	73	77	0	0	150	48	0	15	0	63	431
04:45 PM	0	145	66	0	211	0	0	0	0	0	57	73	0	0	130	44	0	23	0	67	408
Total	0	592	238	0	830	0	0	0	0	0	232	280	0	0	512	196	0	85	0	281	1623
05:00 PM	0	188	55	0	243	0	0	0	0	0	89	68	0	0	157	48	1	21	0	70	470
05:15 PM	0	173	56	0	229	0	0	0	0	0	87	73	0	0	160	49	0	22	0	71	460
05:30 PM	0	172	47	0	219	0	0	0	0	0	83	46	0	0	129	47	0	17	0	64	412
05:45 PM	0	152	52	0	204	0	0	0	0	0	65	52	0	0	117	47	0	12	0	59	380
Total	0	685	210	0	895	0	0	0	0	0	324	239	0	0	563	191	1	72	0	264	1722
Grand Total	0	1277	448	0	1725	0	0	0	0	0	556	519	0	0	1075	387	1	157	0	545	3345
Apprch %	0	74	26	0		0	0	0	0		51.7	48.3	0	0		71	0.2	28.8	0		
Total %	0	38.2	13.4	0	51.6	0	0	0	0	0	16.6	15.5	0	0	32.1	11.6	0	4.7	0	16.3	
Lights	0	1243	420	0	1663	0	0	0	0	0	535	504	0	0	1039	384	1	153	0	538	3240
% Lights	0	97.3	93.8	0	96.4	0	0	0	0	0	96.2	97.1	0	0	96.7	99.2	100	97.5	0	98.7	96.9
Buses	0	2	5	0	7	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	10
% Buses	0	0.2	1.1	0	0.4	0	0	0	0	0	0.5	0	0	0	0.3	0	0	0	0	0	0.3
Trucks	0	32	23	0	55	0	0	0	0	0	18	15	0	0	33	3	0	4	0	7	95
% Trucks	0	2.5	5.1	0	3.2	0	0	0	0	0	3.2	2.9	0	0	3.1	0.8	0	2.5	0	1.3	2.8

Start Time	RIVER RD Southbound				HWY 68 EB ON-RAMP Westbound				RIVER RD Northbound				HWY 68 EB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	153	65	218	0	0	0	0	73	77	0	150	48	0	15	63	431
04:45 PM	0	145	66	211	0	0	0	0	57	73	0	130	44	0	23	67	408
05:00 PM	0	188	55	243	0	0	0	0	89	68	0	157	48	1	21	70	470
05:15 PM	0	173	56	229	0	0	0	0	87	73	0	160	49	0	22	71	460
Total Volume	0	659	242	901	0	0	0	0	306	291	0	597	189	1	81	271	1769
% App. Total	0	73.1	26.9		0	0	0		51.3	48.7	0		69.7	0.4	29.9		
PHF	.000	.876	.917	.927	.000	.000	.000	.000	.860	.945	.000	.933	.964	.250	.880	.954	.941

Traffic Data Service

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File Name : 25PM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 2



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 tdsbay@cs.com

File Name : 25PM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 1

Groups Printed- Bikes

Start Time	RIVER RD Southbound					HWY 68 EB ON-RAMP Westbound					RIVER RD Northbound					HWY 68 EB OFF-RAMP Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	50	50	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %	0	50	50	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

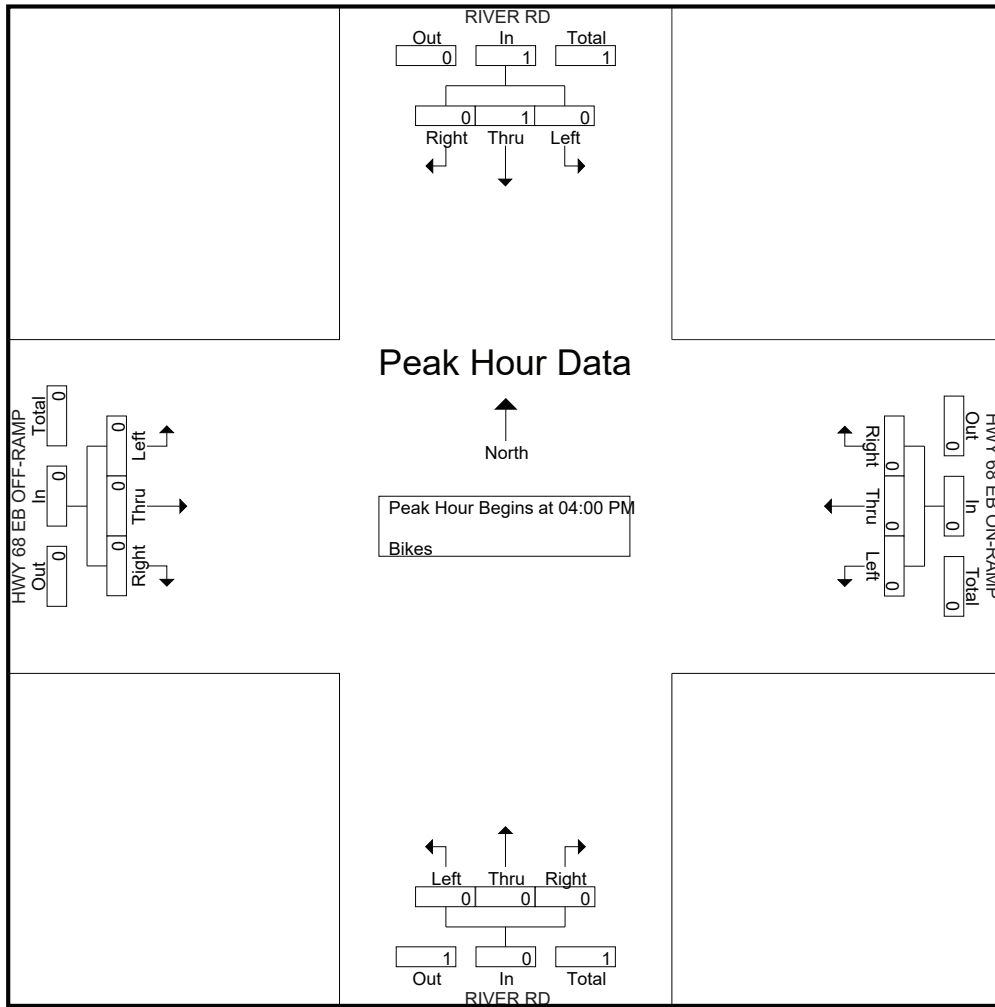
Start Time	RIVER RD Southbound				HWY 68 EB ON-RAMP Westbound				RIVER RD Northbound				HWY 68 EB OFF-RAMP Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Traffic Data Service

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File Name : 25PM FINAL
 Site Code : 00000025
 Start Date : 4/25/2018
 Page No : 2



Study Name 101 - SB Cabrillo Hwy

Start Date 05/03/2017

Start Time 12:00 AM

Site Code 27

Channel Direction	Lights	Buses	Trucks	Total	
	Direction				
	Southbound				
12:00 AM		35	0	0	35
12:15 AM		26	0	0	26
12:30 AM		27	0	1	28
12:45 AM		25	0	0	25
1:00 AM		20	0	1	21
1:15 AM		12	0	2	14
1:30 AM		10	0	1	11
1:45 AM		14	0	0	14
2:00 AM		10	0	0	10
2:15 AM		10	0	0	10
2:30 AM		14	0	2	16
2:45 AM		19	0	0	19
3:00 AM		8	0	0	8
3:15 AM		12	0	1	13
3:30 AM		12	0	3	15
3:45 AM		21	0	2	23
4:00 AM		18	0	5	23
4:15 AM		39	0	4	43
4:30 AM		49	0	9	58
4:45 AM		51	0	8	59
5:00 AM		45	0	10	55
5:15 AM		89	0	12	101
5:30 AM		134	0	16	150
5:45 AM		180	0	32	212
6:00 AM		215	1	24	240
6:15 AM		309	1	20	330
6:30 AM		502	2	29	533
6:45 AM		584	1	22	607
7:00 AM		886	1	26	913
7:15 AM		687	1	33	721
7:30 AM		514	0	26	540
7:45 AM		517	0	21	538
8:00 AM		420	1	20	441

8:15 AM	435	0	29	464
8:30 AM	469	3	30	502
8:45 AM	436	1	32	469
9:00 AM	375	1	27	403
9:15 AM	398	0	30	428
9:30 AM	448	3	24	475
9:45 AM	386	4	13	403
10:00 AM	346	5	21	372
10:15 AM	364	4	16	384
10:30 AM	401	6	28	435
10:45 AM	385	5	26	416
11:00 AM	370	2	13	385
11:15 AM	373	3	17	393
11:30 AM	515	1	20	536
11:45 AM	438	0	25	463
12:00 PM	420	2	12	434
12:15 PM	434	6	14	454
12:30 PM	388	2	23	413
12:45 PM	385	0	23	408
1:00 PM	399	1	20	420
1:15 PM	436	0	14	450
1:30 PM	412	1	10	423
1:45 PM	362	1	15	378
2:00 PM	403	2	11	416
2:15 PM	400	1	13	414
2:30 PM	384	2	5	391
2:45 PM	398	3	13	414
3:00 PM	350	2	10	362
3:15 PM	382	2	11	395
3:30 PM	378	2	20	400
3:45 PM	386	0	12	398
4:00 PM	364	1	6	371
4:15 PM	368	3	8	379
4:30 PM	335	1	9	345
4:45 PM	308	2	6	316
5:00 PM	345	0	1	346
5:15 PM	328	1	4	333
5:30 PM	372	0	2	374
5:45 PM	350	2	2	354
6:00 PM	339	0	4	343
6:15 PM	283	0	5	288
6:30 PM	342	0	3	345
6:45 PM	260	0	4	264
7:00 PM	247	0	1	248
7:15 PM	227	1	3	231
7:30 PM	202	0	0	202

7:45 PM	211	0	0	211
8:00 PM	192	0	1	193
8:15 PM	175	0	2	177
8:30 PM	148	0	3	151
8:45 PM	129	0	1	130
9:00 PM	151	0	3	154
9:15 PM	163	0	0	163
9:30 PM	117	0	1	118
9:45 PM	140	0	1	141
10:00 PM	94	0	0	94
10:15 PM	93	0	2	95
10:30 PM	88	1	0	89
10:45 PM	94	0	0	94
11:00 PM	79	0	2	81
11:15 PM	68	0	0	68
11:30 PM	57	0	1	58
11:45 PM	45	0	0	45
12:00 AM	34	0	0	34
12:15 AM	29	0	0	29
12:30 AM	13	0	1	14
12:45 AM	29	0	1	30
1:00 AM	15	0	0	15
1:15 AM	13	0	3	16
1:30 AM	16	0	1	17
1:45 AM	10	0	1	11
2:00 AM	14	0	0	14
2:15 AM	16	0	0	16
2:30 AM	3	0	0	3
2:45 AM	8	0	1	9
3:00 AM	15	0	4	19
3:15 AM	13	0	4	17
3:30 AM	17	0	5	22
3:45 AM	21	0	3	24
4:00 AM	11	0	0	11
4:15 AM	36	0	7	43
4:30 AM	46	0	10	56
4:45 AM	43	0	6	49
5:00 AM	47	2	15	64
5:15 AM	83	2	7	92
5:30 AM	136	0	13	149
5:45 AM	183	0	19	202
6:00 AM	213	1	17	231
6:15 AM	308	0	23	331
6:30 AM	517	2	27	546
6:45 AM	616	1	37	654
7:00 AM	819	3	41	863

7:15 AM	702	0	33	735
7:30 AM	546	0	31	577
7:45 AM	488	1	32	521
8:00 AM	479	0	24	503
8:15 AM	454	4	29	487
8:30 AM	473	0	28	501
8:45 AM	430	3	32	465
9:00 AM	437	3	21	461
9:15 AM	366	2	28	396
9:30 AM	472	2	33	507
9:45 AM	373	3	23	399
10:00 AM	352	4	29	385
10:15 AM	405	1	19	425
10:30 AM	407	6	25	438
10:45 AM	405	1	17	423
11:00 AM	372	3	21	396
11:15 AM	366	1	20	387
11:30 AM	425	7	31	463
11:45 AM	409	3	31	443
12:00 PM	422	1	27	450
12:15 PM	398	3	18	419
12:30 PM	415	1	22	438
12:45 PM	399	2	21	422
1:00 PM	372	1	15	388
1:15 PM	432	0	15	447
1:30 PM	456	0	13	469
1:45 PM	369	0	7	376
2:00 PM	386	1	17	404
2:15 PM	366	1	11	378
2:30 PM	436	2	13	451
2:45 PM	393	1	16	410
3:00 PM	367	1	10	378
3:15 PM	396	1	6	403
3:30 PM	396	0	11	407
3:45 PM	365	1	6	372
4:00 PM	283	2	6	291
4:15 PM	357	0	4	361
4:30 PM	336	2	4	342
4:45 PM	345	2	5	352
5:00 PM	371	0	4	375
5:15 PM	357	0	2	359
5:30 PM	350	0	6	356
5:45 PM	335	0	2	337
6:00 PM	346	0	5	351
6:15 PM	339	0	1	340
6:30 PM	315	2	2	319

6:45 PM	295	0	5	300
7:00 PM	287	0	4	291
7:15 PM	246	2	2	250
7:30 PM	258	0	4	262
7:45 PM	215	1	2	218
8:00 PM	216	1	4	221
8:15 PM	194	0	1	195
8:30 PM	172	0	3	175
8:45 PM	161	0	4	165
9:00 PM	151	0	0	151
9:15 PM	137	0	0	137
9:30 PM	148	0	3	151
9:45 PM	131	1	0	132
10:00 PM	105	0	1	106
10:15 PM	88	0	3	91
10:30 PM	94	0	1	95
10:45 PM	73	0	1	74
11:00 PM	56	1	1	58
11:15 PM	56	1	1	58
11:30 PM	48	0	1	49
11:45 PM	47	0	0	47

Study Name 102 - SB 3006 CA-1

Start Date 05/03/2017

Start Time 12:00 AM

Site Code 28

Channel Direction	Lights	Buses	Trucks	Total	
	Direction				
	Southbound				
12:00 AM		46	1	0	47
12:15 AM		34	0	1	35
12:30 AM		36	0	2	38
12:45 AM		38	0	0	38
1:00 AM		32	0	1	33
1:15 AM		17	0	2	19
1:30 AM		13	0	1	14
1:45 AM		20	0	2	22
2:00 AM		14	0	0	14
2:15 AM		15	0	0	15
2:30 AM		17	0	2	19
2:45 AM		23	0	3	26
3:00 AM		15	0	0	15
3:15 AM		15	0	2	17
3:30 AM		23	0	3	26
3:45 AM		34	0	1	35
4:00 AM		29	0	5	34
4:15 AM		48	0	7	55
4:30 AM		78	0	8	86
4:45 AM		78	0	12	90
5:00 AM		81	0	10	91
5:15 AM		137	0	14	151
5:30 AM		219	0	18	237
5:45 AM		257	0	29	286
6:00 AM		310	2	26	338
6:15 AM		443	2	26	471
6:30 AM		700	3	34	737
6:45 AM		822	3	39	864
7:00 AM		1211	4	29	1244
7:15 AM		1053	4	34	1091
7:30 AM		933	1	30	964
7:45 AM		775	2	29	806
8:00 AM		664	4	22	690

8:15 AM	670	4	36	710
8:30 AM	694	12	35	741
8:45 AM	659	4	45	708
9:00 AM	554	2	26	582
9:15 AM	587	2	42	631
9:30 AM	658	3	29	690
9:45 AM	556	3	19	578
10:00 AM	479	7	23	509
10:15 AM	510	5	24	539
10:30 AM	565	6	29	600
10:45 AM	546	3	30	579
11:00 AM	497	5	18	520
11:15 AM	527	3	22	552
11:30 AM	682	5	20	707
11:45 AM	590	4	26	620
12:00 PM	582	4	10	596
12:15 PM	615	7	15	637
12:30 PM	580	5	27	612
12:45 PM	531	1	22	554
1:00 PM	590	3	24	617
1:15 PM	617	2	14	633
1:30 PM	616	3	11	630
1:45 PM	548	3	17	568
2:00 PM	547	3	18	568
2:15 PM	569	2	15	586
2:30 PM	558	7	10	575
2:45 PM	555	1	17	573
3:00 PM	525	3	14	542
3:15 PM	533	5	11	549
3:30 PM	549	2	19	570
3:45 PM	527	5	9	541
4:00 PM	552	5	12	569
4:15 PM	508	5	14	527
4:30 PM	515	2	10	527
4:45 PM	483	5	11	499
5:00 PM	501	4	0	505
5:15 PM	480	3	4	487
5:30 PM	557	1	4	562
5:45 PM	529	3	2	534
6:00 PM	476	0	4	480
6:15 PM	446	3	9	458
6:30 PM	469	2	5	476
6:45 PM	376	2	6	384
7:00 PM	376	0	1	377
7:15 PM	328	1	3	332
7:30 PM	314	0	1	315

7:45 PM	311	1	0	312
8:00 PM	302	1	1	304
8:15 PM	256	0	4	260
8:30 PM	230	0	4	234
8:45 PM	221	0	6	227
9:00 PM	212	0	4	216
9:15 PM	211	0	1	212
9:30 PM	179	0	2	181
9:45 PM	194	0	3	197
10:00 PM	145	0	0	145
10:15 PM	146	0	2	148
10:30 PM	128	0	0	128
10:45 PM	178	0	0	178
11:00 PM	118	0	3	121
11:15 PM	89	0	3	92
11:30 PM	70	0	1	71
11:45 PM	62	0	1	63
12:00 AM	55	0	0	55
12:15 AM	38	0	0	38
12:30 AM	22	0	1	23
12:45 AM	42	0	1	43
1:00 AM	23	0	1	24
1:15 AM	19	0	3	22
1:30 AM	23	0	1	24
1:45 AM	16	0	1	17
2:00 AM	20	0	0	20
2:15 AM	21	0	0	21
2:30 AM	11	0	1	12
2:45 AM	11	0	1	12
3:00 AM	20	0	5	25
3:15 AM	21	0	5	26
3:30 AM	29	0	5	34
3:45 AM	37	0	4	41
4:00 AM	25	0	0	25
4:15 AM	57	0	8	65
4:30 AM	64	0	10	74
4:45 AM	64	0	6	70
5:00 AM	73	0	17	90
5:15 AM	134	0	9	143
5:30 AM	197	0	26	223
5:45 AM	271	0	34	305
6:00 AM	303	1	20	324
6:15 AM	432	3	22	457
6:30 AM	741	4	29	774
6:45 AM	912	5	40	957
7:00 AM	1219	8	44	1271

7:15 AM	1054	1	37	1092
7:30 AM	744	2	34	780
7:45 AM	805	2	53	860
8:00 AM	679	2	31	712
8:15 AM	706	6	39	751
8:30 AM	721	7	37	765
8:45 AM	644	7	45	696
9:00 AM	598	3	27	628
9:15 AM	543	3	27	573
9:30 AM	606	7	33	646
9:45 AM	553	5	26	584
10:00 AM	497	4	35	536
10:15 AM	550	1	32	583
10:30 AM	553	4	31	588
10:45 AM	528	2	18	548
11:00 AM	527	6	23	556
11:15 AM	482	1	27	510
11:30 AM	620	10	29	659
11:45 AM	579	5	31	615
12:00 PM	581	2	33	616
12:15 PM	557	4	19	580
12:30 PM	596	4	20	620
12:45 PM	577	3	23	603
1:00 PM	523	1	19	543
1:15 PM	614	1	21	636
1:30 PM	616	1	15	632
1:45 PM	539	1	13	553
2:00 PM	581	2	18	601
2:15 PM	543	2	13	558
2:30 PM	619	5	17	641
2:45 PM	563	3	16	582
3:00 PM	529	3	9	541
3:15 PM	578	2	10	590
3:30 PM	587	3	9	599
3:45 PM	556	7	6	569
4:00 PM	450	6	8	464
4:15 PM	513	2	3	518
4:30 PM	522	3	4	529
4:45 PM	533	2	6	541
5:00 PM	515	3	5	523
5:15 PM	518	1	2	521
5:30 PM	530	0	7	537
5:45 PM	499	3	3	505
6:00 PM	502	0	4	506
6:15 PM	466	0	2	468
6:30 PM	458	2	2	462

6:45 PM	436	1	6	443
7:00 PM	401	0	4	405
7:15 PM	346	4	2	352
7:30 PM	373	0	3	376
7:45 PM	340	3	4	347
8:00 PM	310	1	5	316
8:15 PM	304	0	2	306
8:30 PM	249	0	4	253
8:45 PM	234	0	6	240
9:00 PM	234	0	1	235
9:15 PM	194	0	0	194
9:30 PM	217	0	3	220
9:45 PM	173	1	1	175
10:00 PM	158	0	3	161
10:15 PM	144	0	2	146
10:30 PM	174	0	2	176
10:45 PM	120	0	1	121
11:00 PM	80	1	1	82
11:15 PM	91	0	1	92
11:30 PM	69	0	2	71
11:45 PM	63	0	1	64

Study Name 103 - SB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 29

Channel Direction	Lights	Buses	Trucks	Total	
	Direction				
	Southbound				
12:00 AM		58	0	3	61
12:15 AM		39	0	1	40
12:30 AM		43	0	1	44
12:45 AM		37	0	1	38
1:00 AM		28	0	1	29
1:15 AM		25	0	1	26
1:30 AM		16	0	2	18
1:45 AM		20	0	2	22
2:00 AM		21	0	1	22
2:15 AM		16	0	1	17
2:30 AM		23	0	2	25
2:45 AM		24	0	1	25
3:00 AM		20	0	0	20
3:15 AM		22	0	1	23
3:30 AM		43	0	3	46
3:45 AM		49	0	0	49
4:00 AM		36	0	7	43
4:15 AM		67	0	6	73
4:30 AM		112	0	11	123
4:45 AM		143	0	12	155
5:00 AM		101	0	13	114
5:15 AM		142	0	12	154
5:30 AM		267	1	18	286
5:45 AM		360	0	24	384
6:00 AM		366	3	29	398
6:15 AM		569	3	27	599
6:30 AM		886	4	26	916
6:45 AM		1082	3	22	1107
7:00 AM		1308	4	36	1348
7:15 AM		1026	5	30	1061
7:30 AM		1013	3	46	1062
7:45 AM		893	3	35	931
8:00 AM		934	5	40	979

8:15 AM	812	4	36	852
8:30 AM	883	12	40	935
8:45 AM	836	5	45	886
9:00 AM	713	2	39	754
9:15 AM	749	4	41	794
9:30 AM	755	4	32	791
9:45 AM	690	3	18	711
10:00 AM	598	8	24	630
10:15 AM	640	6	31	677
10:30 AM	680	6	34	720
10:45 AM	706	2	28	736
11:00 AM	622	6	23	651
11:15 AM	666	4	26	696
11:30 AM	789	4	17	810
11:45 AM	700	4	28	732
12:00 PM	718	5	16	739
12:15 PM	778	8	21	807
12:30 PM	735	6	29	770
12:45 PM	660	3	20	683
1:00 PM	724	3	32	759
1:15 PM	735	4	16	755
1:30 PM	742	3	10	755
1:45 PM	707	2	17	726
2:00 PM	687	2	15	704
2:15 PM	679	2	13	694
2:30 PM	717	8	11	736
2:45 PM	701	7	15	723
3:00 PM	648	1	15	664
3:15 PM	680	6	16	702
3:30 PM	704	2	21	727
3:45 PM	685	5	11	701
4:00 PM	702	3	16	721
4:15 PM	696	5	16	717
4:30 PM	690	2	5	697
4:45 PM	686	4	13	703
5:00 PM	658	1	10	669
5:15 PM	674	2	4	680
5:30 PM	771	1	8	780
5:45 PM	671	6	5	682
6:00 PM	612	0	4	616
6:15 PM	581	1	8	590
6:30 PM	572	1	9	582
6:45 PM	489	1	6	496
7:00 PM	450	0	1	451
7:15 PM	419	0	4	423
7:30 PM	409	1	1	411

7:45 PM	377	1	1	379
8:00 PM	375	3	3	381
8:15 PM	324	0	3	327
8:30 PM	287	0	4	291
8:45 PM	237	0	5	242
9:00 PM	246	0	4	250
9:15 PM	206	0	2	208
9:30 PM	209	0	1	210
9:45 PM	202	0	3	205
10:00 PM	169	0	1	170
10:15 PM	167	0	2	169
10:30 PM	150	0	0	150
10:45 PM	174	0	1	175
11:00 PM	116	0	3	119
11:15 PM	92	0	2	94
11:30 PM	76	0	1	77
11:45 PM	53	0	0	53
12:00 AM	56	0	0	56
12:15 AM	44	0	0	44
12:30 AM	27	1	0	28
12:45 AM	47	1	0	48
1:00 AM	26	0	1	27
1:15 AM	23	0	2	25
1:30 AM	24	0	1	25
1:45 AM	21	0	1	22
2:00 AM	17	0	0	17
2:15 AM	25	0	0	25
2:30 AM	17	0	1	18
2:45 AM	12	0	1	13
3:00 AM	26	0	4	30
3:15 AM	24	0	6	30
3:30 AM	40	0	4	44
3:45 AM	51	0	2	53
4:00 AM	27	1	1	29
4:15 AM	63	1	7	71
4:30 AM	108	0	12	120
4:45 AM	118	0	7	125
5:00 AM	88	0	17	105
5:15 AM	142	0	9	151
5:30 AM	258	0	29	287
5:45 AM	343	0	28	371
6:00 AM	370	3	20	393
6:15 AM	562	4	25	591
6:30 AM	877	3	31	911
6:45 AM	1058	4	37	1099
7:00 AM	1350	10	35	1395

7:15 AM	1116	4	27	1147
7:30 AM	1002	4	24	1030
7:45 AM	1090	2	52	1144
8:00 AM	836	3	31	870
8:15 AM	792	7	80	879
8:30 AM	871	8	35	914
8:45 AM	866	7	50	923
9:00 AM	772	4	33	809
9:15 AM	730	2	25	757
9:30 AM	732	9	40	781
9:45 AM	735	5	25	765
10:00 AM	603	3	28	634
10:15 AM	668	4	23	695
10:30 AM	685	4	37	726
10:45 AM	708	4	21	733
11:00 AM	661	4	30	695
11:15 AM	584	4	23	611
11:30 AM	713	7	27	747
11:45 AM	672	7	32	711
12:00 PM	709	1	37	747
12:15 PM	685	4	27	716
12:30 PM	732	4	20	756
12:45 PM	690	4	25	719
1:00 PM	609	2	20	631
1:15 PM	701	2	17	720
1:30 PM	750	0	16	766
1:45 PM	630	3	20	653
2:00 PM	688	2	17	707
2:15 PM	715	3	15	733
2:30 PM	783	5	17	805
2:45 PM	699	6	16	721
3:00 PM	679	2	13	694
3:15 PM	691	4	9	704
3:30 PM	732	2	18	752
3:45 PM	714	9	8	731
4:00 PM	611	4	9	624
4:15 PM	655	5	4	664
4:30 PM	657	5	6	668
4:45 PM	709	2	5	716
5:00 PM	705	0	8	713
5:15 PM	732	1	4	737
5:30 PM	710	1	6	717
5:45 PM	652	4	4	660
6:00 PM	650	0	7	657
6:15 PM	609	0	3	612
6:30 PM	583	3	3	589

6:45 PM	531	2	8	541
7:00 PM	470	0	3	473
7:15 PM	460	2	3	465
7:30 PM	423	0	3	426
7:45 PM	370	3	4	377
8:00 PM	365	1	3	369
8:15 PM	373	0	3	376
8:30 PM	296	0	2	298
8:45 PM	291	0	4	295
9:00 PM	295	0	0	295
9:15 PM	235	0	3	238
9:30 PM	240	0	3	243
9:45 PM	213	0	2	215
10:00 PM	171	0	1	172
10:15 PM	169	0	2	171
10:30 PM	185	0	3	188
10:45 PM	127	0	3	130
11:00 PM	105	0	4	109
11:15 PM	110	0	3	113
11:30 PM	80	0	2	82
11:45 PM	73	0	1	74

Study Name 104 SB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 30

Channel Direction	Lights	Buses	Trucks	Total	
	Direction				
12:00 AM		58	0	1	59
12:15 AM		40	0	0	40
12:30 AM		47	0	3	50
12:45 AM		39	0	1	40
1:00 AM		30	0	1	31
1:15 AM		24	0	2	26
1:30 AM		26	0	2	28
1:45 AM		18	0	2	20
2:00 AM		24	0	1	25
2:15 AM		14	0	1	15
2:30 AM		20	0	2	22
2:45 AM		24	0	2	26
3:00 AM		20	0	0	20
3:15 AM		20	0	0	20
3:30 AM		46	0	0	46
3:45 AM		49	0	0	49
4:00 AM		37	0	7	44
4:15 AM		66	0	7	73
4:30 AM		113	0	13	126
4:45 AM		138	0	13	151
5:00 AM		102	5	0	107
5:15 AM		136	7	5	148
5:30 AM		216	7	15	238
5:45 AM		358	6	24	388
6:00 AM		344	5	27	376
6:15 AM		548	6	27	581
6:30 AM		846	6	25	877
6:45 AM		1108	5	23	1136
7:00 AM		1386	6	33	1425
7:15 AM		1150	5	20	1175
7:30 AM		1003	5	37	1045
7:45 AM		1043	2	43	1088
8:00 AM		976	6	50	1032

8:15 AM	998	3	56	1057
8:30 AM	877	11	49	937
8:45 AM	827	6	39	872
9:00 AM	745	3	36	784
9:15 AM	766	6	31	803
9:30 AM	719	4	33	756
9:45 AM	732	8	15	755
10:00 AM	605	8	25	638
10:15 AM	667	11	29	707
10:30 AM	690	5	35	730
10:45 AM	749	4	30	783
11:00 AM	659	5	21	685
11:15 AM	646	7	20	673
11:30 AM	774	2	21	797
11:45 AM	763	4	27	794
12:00 PM	763	4	16	783
12:15 PM	826	10	21	857
12:30 PM	791	4	21	816
12:45 PM	686	2	23	711
1:00 PM	752	3	27	782
1:15 PM	751	3	25	779
1:30 PM	792	2	12	806
1:45 PM	730	4	15	749
2:00 PM	734	3	17	754
2:15 PM	729	8	14	751
2:30 PM	721	9	13	743
2:45 PM	725	8	15	748
3:00 PM	693	2	17	712
3:15 PM	750	6	19	775
3:30 PM	740	4	17	761
3:45 PM	744	4	17	765
4:00 PM	798	2	13	813
4:15 PM	750	3	10	763
4:30 PM	773	1	3	777
4:45 PM	818	1	8	827
5:00 PM	749	1	9	759
5:15 PM	731	3	8	742
5:30 PM	801	0	7	808
5:45 PM	756	4	4	764
6:00 PM	658	1	4	663
6:15 PM	621	2	5	628
6:30 PM	594	1	8	603
6:45 PM	549	1	5	555
7:00 PM	505	0	2	507
7:15 PM	461	2	4	467
7:30 PM	425	1	1	427

7:45 PM	440	0	0	440
8:00 PM	392	4	2	398
8:15 PM	357	0	2	359
8:30 PM	325	0	4	329
8:45 PM	245	0	5	250
9:00 PM	259	0	3	262
9:15 PM	213	0	3	216
9:30 PM	246	0	3	249
9:45 PM	213	0	2	215
10:00 PM	198	0	1	199
10:15 PM	166	1	1	168
10:30 PM	182	1	2	185
10:45 PM	172	1	1	174
11:00 PM	110	1	1	112
11:15 PM	95	1	2	98
11:30 PM	87	0	1	88
11:45 PM	66	0	0	66
12:00 AM	49	0	0	49
12:15 AM	52	0	0	52
12:30 AM	25	0	1	26
12:45 AM	44	0	1	45
1:00 AM	33	0	1	34
1:15 AM	22	0	2	24
1:30 AM	27	0	1	28
1:45 AM	19	0	2	21
2:00 AM	21	0	0	21
2:15 AM	21	0	1	22
2:30 AM	16	0	1	17
2:45 AM	10	0	0	10
3:00 AM	25	0	3	28
3:15 AM	23	0	7	30
3:30 AM	38	0	5	43
3:45 AM	54	0	3	57
4:00 AM	27	0	2	29
4:15 AM	48	0	8	56
4:30 AM	109	0	13	122
4:45 AM	114	0	8	122
5:00 AM	93	1	12	106
5:15 AM	154	1	8	163
5:30 AM	248	6	22	276
5:45 AM	331	3	27	361
6:00 AM	375	7	24	406
6:15 AM	531	4	20	555
6:30 AM	850	5	34	889
6:45 AM	1042	8	31	1081
7:00 AM	1304	5	39	1348

7:15 AM	1083	6	30	1119
7:30 AM	1197	4	27	1228
7:45 AM	1086	2	38	1126
8:00 AM	963	2	51	1016
8:15 AM	982	8	51	1041
8:30 AM	866	6	33	905
8:45 AM	880	5	37	922
9:00 AM	761	6	40	807
9:15 AM	714	1	29	744
9:30 AM	673	8	44	725
9:45 AM	761	7	32	800
10:00 AM	597	4	26	627
10:15 AM	674	10	20	704
10:30 AM	703	5	31	739
10:45 AM	777	5	25	807
11:00 AM	675	3	27	705
11:15 AM	613	4	26	643
11:30 AM	739	3	23	765
11:45 AM	770	10	33	813
12:00 PM	815	0	28	843
12:15 PM	784	4	22	810
12:30 PM	745	4	18	767
12:45 PM	702	3	18	723
1:00 PM	634	1	24	659
1:15 PM	724	4	22	750
1:30 PM	785	0	22	807
1:45 PM	700	1	25	726
2:00 PM	716	2	20	738
2:15 PM	731	7	15	753
2:30 PM	792	7	14	813
2:45 PM	731	8	17	756
3:00 PM	765	3	17	785
3:15 PM	758	4	8	770
3:30 PM	780	4	15	799
3:45 PM	782	10	10	802
4:00 PM	684	7	7	698
4:15 PM	701	6	2	709
4:30 PM	729	4	3	736
4:45 PM	811	1	5	817
5:00 PM	813	3	9	825
5:15 PM	790	4	3	797
5:30 PM	769	1	7	777
5:45 PM	704	3	2	709
6:00 PM	710	0	4	714
6:15 PM	617	1	7	625
6:30 PM	614	1	2	617

6:45 PM	536	0	6	542
7:00 PM	539	1	4	544
7:15 PM	457	3	5	465
7:30 PM	460	0	3	463
7:45 PM	396	1	3	400
8:00 PM	385	2	6	393
8:15 PM	384	0	3	387
8:30 PM	355	0	2	357
8:45 PM	385	0	4	389
9:00 PM	259	0	3	262
9:15 PM	269	0	0	269
9:30 PM	239	0	2	241
9:45 PM	223	0	3	226
10:00 PM	192	0	2	194
10:15 PM	192	1	3	196
10:30 PM	188	1	2	191
10:45 PM	123	0	3	126
11:00 PM	102	0	8	110
11:15 PM	95	1	3	99
11:30 PM	80	0	5	85
11:45 PM	69	0	2	71

Study Name 105 SB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 31

Channel Direction	lights	buses	trucks	Total	
	Direction				
	Southbound				
12:00 AM		51	0	0	51
12:15 AM		35	0	0	35
12:30 AM		33	0	0	33
12:45 AM		36	0	0	36
1:00 AM		24	0	0	24
1:15 AM		21	0	1	22
1:30 AM		22	0	2	24
1:45 AM		14	0	2	16
2:00 AM		15	0	1	16
2:15 AM		10	0	1	11
2:30 AM		16	0	1	17
2:45 AM		19	0	1	20
3:00 AM		20	0	1	21
3:15 AM		14	0	1	15
3:30 AM		32	0	4	36
3:45 AM		32	0	1	33
4:00 AM		29	0	3	32
4:15 AM		56	2	6	64
4:30 AM		118	0	10	128
4:45 AM		128	0	10	138
5:00 AM		106	0	4	110
5:15 AM		144	0	9	153
5:30 AM		233	4	16	253
5:45 AM		332	3	19	354
6:00 AM		316	2	21	339
6:15 AM		492	4	23	519
6:30 AM		764	3	22	789
6:45 AM		990	3	19	1012
7:00 AM		990	4	18	1012
7:15 AM		972	2	18	992
7:30 AM		916	2	28	946
7:45 AM		871	1	21	893
8:00 AM		799	3	47	849

8:15 AM	875	1	43	919
8:30 AM	802	8	43	853
8:45 AM	784	4	33	821
9:00 AM	676	4	32	712
9:15 AM	666	3	30	699
9:30 AM	668	3	39	710
9:45 AM	644	6	11	661
10:00 AM	528	7	21	556
10:15 AM	582	10	25	617
10:30 AM	628	5	22	655
10:45 AM	678	1	18	697
11:00 AM	567	5	16	588
11:15 AM	573	4	19	596
11:30 AM	703	3	16	722
11:45 AM	676	6	25	707
12:00 PM	618	2	16	636
12:15 PM	720	6	14	740
12:30 PM	669	4	16	689
12:45 PM	604	2	23	629
1:00 PM	617	0	20	637
1:15 PM	647	5	26	678
1:30 PM	660	2	14	676
1:45 PM	678	2	11	691
2:00 PM	661	2	8	671
2:15 PM	636	5	13	654
2:30 PM	652	5	10	667
2:45 PM	624	9	14	647
3:00 PM	604	4	10	618
3:15 PM	649	4	13	666
3:30 PM	613	5	8	626
3:45 PM	623	4	14	641
4:00 PM	612	4	10	626
4:15 PM	652	3	10	665
4:30 PM	646	3	4	653
4:45 PM	669	3	13	685
5:00 PM	588	3	3	594
5:15 PM	582	1	5	588
5:30 PM	639	1	4	644
5:45 PM	621	1	2	624
6:00 PM	550	4	3	557
6:15 PM	529	0	4	533
6:30 PM	495	0	2	497
6:45 PM	448	1	6	455
7:00 PM	413	1	0	414
7:15 PM	404	0	3	407
7:30 PM	346	1	0	347

7:45 PM	336	0	0	336
8:00 PM	313	4	1	318
8:15 PM	281	0	1	282
8:30 PM	268	0	3	271
8:45 PM	231	0	3	234
9:00 PM	224	0	2	226
9:15 PM	208	0	3	211
9:30 PM	196	0	2	198
9:45 PM	191	0	1	192
10:00 PM	177	0	1	178
10:15 PM	143	0	1	144
10:30 PM	141	0	1	142
10:45 PM	126	0	0	126
11:00 PM	106	0	1	107
11:15 PM	72	0	0	72
11:30 PM	76	0	0	76
11:45 PM	47	0	0	47
12:00 AM	42	0	0	42
12:15 AM	46	0	0	46
12:30 AM	25	0	1	26
12:45 AM	37	0	0	37
1:00 AM	24	0	1	25
1:15 AM	20	0	1	21
1:30 AM	24	0	1	25
1:45 AM	10	0	1	11
2:00 AM	13	0	0	13
2:15 AM	17	0	0	17
2:30 AM	15	0	1	16
2:45 AM	11	0	0	11
3:00 AM	17	0	3	20
3:15 AM	16	0	6	22
3:30 AM	28	0	2	30
3:45 AM	31	0	4	35
4:00 AM	27	0	2	29
4:15 AM	50	3	3	56
4:30 AM	114	0	11	125
4:45 AM	116	0	6	122
5:00 AM	92	0	7	99
5:15 AM	142	0	5	147
5:30 AM	229	3	17	249
5:45 AM	309	4	15	328
6:00 AM	343	3	21	367
6:15 AM	476	4	13	493
6:30 AM	829	2	30	861
6:45 AM	900	4	29	933
7:00 AM	1009	5	29	1043

7:15 AM	981	4	24	1009
7:30 AM	1053	1	22	1076
7:45 AM	852	1	41	894
8:00 AM	859	1	41	901
8:15 AM	872	5	38	915
8:30 AM	790	3	39	832
8:45 AM	827	4	27	858
9:00 AM	677	4	25	706
9:15 AM	647	1	26	674
9:30 AM	641	6	31	678
9:45 AM	665	8	22	695
10:00 AM	515	4	26	545
10:15 AM	612	9	23	644
10:30 AM	600	4	25	629
10:45 AM	665	3	21	689
11:00 AM	609	4	20	633
11:15 AM	526	2	17	545
11:30 AM	628	2	24	654
11:45 AM	672	7	26	705
12:00 PM	692	0	25	717
12:15 PM	610	0	16	626
12:30 PM	688	5	16	709
12:45 PM	614	1	19	634
1:00 PM	552	1	19	572
1:15 PM	648	2	18	668
1:30 PM	725	0	16	741
1:45 PM	602	0	16	618
2:00 PM	612	2	20	634
2:15 PM	630	3	10	643
2:30 PM	703	5	10	718
2:45 PM	657	6	17	680
3:00 PM	624	3	14	641
3:15 PM	643	2	8	653
3:30 PM	690	3	8	701
3:45 PM	652	9	10	671
4:00 PM	569	7	8	584
4:15 PM	596	6	2	604
4:30 PM	620	4	3	627
4:45 PM	300	3	0	303

Study Name 101 NB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 36

Channel	lights	buses	trucks	Total	
Direction	Direction				
	Northbound				
12:00 AM		37	0	2	39
12:15 AM		26	0	0	26
12:30 AM		18	0	1	19
12:45 AM		23	0	1	24
1:00 AM		16	0	1	17
1:15 AM		16	0	1	17
1:30 AM		15	0	4	19
1:45 AM		16	0	4	20
2:00 AM		9	0	0	9
2:15 AM		15	0	1	16
2:30 AM		7	0	1	8
2:45 AM		16	0	1	17
3:00 AM		11	0	1	12
3:15 AM		18	0	0	18
3:30 AM		19	1	0	20
3:45 AM		42	0	0	42
4:00 AM		26	0	2	28
4:15 AM		33	0	2	35
4:30 AM		36	0	2	38
4:45 AM		54	0	4	58
5:00 AM		59	0	7	66
5:15 AM		85	0	6	91
5:30 AM		99	0	6	105
5:45 AM		121	0	10	131
6:00 AM		139	2	6	147
6:15 AM		165	0	8	173
6:30 AM		174	0	6	180
6:45 AM		194	3	7	204
7:00 AM		205	4	11	220
7:15 AM		255	0	11	266
7:30 AM		262	1	11	274
7:45 AM		302	0	13	315
8:00 AM		271	0	17	288

8:15 AM	250	2	21	273
8:30 AM	203	0	20	223
8:45 AM	241	2	19	262
9:00 AM	233	2	26	261
9:15 AM	288	0	26	314
9:30 AM	245	1	18	264
9:45 AM	294	0	31	325
10:00 AM	278	1	36	315
10:15 AM	290	1	25	316
10:30 AM	282	1	23	306
10:45 AM	301	0	21	322
11:00 AM	294	0	27	321
11:15 AM	301	1	27	329
11:30 AM	355	1	28	384
11:45 AM	263	0	23	286
12:00 PM	303	1	20	324
12:15 PM	328	0	21	349
12:30 PM	335	0	25	360
12:45 PM	494	2	37	533
1:00 PM	434	3	26	463
1:15 PM	388	6	24	418
1:30 PM	388	2	26	416
1:45 PM	384	1	21	406
2:00 PM	417	5	35	457
2:15 PM	453	3	33	489
2:30 PM	419	1	29	449
2:45 PM	483	2	25	510
3:00 PM	506	5	26	537
3:15 PM	549	1	29	579
3:30 PM	643	3	25	671
3:45 PM	593	1	17	611
4:00 PM	620	3	22	645
4:15 PM	654	0	16	670
4:30 PM	611	1	15	627
4:45 PM	637	2	13	652
5:00 PM	689	1	11	701
5:15 PM	659	1	13	673
5:30 PM	628	1	16	645
5:45 PM	621	2	10	633
6:00 PM	516	2	12	530
6:15 PM	489	7	8	504
6:30 PM	408	0	11	419
6:45 PM	395	0	7	402
7:00 PM	332	1	4	337
7:15 PM	319	0	1	320
7:30 PM	314	1	5	320

7:45 PM	297	0	7	304
8:00 PM	273	0	5	278
8:15 PM	285	0	1	286
8:30 PM	253	0	0	253
8:45 PM	239	0	5	244
9:00 PM	237	0	4	241
9:15 PM	188	0	4	192
9:30 PM	149	1	4	154
9:45 PM	144	0	1	145
10:00 PM	141	0	0	141
10:15 PM	112	1	0	113
10:30 PM	84	0	0	84
10:45 PM	66	0	1	67
11:00 PM	68	0	2	70
11:15 PM	56	0	2	58
11:30 PM	30	0	1	31
11:45 PM	34	0	2	36
12:00 AM	39	0	1	40
12:15 AM	30	0	1	31
12:30 AM	18	0	2	20
12:45 AM	34	0	0	34
1:00 AM	16	0	1	17
1:15 AM	14	0	4	18
1:30 AM	12	0	0	12
1:45 AM	16	0	2	18
2:00 AM	9	0	0	9
2:15 AM	17	0	2	19
2:30 AM	18	0	0	18
2:45 AM	17	0	1	18
3:00 AM	20	0	1	21
3:15 AM	19	0	0	19
3:30 AM	9	0	3	12
3:45 AM	22	0	2	24
4:00 AM	31	0	5	36
4:15 AM	42	0	3	45
4:30 AM	48	0	0	48
4:45 AM	52	0	3	55
5:00 AM	48	0	4	52
5:15 AM	68	0	4	72
5:30 AM	87	0	3	90
5:45 AM	113	0	4	117
6:00 AM	130	0	7	137
6:15 AM	171	1	10	182
6:30 AM	175	0	11	186
6:45 AM	152	0	10	162
7:00 AM	216	3	11	230

7:15 AM	230	2	19	251
7:30 AM	272	1	18	291
7:45 AM	273	0	15	288
8:00 AM	265	1	22	288
8:15 AM	298	2	25	325
8:30 AM	261	0	18	279
8:45 AM	267	1	23	291
9:00 AM	267	1	36	304
9:15 AM	284	0	24	308
9:30 AM	291	1	29	321
9:45 AM	296	0	29	325
10:00 AM	290	2	24	316
10:15 AM	287	0	27	314
10:30 AM	310	1	28	339
10:45 AM	328	0	20	348
11:00 AM	341	1	24	366
11:15 AM	307	1	21	329
11:30 AM	327	2	23	352
11:45 AM	324	1	18	343
12:00 PM	327	1	34	362
12:15 PM	340	2	33	375
12:30 PM	378	1	30	409
12:45 PM	332	0	29	361
1:00 PM	274	1	26	301
1:15 PM	374	5	37	416
1:30 PM	399	0	31	430
1:45 PM	365	1	26	392
2:00 PM	393	1	25	419
2:15 PM	439	2	35	476
2:30 PM	443	3	35	481
2:45 PM	471	0	24	495
3:00 PM	504	7	24	535
3:15 PM	554	5	23	582
3:30 PM	657	3	22	682
3:45 PM	613	2	23	638
4:00 PM	593	2	22	617
4:15 PM	577	1	25	603
4:30 PM	620	1	15	636
4:45 PM	628	1	21	650
5:00 PM	639	0	12	651
5:15 PM	677	4	8	689
5:30 PM	670	2	9	681
5:45 PM	578	3	8	589
6:00 PM	606	0	7	613
6:15 PM	457	0	9	466
6:30 PM	374	1	7	382

6:45 PM	351	0	4	355
7:00 PM	289	1	5	295
7:15 PM	291	0	6	297
7:30 PM	282	1	2	285
7:45 PM	280	0	2	282
8:00 PM	233	0	1	234
8:15 PM	245	0	4	249
8:30 PM	206	0	1	207
8:45 PM	210	0	0	210
9:00 PM	184	0	1	185
9:15 PM	204	0	4	208
9:30 PM	169	0	3	172
9:45 PM	151	0	2	153
10:00 PM	142	0	1	143
10:15 PM	142	0	0	142
10:30 PM	76	0	0	76
10:45 PM	87	0	0	87
11:00 PM	70	0	1	71
11:15 PM	70	0	1	71
11:30 PM	47	0	0	47
11:45 PM	55	0	1	56

Study Name 102 NB 3006 CA-1
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 37

Channel Direction	lights	buses	trucks	Total	
	Direction				
	Northbound				
12:00 AM		70	0	0	70
12:15 AM		51	1	0	52
12:30 AM		37	0	2	39
12:45 AM		39	0	1	40
1:00 AM		21	0	3	24
1:15 AM		29	0	0	29
1:30 AM		31	0	1	32
1:45 AM		31	0	3	34
2:00 AM		19	0	1	20
2:15 AM		20	0	1	21
2:30 AM		11	0	2	13
2:45 AM		17	0	1	18
3:00 AM		15	0	2	17
3:15 AM		23	0	1	24
3:30 AM		28	0	2	30
3:45 AM		39	1	0	40
4:00 AM		37	0	2	39
4:15 AM		39	0	0	39
4:30 AM		50	0	1	51
4:45 AM		55	0	2	57
5:00 AM		72	0	7	79
5:15 AM		91	2	5	98
5:30 AM		112	0	8	120
5:45 AM		144	1	9	154
6:00 AM		170	2	6	178
6:15 AM		209	3	8	220
6:30 AM		210	5	7	222
6:45 AM		245	2	9	256
7:00 AM		269	5	12	286
7:15 AM		326	1	10	337
7:30 AM		381	4	13	398
7:45 AM		425	0	10	435
8:00 AM		432	5	23	460

8:15 AM	349	7	23	379
8:30 AM	322	2	20	344
8:45 AM	328	5	21	354
9:00 AM	355	2	26	383
9:15 AM	388	1	32	421
9:30 AM	347	1	24	372
9:45 AM	387	1	34	422
10:00 AM	407	1	40	448
10:15 AM	407	1	19	427
10:30 AM	420	0	30	450
10:45 AM	431	1	21	453
11:00 AM	457	2	28	487
11:15 AM	478	6	29	513
11:30 AM	515	1	31	547
11:45 AM	459	2	23	484
12:00 PM	493	3	27	523
12:15 PM	512	3	24	539
12:30 PM	529	2	31	562
12:45 PM	721	7	38	766
1:00 PM	634	3	34	671
1:15 PM	618	6	24	648
1:30 PM	577	5	29	611
1:45 PM	575	3	24	602
2:00 PM	636	6	41	683
2:15 PM	687	7	36	730
2:30 PM	627	4	32	663
2:45 PM	698	1	28	727
3:00 PM	749	9	31	789
3:15 PM	821	3	31	855
3:30 PM	942	5	25	972
3:45 PM	904	1	20	925
4:00 PM	939	5	29	973
4:15 PM	968	1	20	989
4:30 PM	969	3	17	989
4:45 PM	984	3	19	1006
5:00 PM	1073	4	13	1090
5:15 PM	1072	6	17	1095
5:30 PM	1041	3	16	1060
5:45 PM	984	3	14	1001
6:00 PM	846	7	11	864
6:15 PM	811	4	15	830
6:30 PM	639	0	13	652
6:45 PM	599	1	7	607
7:00 PM	537	0	3	540
7:15 PM	532	1	1	534
7:30 PM	478	1	6	485

7:45 PM	477	0	8	485
8:00 PM	466	0	4	470
8:15 PM	491	0	2	493
8:30 PM	407	0	1	408
8:45 PM	399	3	4	406
9:00 PM	366	0	3	369
9:15 PM	318	1	5	324
9:30 PM	248	1	5	254
9:45 PM	253	0	1	254
10:00 PM	256	0	0	256
10:15 PM	212	1	1	214
10:30 PM	141	0	0	141
10:45 PM	131	0	2	133
11:00 PM	133	0	2	135
11:15 PM	108	1	2	111
11:30 PM	94	0	2	96
11:45 PM	63	0	1	64
12:00 AM	71	2	0	73
12:15 AM	55	0	2	57
12:30 AM	38	0	2	40
12:45 AM	53	0	0	53
1:00 AM	27	0	1	28
1:15 AM	28	0	4	32
1:30 AM	33	0	1	34
1:45 AM	25	0	2	27
2:00 AM	19	0	0	19
2:15 AM	28	0	3	31
2:30 AM	24	0	0	24
2:45 AM	19	0	2	21
3:00 AM	23	0	1	24
3:15 AM	20	0	0	20
3:30 AM	13	0	2	15
3:45 AM	30	0	3	33
4:00 AM	38	0	4	42
4:15 AM	49	0	4	53
4:30 AM	56	0	2	58
4:45 AM	51	0	4	55
5:00 AM	57	0	6	63
5:15 AM	69	1	5	75
5:30 AM	106	0	3	109
5:45 AM	121	0	4	125
6:00 AM	166	1	10	177
6:15 AM	206	3	12	221
6:30 AM	221	6	16	243
6:45 AM	215	1	8	224
7:00 AM	277	4	12	293

7:15 AM	300	3	20	323
7:30 AM	385	3	23	411
7:45 AM	427	1	16	444
8:00 AM	445	3	29	477
8:15 AM	409	8	25	442
8:30 AM	361	3	14	378
8:45 AM	351	2	31	384
9:00 AM	374	2	37	413
9:15 AM	399	2	24	425
9:30 AM	374	1	33	408
9:45 AM	410	1	34	445
10:00 AM	404	1	25	430
10:15 AM	430	1	28	459
10:30 AM	427	0	37	464
10:45 AM	510	2	23	535
11:00 AM	504	3	30	537
11:15 AM	467	4	22	493
11:30 AM	529	4	23	556
11:45 AM	528	2	26	556
12:00 PM	527	2	34	563
12:15 PM	532	3	42	577
12:30 PM	555	3	34	592
12:45 PM	511	2	33	546
1:00 PM	540	2	32	574
1:15 PM	568	7	36	611
1:30 PM	605	3	33	641
1:45 PM	616	3	31	650
2:00 PM	602	4	35	641
2:15 PM	686	8	41	735
2:30 PM	632	4	43	679
2:45 PM	714	2	30	746
3:00 PM	716	8	22	746
3:15 PM	850	6	21	877
3:30 PM	957	9	23	989
3:45 PM	938	7	22	967
4:00 PM	977	1	30	1008
4:15 PM	946	3	21	970
4:30 PM	936	3	13	952
4:45 PM	975	2	26	1003
5:00 PM	1049	2	12	1063
5:15 PM	1096	6	12	1114
5:30 PM	1012	4	12	1028
5:45 PM	933	3	9	945
6:00 PM	951	2	11	964
6:15 PM	683	1	8	692
6:30 PM	635	1	5	641

6:45 PM	546	1	4	551
7:00 PM	481	1	7	489
7:15 PM	511	1	8	520
7:30 PM	463	1	1	465
7:45 PM	449	0	3	452
8:00 PM	394	1	3	398
8:15 PM	431	0	5	436
8:30 PM	369	1	1	371
8:45 PM	347	0	1	348
9:00 PM	360	0	2	362
9:15 PM	346	0	4	350
9:30 PM	299	1	3	303
9:45 PM	285	0	5	290
10:00 PM	252	0	4	256
10:15 PM	243	0	1	244
10:30 PM	144	0	2	146
10:45 PM	141	0	4	145
11:00 PM	131	1	1	133
11:15 PM	149	1	1	151
11:30 PM	84	0	1	85
11:45 PM	98	1	1	100

Study Name 103 - NB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 38

Channel	lights	buses	trucks	Total	
Direction	Direction				
	Northbound				
12:00 AM		80	1	4	85
12:15 AM		62	0	0	62
12:30 AM		69	0	2	71
12:45 AM		51	0	2	53
1:00 AM		34	0	3	37
1:15 AM		30	0	0	30
1:30 AM		42	0	1	43
1:45 AM		33	0	3	36
2:00 AM		27	0	1	28
2:15 AM		22	0	2	24
2:30 AM		21	0	0	21
2:45 AM		21	0	1	22
3:00 AM		18	0	1	19
3:15 AM		31	0	3	34
3:30 AM		27	0	0	27
3:45 AM		39	0	0	39
4:00 AM		36	0	1	37
4:15 AM		39	0	0	39
4:30 AM		65	0	1	66
4:45 AM		49	0	1	50
5:00 AM		81	0	6	87
5:15 AM		116	0	6	122
5:30 AM		127	1	7	135
5:45 AM		168	1	6	175
6:00 AM		210	3	5	218
6:15 AM		258	4	9	271
6:30 AM		287	7	7	301
6:45 AM		321	3	11	335
7:00 AM		410	8	13	431
7:15 AM		498	2	14	514
7:30 AM		601	5	15	621
7:45 AM		595	3	10	608
8:00 AM		615	7	19	641

8:15 AM	479	6	21	506
8:30 AM	407	4	18	429
8:45 AM	446	2	24	472
9:00 AM	446	5	29	480
9:15 AM	465	1	33	499
9:30 AM	454	2	32	488
9:45 AM	447	2	38	487
10:00 AM	477	2	35	514
10:15 AM	489	3	22	514
10:30 AM	505	2	23	530
10:45 AM	505	3	23	531
11:00 AM	501	3	33	537
11:15 AM	529	3	35	567
11:30 AM	564	3	44	611
11:45 AM	533	2	28	563
12:00 PM	563	5	23	591
12:15 PM	586	6	16	608
12:30 PM	635	1	31	667
12:45 PM	909	9	39	957
1:00 PM	785	6	29	820
1:15 PM	743	7	30	780
1:30 PM	718	5	33	756
1:45 PM	722	4	26	752
2:00 PM	781	4	32	817
2:15 PM	810	6	31	847
2:30 PM	757	3	35	795
2:45 PM	860	3	27	890
3:00 PM	932	6	35	973
3:15 PM	1020	4	24	1048
3:30 PM	1110	6	27	1143
3:45 PM	1058	2	23	1083
4:00 PM	1163	6	23	1192
4:15 PM	1135	2	21	1158
4:30 PM	1176	4	15	1195
4:45 PM	1170	3	16	1189
5:00 PM	1235	5	12	1252
5:15 PM	1211	6	17	1234
5:30 PM	1202	3	21	1226
5:45 PM	1171	3	11	1185
6:00 PM	1009	8	13	1030
6:15 PM	988	2	14	1004
6:30 PM	781	0	12	793
6:45 PM	715	2	8	725
7:00 PM	709	1	4	714
7:15 PM	665	2	6	673
7:30 PM	602	2	8	612

7:45 PM	596	0	7	603
8:00 PM	562	0	2	564
8:15 PM	555	0	4	559
8:30 PM	508	0	0	508
8:45 PM	471	1	5	477
9:00 PM	466	0	3	469
9:15 PM	385	0	4	389
9:30 PM	317	0	5	322
9:45 PM	312	0	2	314
10:00 PM	322	1	1	324
10:15 PM	247	1	0	248
10:30 PM	192	0	0	192
10:45 PM	175	1	3	179
11:00 PM	171	1	1	173
11:15 PM	150	0	3	153
11:30 PM	117	0	3	120
11:45 PM	99	0	1	100
12:00 AM	94	0	2	96
12:15 AM	71	0	2	73
12:30 AM	57	0	3	60
12:45 AM	67	0	0	67
1:00 AM	42	0	1	43
1:15 AM	36	0	4	40
1:30 AM	43	0	1	44
1:45 AM	24	0	2	26
2:00 AM	22	0	2	24
2:15 AM	35	0	1	36
2:30 AM	26	0	0	26
2:45 AM	23	0	0	23
3:00 AM	25	0	4	29
3:15 AM	14	0	6	20
3:30 AM	17	0	5	22
3:45 AM	31	0	10	41
4:00 AM	38	1	2	41
4:15 AM	47	1	3	51
4:30 AM	64	1	1	66
4:45 AM	60	0	4	64
5:00 AM	57	0	4	61
5:15 AM	86	0	6	92
5:30 AM	127	1	2	130
5:45 AM	154	0	5	159
6:00 AM	202	2	6	210
6:15 AM	247	4	13	264
6:30 AM	308	8	11	327
6:45 AM	266	1	9	276
7:00 AM	380	6	16	402

7:15 AM	472	4	17	493
7:30 AM	594	3	16	613
7:45 AM	565	5	14	584
8:00 AM	631	8	25	664
8:15 AM	534	7	14	555
8:30 AM	500	3	19	522
8:45 AM	443	2	25	470
9:00 AM	458	2	36	496
9:15 AM	487	3	33	523
9:30 AM	465	3	36	504
9:45 AM	483	1	43	527
10:00 AM	483	2	29	514
10:15 AM	535	2	22	559
10:30 AM	540	2	27	569
10:45 AM	608	3	26	637
11:00 AM	602	2	32	636
11:15 AM	571	1	25	597
11:30 AM	600	1	32	633
11:45 AM	603	3	33	639
12:00 PM	631	1	32	664
12:15 PM	631	5	50	686
12:30 PM	663	2	30	695
12:45 PM	650	3	34	687
1:00 PM	633	0	34	667
1:15 PM	680	11	32	723
1:30 PM	736	3	30	769
1:45 PM	733	3	32	768
2:00 PM	738	5	31	774
2:15 PM	848	10	35	893
2:30 PM	799	8	38	845
2:45 PM	855	3	30	888
3:00 PM	878	10	23	911
3:15 PM	1069	6	23	1098
3:30 PM	1093	7	26	1126
3:45 PM	1037	5	29	1071
4:00 PM	1095	1	36	1132
4:15 PM	1082	4	21	1107
4:30 PM	1153	2	23	1178
4:45 PM	1125	2	20	1147
5:00 PM	1243	4	20	1267
5:15 PM	1274	8	13	1295
5:30 PM	1182	5	12	1199
5:45 PM	1080	5	13	1098
6:00 PM	1113	0	9	1122
6:15 PM	868	1	10	879
6:30 PM	782	1	3	786

6:45 PM	685	2	4	691
7:00 PM	602	1	9	612
7:15 PM	669	0	5	674
7:30 PM	581	2	2	585
7:45 PM	520	0	4	524
8:00 PM	495	1	3	499
8:15 PM	532	1	4	537
8:30 PM	435	0	4	439
8:45 PM	416	0	5	421
9:00 PM	425	0	2	427
9:15 PM	417	0	3	420
9:30 PM	332	1	1	334
9:45 PM	325	0	3	328
10:00 PM	291	0	2	293
10:15 PM	312	0	2	314
10:30 PM	208	0	4	212
10:45 PM	181	0	3	184
11:00 PM	178	0	1	179
11:15 PM	162	1	1	164
11:30 PM	130	0	1	131
11:45 PM	137	0	2	139

Study Name 104 NB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 39

Channel	lights	buses	trucks	Total	
Direction	Direction				
	Northbound				
12:00 AM		85	1	1	87
12:15 AM		63	0	0	63
12:30 AM		67	0	2	69
12:45 AM		51	0	2	53
1:00 AM		33	0	3	36
1:15 AM		27	0	1	28
1:30 AM		37	0	3	40
1:45 AM		33	0	2	35
2:00 AM		26	0	2	28
2:15 AM		27	0	1	28
2:30 AM		21	0	0	21
2:45 AM		26	0	0	26
3:00 AM		19	0	1	20
3:15 AM		32	0	2	34
3:30 AM		28	0	1	29
3:45 AM		33	0	1	34
4:00 AM		33	0	0	33
4:15 AM		38	0	0	38
4:30 AM		69	0	3	72
4:45 AM		49	1	0	50
5:00 AM		90	0	7	97
5:15 AM		120	0	5	125
5:30 AM		132	0	7	139
5:45 AM		170	1	7	178
6:00 AM		247	4	5	256
6:15 AM		280	2	13	295
6:30 AM		301	7	7	315
6:45 AM		345	3	14	362
7:00 AM		441	6	10	457
7:15 AM		570	2	16	588
7:30 AM		712	6	18	736
7:45 AM		694	7	11	712
8:00 AM		639	11	20	670

8:15 AM	540	3	24	567
8:30 AM	447	2	17	466
8:45 AM	474	4	28	506
9:00 AM	461	3	27	491
9:15 AM	479	4	31	514
9:30 AM	501	3	30	534
9:45 AM	504	2	37	543
10:00 AM	507	3	28	538
10:15 AM	499	3	27	529
10:30 AM	513	2	23	538
10:45 AM	513	4	25	542
11:00 AM	492	3	33	528
11:15 AM	539	2	35	576
11:30 AM	560	2	38	600
11:45 AM	547	1	23	571
12:00 PM	567	4	30	601
12:15 PM	606	5	27	638
12:30 PM	664	2	36	702
12:45 PM	962	6	40	1008
1:00 PM	808	8	25	841
1:15 PM	765	10	24	799
1:30 PM	766	5	37	808
1:45 PM	752	4	28	784
2:00 PM	805	4	30	839
2:15 PM	812	6	38	856
2:30 PM	749	2	36	787
2:45 PM	842	3	26	871
3:00 PM	963	8	31	1002
3:15 PM	1030	4	27	1061
3:30 PM	1136	7	20	1163
3:45 PM	1057	2	30	1089
4:00 PM	1129	6	16	1151
4:15 PM	1114	3	18	1135
4:30 PM	1146	2	12	1160
4:45 PM	1138	1	19	1158
5:00 PM	1160	6	17	1183
5:15 PM	1148	4	19	1171
5:30 PM	1210	6	24	1240
5:45 PM	1154	8	10	1172
6:00 PM	1052	6	15	1073
6:15 PM	962	3	9	974
6:30 PM	783	0	11	794
6:45 PM	736	4	5	745
7:00 PM	699	3	7	709
7:15 PM	671	3	4	678
7:30 PM	624	4	5	633

7:45 PM	609	1	7	617
8:00 PM	576	1	2	579
8:15 PM	526	0	2	528
8:30 PM	542	0	0	542
8:45 PM	448	5	4	457
9:00 PM	497	0	7	504
9:15 PM	373	0	5	378
9:30 PM	327	0	4	331
9:45 PM	312	0	3	315
10:00 PM	318	0	0	318
10:15 PM	240	1	0	241
10:30 PM	204	1	1	206
10:45 PM	159	1	2	162
11:00 PM	185	0	4	189
11:15 PM	146	0	4	150
11:30 PM	133	1	0	134
11:45 PM	106	1	0	107
12:00 AM	101	1	0	102
12:15 AM	71	1	1	73
12:30 AM	59	0	3	62
12:45 AM	61	2	0	63
1:00 AM	48	0	1	49
1:15 AM	33	0	3	36
1:30 AM	38	0	1	39
1:45 AM	26	0	3	29
2:00 AM	22	0	1	23
2:15 AM	33	0	1	34
2:30 AM	28	0	0	28
2:45 AM	26	0	2	28
3:00 AM	29	0	0	29
3:15 AM	23	0	0	23
3:30 AM	26	0	2	28
3:45 AM	28	0	3	31
4:00 AM	42	0	2	44
4:15 AM	42	0	3	45
4:30 AM	67	1	1	69
4:45 AM	55	0	3	58
5:00 AM	66	0	5	71
5:15 AM	90	1	6	97
5:30 AM	137	0	2	139
5:45 AM	158	0	5	163
6:00 AM	231	2	7	240
6:15 AM	262	4	12	278
6:30 AM	321	11	11	343
6:45 AM	288	4	13	305
7:00 AM	418	3	15	436

7:15 AM	543	4	15	562
7:30 AM	689	7	17	713
7:45 AM	663	7	17	687
8:00 AM	652	10	25	687
8:15 AM	621	5	15	641
8:30 AM	535	5	18	558
8:45 AM	498	2	31	531
9:00 AM	503	2	35	540
9:15 AM	515	3	31	549
9:30 AM	533	1	41	575
9:45 AM	537	3	35	575
10:00 AM	506	3	29	538
10:15 AM	538	3	27	568
10:30 AM	582	2	26	610
10:45 AM	668	4	29	701
11:00 AM	636	5	26	667
11:15 AM	592	2	23	617
11:30 AM	632	2	29	663
11:45 AM	621	2	40	663
12:00 PM	617	2	30	649
12:15 PM	672	5	44	721
12:30 PM	665	1	33	699
12:45 PM	713	3	33	749
1:00 PM	695	2	40	737
1:15 PM	719	12	28	759
1:30 PM	795	4	38	837
1:45 PM	754	1	32	787
2:00 PM	765	6	29	800
2:15 PM	869	8	40	917
2:30 PM	793	7	45	845
2:45 PM	848	6	35	889
3:00 PM	896	10	23	929
3:15 PM	1129	9	23	1161
3:30 PM	1093	4	23	1120
3:45 PM	1012	7	26	1045
4:00 PM	1083	1	35	1119
4:15 PM	1075	5	18	1098
4:30 PM	1141	3	28	1172
4:45 PM	1081	3	24	1108
5:00 PM	1158	2	15	1175
5:15 PM	1193	7	21	1221
5:30 PM	1151	8	10	1169
5:45 PM	1103	7	13	1123
6:00 PM	1058	1	14	1073
6:15 PM	872	3	8	883
6:30 PM	806	1	3	810

6:45 PM	677	4	4	685
7:00 PM	627	4	8	639
7:15 PM	685	1	4	690
7:30 PM	597	3	2	602
7:45 PM	536	1	5	542
8:00 PM	515	2	1	518
8:15 PM	496	1	1	498
8:30 PM	432	0	2	434
8:45 PM	430	0	2	432
9:00 PM	435	0	3	438
9:15 PM	418	1	2	421
9:30 PM	347	0	3	350
9:45 PM	343	0	3	346
10:00 PM	277	0	3	280
10:15 PM	303	0	1	304
10:30 PM	225	0	4	229
10:45 PM	190	0	1	191
11:00 PM	186	0	6	192
11:15 PM	160	1	2	163
11:30 PM	146	0	2	148
11:45 PM	142	0	1	143

Study Name 105 NB Cabrillo Hwy
 Start Date 05/03/2017
 Start Time 12:00 AM
 Site Code 40

Channel Direction	lights	buses	trucks	Total	
	Direction				
	Northbound				
12:00 AM		72	1	1	74
12:15 AM		61	0	0	61
12:30 AM		57	0	2	59
12:45 AM		44	0	2	46
1:00 AM		22	0	0	22
1:15 AM		22	0	0	22
1:30 AM		35	0	2	37
1:45 AM		24	0	1	25
2:00 AM		16	0	1	17
2:15 AM		18	0	1	19
2:30 AM		17	0	1	18
2:45 AM		16	0	2	18
3:00 AM		17	0	2	19
3:15 AM		20	0	2	22
3:30 AM		22	0	3	25
3:45 AM		16	0	9	25
4:00 AM		23	0	1	24
4:15 AM		26	0	0	26
4:30 AM		55	0	1	56
4:45 AM		36	0	4	40
5:00 AM		65	0	10	75
5:15 AM		74	0	8	82
5:30 AM		97	0	7	104
5:45 AM		139	1	5	145
6:00 AM		190	4	1	195
6:15 AM		202	4	5	211
6:30 AM		229	7	4	240
6:45 AM		286	2	10	298
7:00 AM		356	4	6	366
7:15 AM		490	3	4	497
7:30 AM		631	7	5	643
7:45 AM		602	6	6	614
8:00 AM		554	9	12	575

8:15 AM	501	1	21	523
8:30 AM	358	1	13	372
8:45 AM	353	2	8	363
9:00 AM	319	3	15	337
9:15 AM	331	4	18	353
9:30 AM	339	5	10	354
9:45 AM	328	2	26	356
10:00 AM	348	3	16	367
10:15 AM	341	1	19	361
10:30 AM	325	1	16	342
10:45 AM	315	4	16	335
11:00 AM	305	2	18	325
11:15 AM	308	0	22	330
11:30 AM	329	0	20	349
11:45 AM	334	0	11	345
12:00 PM	346	2	19	367
12:15 PM	357	1	16	374
12:30 PM	373	0	21	394
12:45 PM	739	6	27	772
1:00 PM	648	5	15	668
1:15 PM	667	5	15	687
1:30 PM	655	5	22	682
1:45 PM	659	2	17	678
2:00 PM	707	3	17	727
2:15 PM	680	4	30	714
2:30 PM	654	5	21	680
2:45 PM	720	7	26	753
3:00 PM	883	6	17	906
3:15 PM	915	2	17	934
3:30 PM	939	4	16	959
3:45 PM	848	2	14	864
4:00 PM	905	4	18	927
4:15 PM	879	1	23	903
4:30 PM	914	3	9	926
4:45 PM	891	1	15	907
5:00 PM	912	4	15	931
5:15 PM	887	5	16	908
5:30 PM	942	5	14	961
5:45 PM	928	7	10	945
6:00 PM	868	10	5	883
6:15 PM	736	3	13	752
6:30 PM	606	0	5	611
6:45 PM	575	3	6	584
7:00 PM	597	2	4	603
7:15 PM	533	0	6	539
7:30 PM	498	2	2	502

7:45 PM	524	2	8	534
8:00 PM	421	1	3	425
8:15 PM	457	0	2	459
8:30 PM	389	0	1	390
8:45 PM	346	3	4	353
9:00 PM	429	2	2	433
9:15 PM	312	2	4	318
9:30 PM	264	0	4	268
9:45 PM	246	0	5	251
10:00 PM	251	0	2	253
10:15 PM	197	0	1	198
10:30 PM	164	0	3	167
10:45 PM	164	0	5	169
11:00 PM	139	3	1	143
11:15 PM	120	3	1	124
11:30 PM	112	0	0	112
11:45 PM	95	1	0	96
12:00 AM	77	0	1	78
12:15 AM	55	0	1	56
12:30 AM	52	0	1	53
12:45 AM	59	0	1	60
1:00 AM	40	0	1	41
1:15 AM	26	0	3	29
1:30 AM	38	0	1	39
1:45 AM	28	0	1	29
2:00 AM	13	0	0	13
2:15 AM	25	0	3	28
2:30 AM	23	0	2	25
2:45 AM	18	0	2	20
3:00 AM	21	0	2	23
3:15 AM	18	0	1	19
3:30 AM	22	0	2	24
3:45 AM	24	0	2	26
4:00 AM	28	1	1	30
4:15 AM	28	3	0	31
4:30 AM	44	1	1	46
4:45 AM	37	0	2	39
5:00 AM	48	0	5	53
5:15 AM	65	0	6	71
5:30 AM	100	0	4	104
5:45 AM	115	0	3	118
6:00 AM	183	3	5	191
6:15 AM	189	3	9	201
6:30 AM	268	6	4	278
6:45 AM	245	5	9	259
7:00 AM	337	3	9	349





















7:15 AM	460	3	13	476
7:30 AM	603	8	12	623
7:45 AM	602	9	14	625
8:00 AM	555	8	19	582
8:15 AM	527	4	9	540
8:30 AM	472	4	14	490
8:45 AM	432	1	23	456
9:00 AM	443	1	18	462
9:15 AM	465	4	17	486
9:30 AM	474	3	20	497
9:45 AM	464	1	28	493
10:00 AM	477	1	24	502
10:15 AM	442	2	16	460
10:30 AM	475	1	26	502
10:45 AM	587	6	22	615
11:00 AM	541	4	16	561
11:15 AM	504	1	18	523
11:30 AM	574	2	21	597
11:45 AM	576	1	23	600
12:00 PM	557	1	27	585
12:15 PM	589	3	23	615
12:30 PM	595	1	28	624
12:45 PM	612	2	23	637
1:00 PM	635	2	33	670
1:15 PM	636	9	26	671
1:30 PM	688	3	30	721
1:45 PM	644	1	26	671
2:00 PM	693	5	18	716
2:15 PM	764	9	35	808
2:30 PM	708	5	35	748
2:45 PM	753	4	29	786
3:00 PM	836	8	17	861
3:15 PM	1050	3	17	1070
3:30 PM	916	4	12	932
3:45 PM	872	5	24	901
4:00 PM	887	0	23	910
4:15 PM	843	2	11	856
4:30 PM	879	1	21	901
4:45 PM	368	0	11	379

APPENDIX E: INTERSECTION LEVEL OF SERVICE CALCULATIONS



HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Existing, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	430	0	58	5	289	105	65	939	0
Future Volume (veh/h)	0	0	0	430	0	58	5	289	105	65	939	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				504	0	0	6	325	51	73	1055	0
Adj No. of Lanes				2	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				811	426	0	14	1394	622	119	1590	0
Arrive On Green				0.22	0.00	0.00	0.01	0.39	0.39	0.07	0.45	0.00
Sat Flow, veh/h				3619	1900	0	1774	3539	1579	1757	3597	0
Grp Volume(v), veh/h				504	0	0	6	325	51	73	1055	0
Grp Sat Flow(s),veh/h/ln				1810	1900	0	1774	1770	1579	1757	1752	0
Q Serve(g_s), s				5.4	0.0	0.0	0.1	2.6	0.9	1.7	10.1	0.0
Cycle Q Clear(g_c), s				5.4	0.0	0.0	0.1	2.6	0.9	1.7	10.1	0.0
Prop In Lane				1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				811	426	0	14	1394	622	119	1590	0
V/C Ratio(X)				0.62	0.00	0.00	0.42	0.23	0.08	0.61	0.66	0.00
Avail Cap(c_a), veh/h				2527	1327	0	1239	2472	1103	1227	2448	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				15.0	0.0	0.0	21.2	8.7	8.2	19.5	9.2	0.0
Incr Delay (d2), s/veh				0.8	0.0	0.0	18.5	0.1	0.1	5.1	0.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.7	0.0	0.0	0.1	1.3	0.4	1.0	4.9	0.0
LnGrp Delay(d),s/veh				15.8	0.0	0.0	39.7	8.8	8.2	24.5	9.7	0.0
LnGrp LOS				B			D	A	A	C	A	
Approach Vol, veh/h					504			382			1128	
Approach Delay, s/veh					15.8			9.2			10.6	
Approach LOS					B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	3.8	24.5			6.4	21.9		14.6				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	12.1			3.7	4.6		7.4				
Green Ext Time (p_c), s	0.0	7.4			0.2	2.2		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.6								
HCM 2010 LOS				B								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	959	0	0	0	0	0	409	5	0
Future Volume (veh/h)	0	0	0	959	0	0	0	0	0	409	5	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1054	0	0				449	5	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				1123	0	0				502	6	0
Arrive On Green				0.64	0.00	0.00				0.29	0.29	0.00
Sat Flow, veh/h				1757	0	0				1738	19	0
Grp Volume(v), veh/h				1054	0	0				454	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				65.8	0.0	0.0				30.1	0.0	0.0
Cycle Q Clear(g_c), s				65.8	0.0	0.0				30.1	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				1123	0	0				508	0	0
V/C Ratio(X)				0.94	0.00	0.00				0.89	0.00	0.00
Avail Cap(c_a), veh/h				1298	0	0				866	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				19.6	0.0	0.0				41.3	0.0	0.0
Incr Delay (d2), s/veh				12.1	0.0	0.0				6.7	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				35.4	0.0	0.0				15.6	0.0	0.0
LnGrp Delay(d),s/veh				31.7	0.0	0.0				48.0	0.0	0.0
LnGrp LOS				C						D		
Approach Vol, veh/h					1054						454	
Approach Delay, s/veh					31.7						48.0	
Approach LOS					C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				39.6		82.2						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				32.1		67.8						
Green Ext Time (p_c), s				3.0		10.0						
Intersection Summary												
HCM 2010 Ctrl Delay				36.6								
HCM 2010 LOS				D								

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↑	↗		↖	↗			
Traffic Vol, veh/h	3	421	0	0	917	123	0	0	805	0	0	0
Future Vol, veh/h	3	421	0	0	917	123	0	0	805	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	3	434	0	0	945	127	0	0	830	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	945	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	722	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	722	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	-	-	722	-	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	0	0	10	0	-
HCM Lane LOS	A	A	B	A	-
HCM 95th %tile Q(veh)	-	-	0	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Existing, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	841	379	310	815	10	99	6	138	5	7	5
Future Volume (veh/h)	12	841	379	310	815	10	99	6	138	5	7	5
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	12	858	168	316	832	10	101	6	19	5	7	0
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	139	1083	484	483	1318	16	205	60	51	99	96	0
Arrive On Green	0.08	0.31	0.31	0.14	0.37	0.37	0.06	0.03	0.03	0.05	0.03	0.00
Sat Flow, veh/h	1774	3539	1583	3442	3582	43	3343	1810	1535	1810	3705	0
Grp Volume(v), veh/h	12	858	168	316	411	431	101	6	19	5	7	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1855	1672	1810	1535	1810	1805	0
Q Serve(g_s), s	0.2	8.5	3.2	3.3	7.3	7.3	1.1	0.1	0.5	0.1	0.1	0.0
Cycle Q Clear(g_c), s	0.2	8.5	3.2	3.3	7.3	7.3	1.1	0.1	0.5	0.1	0.1	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	139	1083	484	483	651	683	205	60	51	99	96	0
V/C Ratio(X)	0.09	0.79	0.35	0.65	0.63	0.63	0.49	0.10	0.37	0.05	0.07	0.00
Avail Cap(c_a), veh/h	693	2764	1236	1344	1382	1449	1740	989	839	471	1973	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.4	12.2	10.4	15.6	10.0	10.0	17.4	18.0	18.2	17.2	18.2	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.2	0.6	0.4	0.4	0.7	0.3	1.7	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.1	1.4	1.6	3.6	3.8	0.5	0.1	0.2	0.1	0.0	0.0
LnGrp Delay(d),s/veh	16.5	12.7	10.5	16.2	10.4	10.4	18.1	18.3	19.8	17.3	18.4	0.0
LnGrp LOS	B	B	B	B	B	B	B	B	B	B	B	B
Approach Vol, veh/h		1038			1158			126				12
Approach Delay, s/veh		12.4			12.0			18.4				17.9
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	17.1	5.9	5.6	7.5	19.4	5.6	5.9				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	5.3	10.5	3.1	2.1	2.2	9.3	2.1	2.5				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			12.5									
HCM 2010 LOS			B									

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↗		↖	↗	
Traffic Vol, veh/h	46	800	13	234	1208	24	3	1	16	6	3	31
Future Vol, veh/h	46	800	13	234	1208	24	3	1	16	6	3	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	300	-	-	85	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	48	833	14	244	1258	25	3	1	17	6	3	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1284	0	0	848	0	0	2056	2709	427	2275	2704	643
Stage 1	-	-	-	-	-	-	937	937	-	1760	1760	-
Stage 2	-	-	-	-	-	-	1119	1772	-	515	944	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.6	6.6	7	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.55	4.05	3.35	3.52	4.02	3.32
Pot Cap-1 Maneuver	536	-	-	785	-	-	31	20	568	22	21	416
Stage 1	-	-	-	-	-	-	279	335	-	88	136	-
Stage 2	-	-	-	-	-	-	215	130	-	511	339	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	535	-	-	784	-	-	17	13	566	14	13	416
Mov Cap-2 Maneuver	-	-	-	-	-	-	17	13	-	14	13	-
Stage 1	-	-	-	-	-	-	254	305	-	80	94	-
Stage 2	-	-	-	-	-	-	132	89	-	449	308	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			1.9			64.3			103.6		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	17	162	535	-	-	784	-	-	14	111
HCM Lane V/C Ratio	0.184	0.109	0.09	-	-	0.311	-	-	0.446	0.319
HCM Control Delay (s)	259.5	29.9	12.4	-	-	11.7	-	-	396.8	51.9
HCM Lane LOS	F	D	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	0.5	0.4	0.3	-	-	1.3	-	-	1.1	1.2

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	886	19	5	1407	8	3	0	1	3	1	2
Future Vol, veh/h	2	886	19	5	1407	8	3	0	1	3	1	2
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	330	-	-	330	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	50	50	50	0	0	0
Mvmt Flow	2	923	20	5	1466	8	3	0	1	3	1	2



















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1475	0	0	944	0	0	1682	2423	473	1947	2429	738
Stage 1	-	-	-	-	-	-	938	938	-	1481	1481	-
Stage 2	-	-	-	-	-	-	744	1485	-	466	948	-
Critical Hdwy	4.14	-	-	4.14	-	-	8.5	7.5	7.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.5	6.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.5	6.5	-	6.5	5.5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	4	4.5	3.8	3.5	4	3.3
Pot Cap-1 Maneuver	453	-	-	722	-	-	37	16	426	40	32	365
Stage 1	-	-	-	-	-	-	205	250	-	134	191	-
Stage 2	-	-	-	-	-	-	281	121	-	551	342	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	453	-	-	721	-	-	36	16	426	40	32	365
Mov Cap-2 Maneuver	-	-	-	-	-	-	36	16	-	40	32	-
Stage 1	-	-	-	-	-	-	204	249	-	133	189	-
Stage 2	-	-	-	-	-	-	276	120	-	547	340	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			88.9			77.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	47	453	-	-	721	-	-	56
HCM Lane V/C Ratio	0.089	0.005	-	-	0.007	-	-	0.112
HCM Control Delay (s)	88.9	13	-	-	10	-	-	77.2
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.4

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Existing, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	761	20	4	931	58	12	10	1	70	146	389
Future Volume (veh/h)	113	761	20	4	931	58	12	10	1	70	146	389
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	119	801	19	4	980	55	13	11	0	74	154	335
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	153	1441	34	6	1097	62	223	153	0	127	183	349
Arrive On Green	0.09	0.40	0.40	0.00	0.32	0.32	0.37	0.35	0.00	0.37	0.35	0.35
Sat Flow, veh/h	1792	3567	85	1774	3407	191	352	431	0	155	515	984
Grp Volume(v), veh/h	119	401	419	4	509	526	24	0	0	563	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1864	1774	1770	1829	782	0	0	1654	0	0
Q Serve(g_s), s	3.7	9.7	9.7	0.1	15.4	15.4	0.0	0.0	0.0	12.7	0.0	0.0
Cycle Q Clear(g_c), s	3.7	9.7	9.7	0.1	15.4	15.4	0.5	0.0	0.0	18.4	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.10	0.54		0.00	0.13		0.60
Lane Grp Cap(c), veh/h	153	722	753	6	570	589	385	0	0	677	0	0
V/C Ratio(X)	0.78	0.56	0.56	0.70	0.89	0.89	0.06	0.00	0.00	0.83	0.00	0.00
Avail Cap(c_a), veh/h	477	951	992	472	942	974	385	0	0	677	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.3	12.9	12.9	28.1	18.2	18.2	11.8	0.0	0.0	17.6	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.2	0.2	43.9	3.8	3.7	0.0	0.0	0.0	8.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.8	5.1	0.1	8.1	8.3	0.2	0.0	0.0	9.7	0.0	0.0
LnGrp Delay(d),s/veh	28.5	13.2	13.1	71.9	21.9	21.8	11.8	0.0	0.0	25.8	0.0	0.0
LnGrp LOS	C	B	B	E	C	C	B			C		
Approach Vol, veh/h		939			1039			24			563	
Approach Delay, s/veh		15.1			22.1			11.8			25.8	
Approach LOS		B			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.7	28.1		24.6	8.3	23.4		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	2.1	11.7		20.4	5.7	17.4		2.5				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				20.2								
HCM 2010 LOS				C								

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	28	27	188	574	74
Future Vol, veh/h	29	28	27	188	574	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	30	29	204	624	80












Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	926	664	704	0	-	0
Stage 1	664	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	298	461	894	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	461	894	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.4	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	894	-	353	-	-
HCM Lane V/C Ratio	0.033	-	0.176	-	-
HCM Control Delay (s)	9.2	-	17.4	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Existing, AM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	737	130	216	974	20	41		
Future Volume (veh/h)	737	130	216	974	20	41		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	776	124	227	1025	21	43		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	974	156	287	2296	71	127		
Arrive On Green	0.32	0.32	0.16	0.66	0.04	0.04		
Sat Flow, veh/h	3151	489	1757	3597	1723	3076		
Grp Volume(v), veh/h	449	451	227	1025	21	43		
Grp Sat Flow(s),veh/h/ln	1770	1777	1757	1752	1723	1538		
Q Serve(g_s), s	7.1	7.1	3.8	4.4	0.4	0.4		
Cycle Q Clear(g_c), s	7.1	7.1	3.8	4.4	0.4	0.4		
Prop In Lane		0.27	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	564	566	287	2296	71	127		
V/C Ratio(X)	0.80	0.80	0.79	0.45	0.30	0.34		
Avail Cap(c_a), veh/h	1734	1741	1148	3435	1239	2211		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	9.5	9.5	12.3	2.6	14.2	14.3		
Incr Delay (d2), s/veh	1.0	1.0	1.9	0.1	0.9	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.5	3.5	2.0	2.0	0.2	0.2		
LnGrp Delay(d),s/veh	10.5	10.5	14.2	2.6	15.1	14.9		
LnGrp LOS	B	B	B	A	B	B		
Approach Vol, veh/h	900			1252	64			
Approach Delay, s/veh	10.5			4.7	14.9			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.3	15.1				25.4		5.3
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	5.8	9.1				6.4		2.4
Green Ext Time (p_c), s	0.0	0.7				1.2		0.0
Intersection Summary								
HCM 2010 Ctrl Delay	7.4							
HCM 2010 LOS	A							
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	647	31	78	914	17	127	18	113	33	42	187
Future Volume (veh/h)	35	647	31	78	914	17	127	18	113	33	42	187
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1863	1863	1863	1900	1845	1845	1900	1863	1863
Adj Flow Rate, veh/h	38	696	0	84	983	0	137	19	0	35	45	0
Adj No. of Lanes	1	1	1	1	1	1	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	82	1151	978	108	1153	980	277	24	207	153	161	209
Arrive On Green	0.05	0.61	0.00	0.06	0.62	0.00	0.13	0.13	0.00	0.13	0.13	0.00
Sat Flow, veh/h	1792	1881	1599	1774	1863	1583	1316	182	1568	557	1224	1583
Grp Volume(v), veh/h	38	696	0	84	983	0	156	0	0	80	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1774	1863	1583	1498	0	1568	1781	0	1583
Q Serve(g_s), s	1.4	14.9	0.0	3.1	27.8	0.0	3.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	14.9	0.0	3.1	27.8	0.0	6.4	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.88		1.00	0.44		1.00
Lane Grp Cap(c), veh/h	82	1151	978	108	1153	980	301	0	207	314	0	209
V/C Ratio(X)	0.46	0.60	0.00	0.78	0.85	0.00	0.52	0.00	0.00	0.25	0.00	0.00
Avail Cap(c_a), veh/h	548	1438	1223	543	1424	1211	754	0	719	843	0	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.4	7.8	0.0	30.3	10.1	0.0	27.2	0.0	0.0	25.7	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.2	0.0	4.6	3.7	0.0	0.5	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.6	0.0	1.6	15.1	0.0	2.8	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	31.9	8.0	0.0	34.8	13.7	0.0	27.8	0.0	0.0	25.9	0.0	0.0
LnGrp LOS	C	A		C	B		C			C		
Approach Vol, veh/h		734			1067			156			80	
Approach Delay, s/veh		9.3			15.4			27.8			25.9	
Approach LOS		A			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	45.3		12.6	7.0	45.8		12.6				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+15), s	15.0	16.9		4.6	3.4	29.8		8.4				
Green Ext Time (p_c), s	0.0	0.5		0.1	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				14.5								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Existing, AM
 06/11/2019



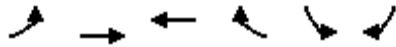
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	115	28	729	3	7	15	897	623	19	36	542	84
Future Volume (veh/h)	115	28	729	3	7	15	897	623	19	36	542	84
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	77	96	370	3	8	3	965	670	14	39	583	27
Adj No. of Lanes	1	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	213	223	1356	27	29	24	1062	2012	898	100	1022	445
Arrive On Green	0.12	0.12	0.12	0.02	0.02	0.02	0.31	0.57	0.57	0.03	0.29	0.29
Sat Flow, veh/h	1774	1863	3153	1560	1638	1384	3442	3539	1581	3442	3539	1542
Grp Volume(v), veh/h	77	96	370	3	8	3	965	670	14	39	583	27
Grp Sat Flow(s),veh/h/ln	1774	1863	1577	1560	1638	1384	1721	1770	1581	1721	1770	1542
Q Serve(g_s), s	3.1	3.8	6.0	0.1	0.4	0.2	21.1	7.9	0.3	0.9	11.0	1.0
Cycle Q Clear(g_c), s	3.1	3.8	6.0	0.1	0.4	0.2	21.1	7.9	0.3	0.9	11.0	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	223	1356	27	29	24	1062	2012	898	100	1022	445
V/C Ratio(X)	0.36	0.43	0.27	0.11	0.28	0.12	0.91	0.33	0.02	0.39	0.57	0.06
Avail Cap(c_a), veh/h	791	830	2383	616	647	546	1534	2254	1007	877	2705	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	32.1	14.5	38.0	38.1	38.0	26.1	9.0	7.4	37.4	23.8	20.2
Incr Delay (d2), s/veh	0.4	0.5	0.0	0.6	1.9	0.8	4.8	0.3	0.0	0.9	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.0	2.6	0.1	0.2	0.1	10.8	3.9	0.1	0.4	5.5	0.4
LnGrp Delay(d),s/veh	32.2	32.5	14.6	38.6	40.0	38.8	30.9	9.3	7.4	38.3	25.2	20.4
LnGrp LOS	C	C	B	D	D	D	C	A	A	D	C	C
Approach Vol, veh/h		543			14			1649			649	
Approach Delay, s/veh		20.2			39.4			21.9			25.7	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.3			6.4	6.4	50.8		14.9				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	23.1	13.0		2.4	2.9	9.9		8.0				
Green Ext Time (p_c), s	1.1	9.6		0.0	0.0	10.8		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			22.5									
HCM 2010 LOS			C									
Notes												

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Existing, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶↷	↶↷	↶	↷	↶↷	↶↷		
Traffic Volume (veh/h)	1048	260	372	26	28	1165		
Future Volume (veh/h)	1048	260	372	26	28	1165		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1127	280	400	9	30	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1265	2720	517	439	95	77		
Arrive On Green	0.37	0.77	0.28	0.28	0.03	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1127	280	400	9	30	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	14.0	0.9	9.1	0.2	0.4	0.0		
Cycle Q Clear(g_c), s	14.0	0.9	9.1	0.2	0.4	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1265	2720	517	439	95	77		
V/C Ratio(X)	0.89	0.10	0.77	0.02	0.32	0.00		
Avail Cap(c_a), veh/h	3017	4654	2426	2062	2017	1633		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	13.6	1.3	15.1	11.9	21.8	0.0		
Incr Delay (d2), s/veh	0.9	0.0	1.9	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.7	0.4	4.8	0.1	0.2	0.0		
LnGrp Delay(d),s/veh	14.5	1.3	17.0	11.9	22.5	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1407	409		30			
Approach Delay, s/veh		11.9	16.8		22.5			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.9		4.8	22.3	18.6		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		2.9		2.4	16.0	11.1		
Green Ext Time (p_c), s		1.3		0.0	0.7	1.7		
Intersection Summary								
HCM 2010 Ctrl Delay			13.1					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Existing, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	53	90	373	371	232	40		
Future Volume (veh/h)	53	90	373	371	232	40		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	56	57	397	395	247	27		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	196	599	481	2103	626	68		
Arrive On Green	0.11	0.11	0.27	0.59	0.20	0.20		
Sat Flow, veh/h	1757	1568	1774	3632	3283	346		
Grp Volume(v), veh/h	56	57	397	395	135	139		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1784		
Q Serve(g_s), s	1.1	0.9	7.8	1.9	2.5	2.5		
Cycle Q Clear(g_c), s	1.1	0.9	7.8	1.9	2.5	2.5		
Prop In Lane	1.00	1.00	1.00			0.19		
Lane Grp Cap(c), veh/h	196	599	481	2103	344	350		
V/C Ratio(X)	0.29	0.10	0.83	0.19	0.39	0.40		
Avail Cap(c_a), veh/h	1282	1569	959	5738	2841	2892		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.1	7.3	12.7	3.4	13.0	13.0		
Incr Delay (d2), s/veh	0.8	0.1	1.4	0.1	1.4	1.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	0.4	3.9	0.9	1.3	1.4		
LnGrp Delay(d),s/veh	15.9	7.4	14.1	3.5	14.3	14.3		
LnGrp LOS	B	A	B	A	B	B		
Approach Vol, veh/h	113			792	274			
Approach Delay, s/veh	11.6			8.8	14.3			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.7	13.7				28.4		8.6
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	20	60.0				60.0		27.0
Max Q Clear Time (g_c+19), s	4.5					3.9		3.1
Green Ext Time (p_c), s	0.4	2.7				4.5		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			10.4					
HCM 2010 LOS			B					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	21.9											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↕		↖	↗			↖	↗
Traffic Vol, veh/h	36	1	43	242	10	3	6	120	4	2	459	22
Future Vol, veh/h	36	1	43	242	10	3	6	120	4	2	459	22
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	38	1	46	257	11	3	6	128	4	2	488	23
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	10.3	16.9	11.3	29.3
HCM LOS	B	C	B	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	97%	0%	95%	0%	0%
Vol Thru, %	0%	97%	3%	0%	4%	100%	0%
Vol Right, %	0%	3%	0%	100%	1%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	124	37	43	255	461	22
LT Vol	6	0	36	0	242	2	0
Through Vol	0	120	1	0	10	459	0
RT Vol	0	4	0	43	3	0	22
Lane Flow Rate	6	132	39	46	271	490	23
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.013	0.24	0.083	0.081	0.512	0.818	0.034
Departure Headway (Hd)	7.086	6.552	7.577	6.365	6.795	6.002	5.29
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	502	545	470	558	529	603	674
Service Time	4.87	4.335	5.374	4.161	4.868	3.76	3.048
HCM Lane V/C Ratio	0.012	0.242	0.083	0.082	0.512	0.813	0.034
HCM Control Delay	10	11.4	11.1	9.7	16.9	30.3	8.2
HCM Lane LOS	A	B	B	A	C	D	A
HCM 95th-tile Q	0	0.9	0.3	0.3	2.9	8.3	0.1

Intersection

Intersection Delay, s/veh 56.3

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑	↗		↖	↗	↙	↑	↗	↙	↗	
Traffic Vol, veh/h	0	0	1	3	0	2	1	127	2	15	734	0
Future Vol, veh/h	0	0	1	3	0	2	1	127	2	15	734	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	20	20	20	2	2	2	1	1	1
Mvmt Flow	0	0	1	3	0	2	1	134	2	16	773	0
Number of Lanes	1	1	1	0	1	1	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	9.1	10.1	10.6	64.6
HCM LOS	A	B	B	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	100%	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	127	2	0	0	1	3	2	15	734
LT Vol	1	0	0	0	0	0	3	0	15	0
Through Vol	0	127	0	0	0	0	0	0	0	734
RT Vol	0	0	2	0	0	1	0	2	0	0
Lane Flow Rate	1	134	2	0	0	1	3	2	16	773
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.002	0.225	0.003	0	0	0.002	0.007	0.004	0.023	1.042
Departure Headway (Hd)	6.666	6.163	5.359	7.046	7.046	6.34	7.871	6.663	5.356	4.856
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	586	660	0	0	568	457	540	669	749
Service Time	4.366	3.863	3.158	4.746	4.746	4.04	5.571	4.363	3.086	2.585
HCM Lane V/C Ratio	0.002	0.229	0.003	0	0	0.002	0.007	0.004	0.024	1.032
HCM Control Delay	9.4	10.6	8.2	9.7	9.7	9.1	10.6	9.4	8.2	65.8
HCM Lane LOS	A	B	A	N	N	A	B	A	A	F
HCM 95th-tile Q	0	0.9	0	0	0	0	0	0	0.1	19

Intersection												
Intersection Delay, s/veh	17.9											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	162	2	6	9	48	0	7	29	337	6	5
Future Vol, veh/h	7	162	2	6	9	48	0	7	29	337	6	5
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	5	5	5	0	0	0	1	1	1
Mvmt Flow	9	200	2	7	11	59	0	9	36	416	7	6
Number of Lanes	1	1	0	1	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	2
HCM Control Delay	12.7	9.7	9.3	22.9
HCM LOS	B	A	A	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	0%	100%	0%	100%	0%	0%	98%	0%
Vol Thru, %	19%	0%	99%	0%	100%	0%	2%	0%
Vol Right, %	81%	0%	1%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	7	164	6	9	48	343	5
LT Vol	0	7	0	6	0	0	337	0
Through Vol	7	0	162	0	9	0	6	0
RT Vol	29	0	2	0	0	48	0	5
Lane Flow Rate	44	9	202	7	11	59	423	6
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.075	0.017	0.362	0.015	0.021	0.101	0.72	0.008
Departure Headway (Hd)	6.049	6.952	6.434	7.337	6.828	6.115	6.125	4.931
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	591	515	559	487	523	584	593	726
Service Time	3.798	4.696	4.178	5.091	4.582	3.869	3.853	2.659
HCM Lane V/C Ratio	0.074	0.017	0.361	0.014	0.021	0.101	0.713	0.008
HCM Control Delay	9.3	9.8	12.8	10.2	9.7	9.6	23.1	7.7
HCM Lane LOS	A	A	B	B	A	A	C	A
HCM 95th-tile Q	0.2	0.1	1.6	0	0.1	0.3	6	0

Intersection	
Intersection Delay, s/veh	26.5
Intersection LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	9	19	96	29	83	644
Future Vol, veh/h	9	19	96	29	83	644
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	10	20	103	31	89	692
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	9.2	8.6	30.2
HCM LOS	A	A	D

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	29	9	19	83	644
LT Vol	0	0	9	0	83	0
Through Vol	96	0	0	0	0	644
RT Vol	0	29	0	19	0	0
Lane Flow Rate	103	31	10	20	89	692
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.15	0.039	0.019	0.033	0.127	0.892
Departure Headway (Hd)	5.245	4.54	7.052	5.84	5.137	4.637
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	686	791	510	616	690	769
Service Time	2.957	2.253	4.764	3.551	2.929	2.428
HCM Lane V/C Ratio	0.15	0.039	0.02	0.032	0.129	0.9
HCM Control Delay	8.9	7.4	9.9	8.8	8.7	33
HCM Lane LOS	A	A	A	A	A	D
HCM 95th-tile Q	0.5	0.1	0.1	0.1	0.4	11.6

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	78	16	85	93	28	7	5	64	2	6	6
Future Vol, veh/h	0	78	16	85	93	28	7	5	64	2	6	6
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	0	92	19	100	109	33	8	6	75	2	7	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	9	7.8	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	0%	41%	14%
Vol Thru, %	7%	83%	45%	43%
Vol Right, %	84%	17%	14%	43%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	76	94	206	14
LT Vol	7	0	85	2
Through Vol	5	78	93	6
RT Vol	64	16	28	6
Lane Flow Rate	89	111	242	16
Geometry Grp	1	1	1	1
Degree of Util (X)	0.106	0.135	0.283	0.021
Departure Headway (Hd)	4.285	4.389	4.204	4.562
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	840	821	841	787
Service Time	2.293	2.399	2.303	2.574
HCM Lane V/C Ratio	0.106	0.135	0.288	0.02
HCM Control Delay	7.8	8.1	9	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.5	1.2	0.1

Intersection												
Intersection Delay, s/veh	12.9											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	4	29	15	20	308	30	40	28	5	15	130	6
Future Vol, veh/h	4	29	15	20	308	30	40	28	5	15	130	6
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	8	8	8	3	3	3	19	19	19	7	7	7
Mvmt Flow	5	36	19	25	380	37	49	35	6	19	160	7
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	8.9	14.6	10.1	11.4
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	55%	8%	6%	10%	0%
Vol Thru, %	38%	60%	86%	90%	0%
Vol Right, %	7%	31%	8%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	48	358	145	6
LT Vol	40	4	20	15	0
Through Vol	28	29	308	130	0
RT Vol	5	15	30	0	6
Lane Flow Rate	90	59	442	179	7
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.152	0.088	0.588	0.304	0.011
Departure Headway (Hd)	6.054	5.352	4.786	6.12	5.359
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	595	671	747	591	671
Service Time	4.064	3.372	2.875	3.828	3.066
HCM Lane V/C Ratio	0.151	0.088	0.592	0.303	0.01
HCM Control Delay	10.1	8.9	14.6	11.5	8.1
HCM Lane LOS	B	A	B	B	A
HCM 95th-tile Q	0.5	0.3	3.9	1.3	0

Intersection			
Intersection Delay, s/veh	32.1		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	51	1067	133
Demand Flow Rate, veh/h	64	1078	137
Vehicles Circulating, veh/h	717	2	47
Vehicles Exiting, veh/h	363	182	733
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	9.8	36.6	4.6
Approach LOS	A	E	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	64	1078	137
Cap Entry Lane, veh/h	552	1128	1078
Entry HV Adj Factor	0.803	0.990	0.971
Flow Entry, veh/h	51	1067	133
Cap Entry, veh/h	443	1117	1047
V/C Ratio	0.116	0.956	0.127
Control Delay, s/veh	9.8	36.6	4.6
LOS	A	E	A
95th %tile Queue, veh	0	17	0

Intersection	
Intersection Delay, s/veh	60.3
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	54	64	580	12	10	279
Future Vol, veh/h	54	64	580	12	10	279
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	8	8	1	1	1	1
Mvmt Flow	64	75	682	14	12	328
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	10.8	91.8	16
HCM LOS	B	F	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	64	580	12	10	279
LT Vol	54	0	0	0	10	0
Through Vol	0	64	580	0	0	0
RT Vol	0	0	0	12	0	279
Lane Flow Rate	64	75	682	14	12	328
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.125	0.138	1.112	0.02	0.024	0.546
Departure Headway (Hd)	7.323	6.811	5.865	5.156	7.466	6.249
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	492	529	621	698	482	581
Service Time	5.023	4.511	3.569	2.859	5.166	3.949
HCM Lane V/C Ratio	0.13	0.142	1.098	0.02	0.025	0.565
HCM Control Delay	11.1	10.6	93.5	8	10.3	16.2
HCM Lane LOS	B	B	F	A	B	C
HCM 95th-tile Q	0.4	0.5	20.9	0.1	0.1	3.3

Intersection	
Intersection Delay, s/veh	20.8
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	12	61	442	15	35	146
Future Vol, veh/h	12	61	442	15	35	146
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	5	5	1	1	3	3
Mvmt Flow	15	77	559	19	44	185
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	9.5	26.7	10.5
HCM LOS	A	D	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	61	442	15	35	146
LT Vol	12	0	0	0	35	0
Through Vol	0	61	442	0	0	0
RT Vol	0	0	0	15	0	146
Lane Flow Rate	15	77	559	19	44	185
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.027	0.127	0.816	0.024	0.084	0.289
Departure Headway (Hd)	6.441	5.934	5.25	4.545	6.849	5.638
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	606	683	776	526	641
Service Time	4.155	3.648	3.044	2.338	4.549	3.338
HCM Lane V/C Ratio	0.027	0.127	0.818	0.024	0.084	0.289
HCM Control Delay	9.3	9.5	27.3	7.5	10.2	10.6
HCM Lane LOS	A	A	D	A	B	B
HCM 95th-tile Q	0.1	0.4	8.6	0.1	0.3	1.2

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Vol, veh/h	84	10	77	18	13	390
Future Vol, veh/h	84	10	77	18	13	390
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	102	12	94	22	16	476
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	9.6	9.1	13
HCM LOS	A	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	89%	0%	100%	0%
Vol Thru, %	11%	81%	0%	0%
Vol Right, %	0%	19%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	95	13	390
LT Vol	84	0	13	0
Through Vol	10	77	0	0
RT Vol	0	18	0	390
Lane Flow Rate	115	116	16	476
Geometry Grp	2	2	7	7
Degree of Util (X)	0.173	0.163	0.025	0.581
Departure Headway (Hd)	5.433	5.079	5.606	4.4
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	657	701	638	818
Service Time	3.498	3.145	3.343	2.136
HCM Lane V/C Ratio	0.175	0.165	0.025	0.582
HCM Control Delay	9.6	9.1	8.5	13.1
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.6	0.1	3.8

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	322	8	38	753	0	33	0	72	0	0	0
Future Volume (veh/h)	0	322	8	38	753	0	33	0	72	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	362	7	43	846	0	37	0	9			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	7	1195	23	92	1920	0	79	0	70			
Arrive On Green	0.00	0.34	0.34	0.05	0.54	0.00	0.04	0.00	0.04			
Sat Flow, veh/h	1740	3483	67	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	180	189	43	846	0	37	0	9			
Grp Sat Flow(s),veh/h/ln	1740	1736	1815	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	1.9	1.9	0.6	3.5	0.0	0.5	0.0	0.1			
Cycle Q Clear(g_c), s	0.0	1.9	1.9	0.6	3.5	0.0	0.5	0.0	0.1			
Prop In Lane	1.00		0.04	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	7	596	623	92	1920	0	79	0	70			
V/C Ratio(X)	0.00	0.30	0.30	0.47	0.44	0.00	0.47	0.00	0.13			
Avail Cap(c_a), veh/h	1425	4265	4460	1453	8697	0	1981	0	1768			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.9	5.9	11.2	3.4	0.0	11.4	0.0	11.2			
Incr Delay (d2), s/veh	0.0	0.5	0.5	1.4	0.2	0.0	1.6	0.0	0.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.9	1.0	0.3	1.7	0.0	0.3	0.0	0.1			
LnGrp Delay(d),s/veh	0.0	6.4	6.4	12.6	3.6	0.0	13.0	0.0	11.5			
LnGrp LOS		A	A	B	A		B		B			
Approach Vol, veh/h		369			889			46				
Approach Delay, s/veh		6.4			4.0			12.7				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.9	13.8			0.0	18.6		5.8				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax)	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+12)	12.6	3.9			0.0	5.5		2.5				
Green Ext Time (p_c), s	0.0	3.8			0.0	7.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				5.0								
HCM 2010 LOS				A								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	771	0	0	398	0
Future Vol, veh/h	0	0	0	0	0	0	0	771	0	0	398	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	876	0	0	452	0




















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1328	1328	452	1328	1328	876	452	0	0	876	0	0
Stage 1	452	452	-	876	876	-	-	-	-	-	-	-
Stage 2	876	876	-	452	452	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	132	155	608	132	155	348	1109	-	-	771	-	-
Stage 1	587	570	-	344	367	-	-	-	-	-	-	-
Stage 2	344	367	-	587	570	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	132	155	608	132	155	348	1109	-	-	771	-	-
Mov Cap-2 Maneuver	132	155	-	132	155	-	-	-	-	-	-	-
Stage 1	587	570	-	344	367	-	-	-	-	-	-	-
Stage 2	344	367	-	587	570	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1109	-	-	-	771	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Existing, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	261	1	1	489	104	3	6	4	145	3	301
Future Volume (veh/h)	132	261	1	1	489	104	3	6	4	145	3	301
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	143	284	1	1	569	113	3	7	2	169	3	108
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	181	1062	4	3	714	142	7	16	5	225	4	364
Arrive On Green	0.10	0.57	0.57	0.00	0.47	0.47	0.02	0.02	0.02	0.13	0.13	0.13
Sat Flow, veh/h	1774	1855	7	1774	1510	300	456	1064	304	1728	31	1568
Grp Volume(v), veh/h	143	0	285	1	0	682	12	0	0	172	0	108
Grp Sat Flow(s),veh/h/ln	1774	0	1862	1774	0	1810	1824	0	0	1758	0	1568
Q Serve(g_s), s	5.0	0.0	4.9	0.0	0.0	20.3	0.4	0.0	0.0	6.0	0.0	3.6
Cycle Q Clear(g_c), s	5.0	0.0	4.9	0.0	0.0	20.3	0.4	0.0	0.0	6.0	0.0	3.6
Prop In Lane	1.00		0.00	1.00		0.17	0.25		0.17	0.98		1.00
Lane Grp Cap(c), veh/h	181	0	1065	3	0	856	27	0	0	229	0	364
V/C Ratio(X)	0.79	0.00	0.27	0.36	0.00	0.80	0.44	0.00	0.00	0.75	0.00	0.30
Avail Cap(c_a), veh/h	837	0	1757	837	0	1708	860	0	0	830	0	900
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	6.9	31.7	0.0	14.2	31.1	0.0	0.0	26.7	0.0	20.1
Incr Delay (d2), s/veh	2.9	0.0	0.2	26.4	0.0	2.7	4.0	0.0	0.0	1.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	2.5	0.0	0.0	10.7	0.2	0.0	0.0	3.0	0.0	1.6
LnGrp Delay(d),s/veh	30.8	0.0	7.1	58.1	0.0	16.9	35.1	0.0	0.0	28.6	0.0	20.3
LnGrp LOS	C		A	E		B	D			C		C
Approach Vol, veh/h		428			683			12			280	
Approach Delay, s/veh		15.0			17.0			35.1			25.4	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	41.4		13.3	10.3	35.1		5.0				
Change Period (Y+Rc), s	* 3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	* 30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+I1), s	2.0	6.9		8.0	7.0	22.3		2.4				
Green Ext Time (p_c), s	0.0	2.6		0.3	0.0	7.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	31.1											
Intersection LOS	D											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	↔
Traffic Vol, veh/h	1	5	1	7	1	2	18	122	13	32	609	13
Future Vol, veh/h	1	5	1	7	1	2	18	122	13	32	609	13
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	14	14	14	0	0	0	2	2	2	1	1	1
Mvmt Flow	1	5	1	8	1	2	20	134	14	35	669	14
Number of Lanes	0	1	0	0	1	1	1	2	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	9.9	9.9	9.6	36.7
HCM LOS	A	A	A	E

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	14%	88%	0%	100%	0%	0%
Vol Thru, %	0%	100%	76%	71%	12%	0%	0%	100%	0%
Vol Right, %	0%	0%	24%	14%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	81	54	7	8	2	32	609	13
LT Vol	18	0	0	1	7	0	32	0	0
Through Vol	0	81	41	5	1	0	0	609	0
RT Vol	0	0	13	1	0	2	0	0	13
Lane Flow Rate	20	89	59	8	9	2	35	669	14
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.036	0.148	0.095	0.015	0.018	0.004	0.053	0.921	0.017
Departure Headway (Hd)	6.478	5.978	5.808	6.958	7.179	6.043	5.455	4.955	4.254
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	551	597	614	510	495	586	655	729	838
Service Time	4.241	3.74	3.57	4.758	4.979	3.843	3.197	2.696	1.996
HCM Lane V/C Ratio	0.036	0.149	0.096	0.016	0.018	0.003	0.053	0.918	0.017
HCM Control Delay	9.5	9.8	9.2	9.9	10.1	8.9	8.5	38.8	7.1
HCM Lane LOS	A	A	A	A	B	A	A	E	A
HCM 95th-tile Q	0.1	0.5	0.3	0	0.1	0	0.2	12.6	0.1

Intersection												
Intersection Delay, s/veh	9.1											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	7	44	5	57	8	18	9	122	62	12	136	2
Future Vol, veh/h	7	44	5	57	8	18	9	122	62	12	136	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	8	48	5	63	9	20	10	134	68	13	149	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.4	8.7	9.4	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	12%	69%	100%	0%
Vol Thru, %	0%	66%	79%	10%	0%	99%
Vol Right, %	0%	34%	9%	22%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	184	56	83	12	138
LT Vol	9	0	7	57	12	0
Through Vol	0	122	44	8	0	136
RT Vol	0	62	5	18	0	2
Lane Flow Rate	10	202	62	91	13	152
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.015	0.271	0.084	0.125	0.02	0.214
Departure Headway (Hd)	5.571	4.831	4.911	4.92	5.588	5.075
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	642	742	728	728	640	707
Service Time	3.306	2.566	2.951	2.957	3.324	2.811
HCM Lane V/C Ratio	0.016	0.272	0.085	0.125	0.02	0.215
HCM Control Delay	8.4	9.4	8.4	8.7	8.4	9.2
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	1.1	0.3	0.4	0.1	0.8

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	748	126	20	754	0	158	0	16	14	4	18
Future Volume (veh/h)	0	748	126	20	754	0	158	0	16	14	4	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	890	0	24	898	0	188	0	5	17	5	2
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	1998	894	26	2446	0	0	0	0	24	25	21
Arrive On Green	0.00	0.56	0.00	0.01	0.69	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Sat Flow, veh/h	0	3632	1583	1774	3632	0	0	0	1707	1792	1524	
Grp Volume(v), veh/h	0	890	0	24	898	0	0.0	0.0	17	5	2	
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	0.0	0.0	1707	1792	1524	
Q Serve(g_s), s	0.0	4.6	0.0	0.4	3.3	0.0	0.0	0.0	0.3	0.1	0.0	
Cycle Q Clear(g_c), s	0.0	4.6	0.0	0.4	3.3	0.0	0.0	0.0	0.3	0.1	0.0	
Prop In Lane	0.00		1.00	1.00		0.00			1.00		1.00	
Lane Grp Cap(c), veh/h	0	1998	894	26	2446	0	0	0	24	25	21	
V/C Ratio(X)	0.00	0.45	0.00	0.92	0.37	0.00	0.00	0.00	0.71	0.20	0.09	
Avail Cap(c_a), veh/h	0	5102	2283	1137	5102	0	0	0	1367	1436	1220	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	0.0	4.0	0.0	15.4	2.0	0.0	0.0	0.0	15.3	15.2	15.2	
Incr Delay (d2), s/veh	0.0	0.2	0.0	33.8	0.1	0.0	0.0	0.0	13.4	1.4	0.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.4	1.5	0.0	0.0	0.0	0.2	0.1	0.0	
LnGrp Delay(d),s/veh	0.0	4.2	0.0	49.2	2.1	0.0	0.0	0.0	28.8	16.6	15.9	
LnGrp LOS		A		D	A				C	B	B	
Approach Vol, veh/h		890			922						24	
Approach Delay, s/veh		4.2			3.4						25.2	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.0	22.2		5.0		26.2				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.4	6.6		2.3		5.3				
Green Ext Time (p_c), s			0.0	11.1		0.0		10.4				
Intersection Summary												
HCM 2010 Ctrl Delay			4.0									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	696	2	5	424	68	2	1	1	272	4	343
Future Volume (veh/h)	78	696	2	5	424	68	2	1	1	272	4	343
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	87	773	2	6	471	67	2	1	0	302	4	105
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	111	2281	6	11	1752	248	276	126	0	403	436	371
Arrive On Green	0.06	0.63	0.63	0.01	0.57	0.57	0.24	0.23	0.00	0.23	0.23	0.23
Sat Flow, veh/h	1774	3621	9	1740	3054	432	930	545	0	1424	1881	1599
Grp Volume(v), veh/h	87	378	397	6	267	271	3	0	0	302	4	105
Grp Sat Flow(s),veh/h/ln	1774	1770	1861	1740	1736	1751	1476	0	0	1424	1881	1599
Q Serve(g_s), s	4.8	10.0	10.0	0.3	7.7	7.8	0.0	0.0	0.0	20.5	0.2	5.4
Cycle Q Clear(g_c), s	4.8	10.0	10.0	0.3	7.7	7.8	0.1	0.0	0.0	20.6	0.2	5.4
Prop In Lane	1.00		0.01	1.00		0.25	0.67		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	111	1115	1172	11	995	1004	411	0	0	403	436	371
V/C Ratio(X)	0.79	0.34	0.34	0.56	0.27	0.27	0.01	0.00	0.00	0.75	0.01	0.28
Avail Cap(c_a), veh/h	220	1115	1172	216	995	1004	662	0	0	648	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.82	0.82	0.82	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	8.7	8.7	49.6	10.7	10.8	29.4	0.0	0.0	37.4	29.6	31.6
Incr Delay (d2), s/veh	4.0	0.7	0.7	13.3	0.5	0.5	0.0	0.0	0.0	1.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.0	5.3	0.2	3.9	3.9	0.1	0.0	0.0	8.3	0.1	2.4
LnGrp Delay(d),s/veh	50.2	9.4	9.4	62.9	11.3	11.3	29.4	0.0	0.0	38.5	29.6	31.7
LnGrp LOS	D	A	A	E	B	B	C			D	C	C
Approach Vol, veh/h		862			544			3			411	
Approach Delay, s/veh		13.5			11.9			29.4			36.7	
Approach LOS		B			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	67.6		27.8	10.2	62.0		27.8				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1/3), s	12.3	12.0		22.6	6.8	9.8		2.1				
Green Ext Time (p_c), s	0.0	2.8		0.6	0.0	1.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	123	127	710	21	187	10	250	90	2	10	179	59
Future Volume (veh/h)	123	127	710	21	187	10	250	90	2	10	179	59
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	138	143	0	24	210	9	281	101	1	11	201	66
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	183	493	419	39	314	13	682	633	6	20	411	131
Arrive On Green	0.10	0.26	0.00	0.02	0.18	0.18	0.20	0.34	0.34	0.01	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1707	1706	73	3476	1859	18	1774	2639	841
Grp Volume(v), veh/h	138	143	0	24	0	219	281	0	102	11	133	134
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1779	1738	0	1878	1774	1770	1710
Q Serve(g_s), s	3.8	3.1	0.0	0.7	0.0	5.7	3.5	0.0	1.9	0.3	3.4	3.6
Cycle Q Clear(g_c), s	3.8	3.1	0.0	0.7	0.0	5.7	3.5	0.0	1.9	0.3	3.4	3.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.01	1.00		0.49
Lane Grp Cap(c), veh/h	183	493	419	39	0	328	682	0	640	20	275	266
V/C Ratio(X)	0.75	0.29	0.00	0.62	0.00	0.67	0.41	0.00	0.16	0.55	0.48	0.50
Avail Cap(c_a), veh/h	711	1120	952	684	0	1069	696	0	1129	533	1064	1028
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	14.6	0.0	24.2	0.0	18.9	17.5	0.0	11.5	24.5	19.2	19.3
Incr Delay (d2), s/veh	6.1	0.4	0.0	5.9	0.0	2.8	0.3	0.0	0.2	8.3	1.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.6	0.0	0.4	0.0	3.1	1.7	0.0	1.0	0.2	1.8	1.8
LnGrp Delay(d),s/veh	27.9	15.0	0.0	30.0	0.0	21.8	17.8	0.0	11.7	32.9	20.8	21.1
LnGrp LOS	C	B		C		C	B		B	C	C	C
Approach Vol, veh/h		281			243			383			278	
Approach Delay, s/veh		21.3			22.6			16.2			21.4	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.3	12.3	9.7	13.7	5.1	21.5	5.6	17.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+15), s	5.6	5.6	5.8	7.7	2.3	3.9	2.7	5.1				
Green Ext Time (p_c), s	0.3	1.8	0.3	1.5	0.0	0.9	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	260	58	3	138	29
Future Vol, veh/h	12	260	58	3	138	29
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	16	338	75	4	179	38
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10	8.6	10.1
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	83%
Vol Thru, %	95%	0%	17%
Vol Right, %	5%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	61	272	167
LT Vol	0	12	138
Through Vol	58	0	29
RT Vol	3	260	0
Lane Flow Rate	79	353	217
Geometry Grp	1	1	1
Degree of Util (X)	0.109	0.407	0.299
Departure Headway (Hd)	4.964	4.145	4.96
Convergence, Y/N	Yes	Yes	Yes
Cap	718	869	722
Service Time	3.025	2.175	3.013
HCM Lane V/C Ratio	0.11	0.406	0.301
HCM Control Delay	8.6	10	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.4	2	1.3

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	76	17	8	277	7	3
Future Vol, veh/h	76	17	8	277	7	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	97	22	10	355	9	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	119	0	483
Stage 1	-	-	-	-	108
Stage 2	-	-	-	-	375
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	1457	-	546
Stage 1	-	-	-	-	921
Stage 2	-	-	-	-	699
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1457	-	541
Mov Cap-2 Maneuver	-	-	-	-	541
Stage 1	-	-	-	-	913
Stage 2	-	-	-	-	699

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	621	-	-	1457	-
HCM Lane V/C Ratio	0.021	-	-	0.007	-
HCM Control Delay (s)	10.9	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	45	23	10	230	0	1	7	2	0	5	53
Future Vol, veh/h	14	45	23	10	230	0	1	7	2	0	5	53
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	18	57	29	13	291	0	1	9	3	0	6	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	9.6	8.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	17%	4%	0%
Vol Thru, %	70%	55%	96%	9%
Vol Right, %	20%	28%	0%	91%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	82	240	58
LT Vol	1	14	10	0
Through Vol	7	45	230	5
RT Vol	2	23	0	53
Lane Flow Rate	13	104	304	73
Geometry Grp	1	1	1	1
Degree of Util (X)	0.018	0.126	0.355	0.088
Departure Headway (Hd)	5.139	4.374	4.205	4.307
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	822	842	835
Service Time	3.15	2.387	2.294	2.313
HCM Lane V/C Ratio	0.019	0.127	0.361	0.087
HCM Control Delay	8.2	8	9.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.4	1.6	0.3

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	37	1	2	157	0	0	20	0	0	97	60
Future Vol, veh/h	19	37	1	2	157	0	0	20	0	0	97	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	23	45	1	2	191	0	0	24	0	0	118	73

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	275	180	155	203	216	25	191	0	0	25	0	0
Stage 1	155	155	-	25	25	-	-	-	-	-	-	-
Stage 2	120	25	-	178	191	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	658	696	865	759	685	1057	1336	-	-	1539	-	-
Stage 1	824	751	-	998	878	-	-	-	-	-	-	-
Stage 2	861	855	-	828	746	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	516	695	865	720	684	1056	1336	-	-	1538	-	-
Mov Cap-2 Maneuver	516	695	-	720	684	-	-	-	-	-	-	-
Stage 1	824	751	-	997	877	-	-	-	-	-	-	-
Stage 2	673	854	-	777	746	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.5		12.3		0		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1336	-	-	625	684	1538	-	-
HCM Lane V/C Ratio	-	-	-	0.111	0.283	-	-	-
HCM Control Delay (s)	0	-	-	11.5	12.3	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	1.2	0	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	31	0	0	88	409	176
Future Vol, veh/h	31	0	0	88	409	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	35	0	0	99	460	198
























Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	658	559	658	0	-	0
Stage 1	559	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	412	508	930	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	412	508	930	-	-	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	930	-	412	-	-
HCM Lane V/C Ratio	-	-	0.085	-	-
HCM Control Delay (s)	0	-	14.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Existing, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	94	75	361	31	46	47	317	178	162	717	46
Future Volume (veh/h)	22	94	75	361	31	46	47	317	178	162	717	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	25	108	54	415	36	0	54	364	0	186	824	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	49	144	72	460	667	567	88	683	306	229	961	430
Arrive On Green	0.03	0.13	0.13	0.26	0.36	0.00	0.05	0.19	0.00	0.13	0.27	0.00
Sat Flow, veh/h	1723	1138	569	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	25	0	162	415	36	0	54	364	0	186	824	0
Grp Sat Flow(s),veh/h/ln	1723	0	1707	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	0.9	0.0	5.6	13.9	0.8	0.0	1.8	5.6	0.0	6.3	13.6	0.0
Cycle Q Clear(g_c), s	0.9	0.0	5.6	13.9	0.8	0.0	1.8	5.6	0.0	6.3	13.6	0.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	0	217	460	667	567	88	683	306	229	961	430
V/C Ratio(X)	0.51	0.00	0.75	0.90	0.05	0.00	0.62	0.53	0.00	0.81	0.86	0.00
Avail Cap(c_a), veh/h	295	0	862	592	1243	1057	160	1455	651	448	2017	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	25.9	22.0	12.9	0.0	28.6	22.4	0.0	26.0	21.2	0.0
Incr Delay (d2), s/veh	3.1	0.0	1.9	12.5	0.0	0.0	2.6	0.2	0.0	2.6	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	2.8	8.4	0.4	0.0	1.0	2.8	0.0	3.2	6.8	0.0
LnGrp Delay(d),s/veh	32.5	0.0	27.8	34.5	12.9	0.0	31.2	22.6	0.0	28.6	22.1	0.0
LnGrp LOS	C		C	C	B		C	C		C	C	
Approach Vol, veh/h		187			451			418			1010	
Approach Delay, s/veh		28.4			32.8			23.7			23.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	21.2	6.2	26.5	12.4	16.2	20.4	12.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	3.8	15.6	2.9	2.8	8.3	7.6	15.9	7.6				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.0	0.0	0.4	0.1	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			25.9									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	353	16	13	382	15	30	45	7	30	9	13
Future Vol, veh/h	3	353	16	13	382	15	30	45	7	30	9	13
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	3	401	18	15	434	17	34	51	8	34	10	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	451	0	0	420	0	0	902	898	411	919	899	443
Stage 1	-	-	-	-	-	-	417	417	-	473	473	-
Stage 2	-	-	-	-	-	-	485	481	-	446	426	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	1104	-	-	1134	-	-	259	279	641	250	277	611
Stage 1	-	-	-	-	-	-	613	591	-	568	555	-
Stage 2	-	-	-	-	-	-	563	554	-	588	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1104	-	-	1133	-	-	241	273	640	208	271	611
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	273	-	208	271	-
Stage 1	-	-	-	-	-	-	610	588	-	566	545	-
Stage 2	-	-	-	-	-	-	529	544	-	528	579	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			24.9			22.7		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	273	1104	-	-	1133	-	-	262
HCM Lane V/C Ratio	0.341	0.003	-	-	0.013	-	-	0.226
HCM Control Delay (s)	24.9	8.3	0	-	8.2	0	-	22.7
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0.8

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	5	285	91	41	381	0	17	9	31	7	11	0
Future Vol, veh/h	5	285	91	41	381	0	17	9	31	7	11	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	6	339	108	49	454	0	20	11	37	8	13	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	454	0	0	447	0	0	964	957	393	981	1011	454
Stage 1	-	-	-	-	-	-	405	405	-	552	552	-
Stage 2	-	-	-	-	-	-	559	552	-	429	459	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1101	-	-	1113	-	-	235	258	656	231	241	610
Stage 1	-	-	-	-	-	-	622	598	-	522	518	-
Stage 2	-	-	-	-	-	-	513	515	-	608	570	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1101	-	-	1113	-	-	213	241	656	200	225	610
Mov Cap-2 Maneuver	-	-	-	-	-	-	213	241	-	200	225	-
Stage 1	-	-	-	-	-	-	618	594	-	518	487	-
Stage 2	-	-	-	-	-	-	470	485	-	560	566	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.8			16.7			23.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	222	656	1101	-	-	1113	-	-	215
HCM Lane V/C Ratio	0.139	0.056	0.005	-	-	0.044	-	-	0.1
HCM Control Delay (s)	23.8	10.8	8.3	0	-	8.4	0	-	23.6
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.2	0	-	-	0.1	-	-	0.3

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	9	133	41	75	408	2	0	1	2	0	36	13
Future Vol, veh/h	9	133	41	75	408	2	0	1	2	0	36	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	2	2	2	33	33	33	2	2	2
Mvmt Flow	10	149	46	84	458	2	0	1	2	0	40	15
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.2	15.3	9.1	9.1
HCM LOS	A	C	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	5%	15%	0%
Vol Thru, %	100%	0%	73%	84%	73%
Vol Right, %	0%	100%	22%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	2	183	485	49
LT Vol	0	0	9	75	0
Through Vol	1	0	133	408	36
RT Vol	0	2	41	2	13
Lane Flow Rate	1	2	206	545	55
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.002	0.004	0.26	0.657	0.084
Departure Headway (Hd)	6.803	6.092	4.545	4.341	5.522
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	525	585	790	834	647
Service Time	4.563	3.851	2.574	2.364	3.572
HCM Lane V/C Ratio	0.002	0.003	0.261	0.653	0.085
HCM Control Delay	9.6	8.9	9.2	15.3	9.1
HCM Lane LOS	A	A	A	C	A
HCM 95th-tile Q	0	0	1	5	0.3

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	16	103	409	0	1	90
Future Vol, veh/h	16	103	409	0	1	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	19	120	476	0	1	105

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	476	0	-	0	634 476
Stage 1	-	-	-	-	476 -
Stage 2	-	-	-	-	158 -
Critical Hdwy	4.13	-	-	-	6.48 6.28
Critical Hdwy Stg 1	-	-	-	-	5.48 -
Critical Hdwy Stg 2	-	-	-	-	5.48 -
Follow-up Hdwy	2.227	-	-	-	3.572 3.372
Pot Cap-1 Maneuver	1081	-	-	-	434 577
Stage 1	-	-	-	-	613 -
Stage 2	-	-	-	-	856 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1081	-	-	-	426 577
Mov Cap-2 Maneuver	-	-	-	-	426 -
Stage 1	-	-	-	-	601 -
Stage 2	-	-	-	-	856 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1081	-	-	-	575
HCM Lane V/C Ratio	0.017	-	-	-	0.184
HCM Control Delay (s)	8.4	0	-	-	12.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	88	2	13	0	0	0	1	0	0	1	3	408
Future Vol, veh/h	88	2	13	0	0	0	1	0	0	1	3	408
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	104	2	15	0	0	0	1	0	0	1	4	480
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	0	7.9	10.1
HCM LOS	A	-	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	85%	0%	0%
Vol Thru, %	0%	2%	100%	1%
Vol Right, %	0%	13%	0%	99%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	103	0	412
LT Vol	1	88	0	1
Through Vol	0	2	0	3
RT Vol	0	13	0	408
Lane Flow Rate	1	121	0	485
Geometry Grp	1	1	1	1
Degree of Util (X)	0.002	0.168	0	0.489
Departure Headway (Hd)	4.853	4.988	5.037	3.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	738	723	0	998
Service Time	2.875	2.988	3.072	1.638
HCM Lane V/C Ratio	0.001	0.167	0	0.486
HCM Control Delay	7.9	9	8.1	10.1
HCM Lane LOS	A	A	N	B
HCM 95th-tile Q	0	0.6	0	2.8

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	65	78	118	141	70	35	122	330	105	74	759	149
Future Volume (veh/h)	65	78	118	141	70	35	122	330	105	74	759	149
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	83	100	122	181	90	41	156	423	108	95	973	122
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	194	230	232	350	164	64	196	579	146	383	1105	489
Arrive On Green	0.36	0.35	0.35	0.36	0.35	0.35	0.11	0.21	0.21	0.22	0.31	0.31
Sat Flow, veh/h	334	649	655	722	463	179	1792	2816	712	1774	3539	1566
Grp Volume(v), veh/h	305	0	0	312	0	0	156	267	264	95	973	122
Grp Sat Flow(s),veh/h/ln	1637	0	0	1365	0	0	1792	1787	1741	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	5.1	8.4	8.6	2.7	15.7	3.5
Cycle Q Clear(g_c), s	8.3	0.0	0.0	11.1	0.0	0.0	5.1	8.4	8.6	2.7	15.7	3.5
Prop In Lane	0.27		0.40	0.58		0.13	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	670	0	0	590	0	0	196	367	358	383	1105	489
V/C Ratio(X)	0.46	0.00	0.00	0.53	0.00	0.00	0.80	0.73	0.74	0.25	0.88	0.25
Avail Cap(c_a), veh/h	967	0	0	847	0	0	238	756	736	383	1497	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	0.0	15.8	0.0	0.0	26.2	22.4	22.4	19.6	19.7	15.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	11.6	1.0	1.1	0.1	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	4.3	0.0	0.0	3.1	4.3	4.2	1.3	8.2	1.5
LnGrp Delay(d),s/veh	15.3	0.0	0.0	16.1	0.0	0.0	37.8	23.4	23.6	19.7	23.7	15.6
LnGrp LOS	B			B			D	C	C	B	C	B
Approach Vol, veh/h		305			312			687			1190	
Approach Delay, s/veh		15.3			16.1			26.7			22.5	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	23.3		25.9	17.5	16.9		25.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+11), s	17.7	17.7		13.1	4.7	10.6		10.3				
Green Ext Time (p_c), s	0.0	1.1		0.5	0.0	0.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				22.0								
HCM 2010 LOS				C								

Intersection	
Intersection Delay, s/veh	92.2
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	114	430	221	339	874	135
Future Vol, veh/h	114	430	221	339	874	135
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	127	478	246	377	971	150
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	115.7	25	116.8
HCM LOS	F	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	221	170	170	114	430	437	437	135
LT Vol	221	0	0	114	0	0	0	0
Through Vol	0	170	170	0	0	437	437	0
RT Vol	0	0	0	0	430	0	0	135
Lane Flow Rate	246	188	188	127	478	486	486	150
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.671	0.489	0.399	0.36	1.199	1.178	1.178	0.263
Departure Headway (Hd)	10.89	10.366	8.565	10.689	9.47	9.334	9.334	6.786
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	334	350	424	338	387	393	393	533
Service Time	8.59	8.066	6.265	8.389	7.17	7.034	7.034	4.486
HCM Lane V/C Ratio	0.737	0.537	0.443	0.376	1.235	1.237	1.237	0.281
HCM Control Delay	33.2	22.6	16.8	19.3	141.3	133	133	11.9
HCM Lane LOS	D	C	C	C	F	F	F	B
HCM 95th-tile Q	4.6	2.6	1.9	1.6	18.6	18	18	1

HCM 2010 Signalized Intersection Summary
 48: Fremont Boulevard/Hwy 1 SB Off-Ramp/ NB On-Ramp & Monterey Road

Existing, AM
 06/11/2019






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↕		↖	↗		↖	↗	↘
Traffic Volume (veh/h)	69	136	94	113	283	19	193	506	140	93	804	153
Future Volume (veh/h)	69	136	94	113	283	19	193	506	140	93	804	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	76	149	14	124	311	19	212	556	139	102	884	101
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	230	241	196	113	282	17	398	1150	286	125	880	388
Arrive On Green	0.13	0.13	0.13	0.22	0.22	0.22	0.23	0.42	0.42	0.07	0.25	0.25
Sat Flow, veh/h	1757	1845	1501	502	1260	77	1740	2745	684	1740	3471	1529
Grp Volume(v), veh/h	76	149	14	454	0	0	212	351	344	102	884	101
Grp Sat Flow(s),veh/h/ln	1757	1845	1501	1840	0	0	1740	1736	1694	1740	1736	1529
Q Serve(g_s), s	4.9	9.5	1.0	28.0	0.0	0.0	13.4	18.4	18.5	7.2	31.7	6.6
Cycle Q Clear(g_c), s	4.9	9.5	1.0	28.0	0.0	0.0	13.4	18.4	18.5	7.2	31.7	6.6
Prop In Lane	1.00		1.00	0.27		0.04	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	230	241	196	412	0	0	398	727	709	125	880	388
V/C Ratio(X)	0.33	0.62	0.07	1.10	0.00	0.00	0.53	0.48	0.49	0.81	1.00	0.26
Avail Cap(c_a), veh/h	436	457	372	412	0	0	398	727	709	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	51.4	47.7	48.5	0.0	0.0	42.4	26.4	26.5	57.2	46.7	37.3
Incr Delay (d2), s/veh	0.7	2.0	0.1	74.8	0.0	0.0	0.7	2.3	2.4	4.8	31.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.0	0.4	22.8	0.0	0.0	6.5	9.2	9.1	3.7	19.0	3.0
LnGrp Delay(d),s/veh	50.0	53.4	47.8	123.3	0.0	0.0	43.1	28.7	28.9	61.9	78.0	38.9
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		239			454			907			1087	
Approach Delay, s/veh		52.0			123.3			32.1			72.9	
Approach LOS		D			F			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.2	57.7		21.0	33.9	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+1/2), s	19.2	20.5		11.5	15.4	33.7		30.0				
Green Ext Time (p_c), s	0.1	2.7		1.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	65.8											
HCM 2010 LOS	E											
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	198	100	225	0	416	0	41	109	0	1	0
Future Volume (veh/h)	2	198	100	225	0	416	0	41	109	0	1	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	2	204	9	232	0	290	0	42	9	0	1	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	29	3079	1354	0	0	0	0	110	94	0	114	0
Arrive On Green	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.06	0.00
Sat Flow, veh/h	33	3562	1566			0	0	1845	1568	0	1900	0
Grp Volume(v), veh/h	110	96	9		0.0		0	42	9	0	1	0
Grp Sat Flow(s),veh/h/ln	1843	1752	1566				0	1845	1568	0	1900	0
Q Serve(g_s), s	1.1	1.0	0.1				0.0	2.7	0.7	0.0	0.1	0.0
Cycle Q Clear(g_c), s	1.1	1.0	0.1				0.0	2.7	0.7	0.0	0.1	0.0
Prop In Lane	0.02		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	1593	1515	1354				0	110	94	0	114	0
V/C Ratio(X)	0.07	0.06	0.01				0.00	0.38	0.10	0.00	0.01	0.00
Avail Cap(c_a), veh/h	1593	1515	1354				0	148	125	0	152	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	1.2	1.2	1.2				0.0	56.5	55.6	0.0	55.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	0.8	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0				0.0	1.4	0.3	0.0	0.0	0.0
LnGrp Delay(d),s/veh	1.2	1.2	1.2				0.0	57.3	55.7	0.0	55.3	0.0
LnGrp LOS	A	A	A					E	E		E	
Approach Vol, veh/h		215						51			1	
Approach Delay, s/veh		1.2						57.1			55.3	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				11.7		113.3		11.7				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				4.7		3.1		2.1				
Green Ext Time (p_c), s				0.0		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.1								
HCM 2010 LOS				B								
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	243	0	293	123	355	0	0	335	105
Future Volume (veh/h)	0	0	0	243	0	293	123	355	0	0	335	105
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				256	0	56	129	374	0	0	353	102
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				374	0	334	223	1004	0	0	456	132
Arrive On Green				0.22	0.00	0.22	0.13	0.54	0.00	0.00	0.33	0.33
Sat Flow, veh/h				1740	0	1553	1774	1863	0	0	1363	394
Grp Volume(v), veh/h				256	0	56	129	374	0	0	0	455
Grp Sat Flow(s),veh/h/ln				1740	0	1553	1774	1863	0	0	0	1757
Q Serve(g_s), s				6.0	0.0	1.3	3.0	5.1	0.0	0.0	0.0	10.3
Cycle Q Clear(g_c), s				6.0	0.0	1.3	3.0	5.1	0.0	0.0	0.0	10.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.22
Lane Grp Cap(c), veh/h				374	0	334	223	1004	0	0	0	587
V/C Ratio(X)				0.68	0.00	0.17	0.58	0.37	0.00	0.00	0.00	0.77
Avail Cap(c_a), veh/h				1571	0	1402	1041	1598	0	0	0	1507
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				16.0	0.0	14.2	18.3	5.9	0.0	0.0	0.0	13.3
Incr Delay (d2), s/veh				2.2	0.0	0.2	0.9	0.2	0.0	0.0	0.0	2.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.1	0.0	0.6	1.5	2.7	0.0	0.0	0.0	5.3
LnGrp Delay(d),s/veh				18.2	0.0	14.4	19.1	6.1	0.0	0.0	0.0	15.5
LnGrp LOS				B		B	B	A				B
Approach Vol, veh/h					312			503			455	
Approach Delay, s/veh					17.5			9.5			15.5	
Approach LOS					B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.1	20.8		14.4		29.9						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+15), s	15.0	12.3		8.0		7.1						
Green Ext Time (p_c), s	0.1	2.5		1.7		2.0						
Intersection Summary												
HCM 2010 Ctrl Delay				13.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp




















Existing, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	96	1	105	0	0	0	0	376	664	223	346	0
Future Volume (veh/h)	96	1	105	0	0	0	0	376	664	223	346	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	104	1	13				0	409	393	242	376	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	151	1	136				0	664	564	330	1163	0
Arrive On Green	0.09	0.09	0.09				0.00	0.35	0.35	0.19	0.64	0.00
Sat Flow, veh/h	1775	17	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	105	0	13				0	409	393	242	376	0
Grp Sat Flow(s),veh/h/ln	1792	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	2.2	0.0	0.3				0.0	7.0	8.3	5.1	3.7	0.0
Cycle Q Clear(g_c), s	2.2	0.0	0.3				0.0	7.0	8.3	5.1	3.7	0.0
Prop In Lane	0.99		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	152	0	136				0	664	564	330	1163	0
V/C Ratio(X)	0.69	0.00	0.10				0.00	0.62	0.70	0.73	0.32	0.00
Avail Cap(c_a), veh/h	1830	0	1632				0	1776	1510	1066	1725	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.4	0.0	16.5				0.0	10.5	10.9	14.9	3.3	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1				0.0	0.9	1.6	3.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.1				0.0	3.8	3.8	2.7	1.8	0.0
LnGrp Delay(d),s/veh	19.5	0.0	16.6				0.0	11.4	12.4	18.1	3.4	0.0
LnGrp LOS	B		B					B	B	B	A	
Approach Vol, veh/h		118						802			618	
Approach Delay, s/veh		19.2						11.9			9.2	
Approach LOS		B						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.0			11.1	19.8		8.2				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		5.7			7.1	10.3		4.2				
Green Ext Time (p_c), s		2.1			0.6	3.6		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			11.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 1: Del Monte Boulevard & Reindollar Avenue

Existing, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	171	0	85	4	1010	318	73	475	0
Future Volume (veh/h)	0	0	0	171	0	85	4	1010	318	73	475	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				194	0	0	4	1052	248	76	495	0
Adj No. of Lanes				2	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				453	238	0	10	1683	753	127	1917	0
Arrive On Green				0.13	0.00	0.00	0.01	0.47	0.47	0.07	0.54	0.00
Sat Flow, veh/h				3583	1881	0	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				194	0	0	4	1052	248	76	495	0
Grp Sat Flow(s),veh/h/ln				1792	1881	0	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				2.0	0.0	0.0	0.1	9.0	4.0	1.7	3.0	0.0
Cycle Q Clear(g_c), s				2.0	0.0	0.0	0.1	9.0	4.0	1.7	3.0	0.0
Prop In Lane				1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				453	238	0	10	1683	753	127	1917	0
V/C Ratio(X)				0.43	0.00	0.00	0.41	0.63	0.33	0.60	0.26	0.00
Avail Cap(c_a), veh/h				2642	1387	0	1321	2636	1179	1321	2636	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				16.4	0.0	0.0	20.2	8.1	6.7	18.3	5.1	0.0
Incr Delay (d2), s/veh				0.6	0.0	0.0	25.4	0.4	0.3	4.5	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.0	0.0	0.0	0.1	4.5	1.8	1.0	1.5	0.0
LnGrp Delay(d),s/veh				17.1	0.0	0.0	45.6	8.5	7.0	22.8	5.1	0.0
LnGrp LOS				B			D	A	A	C	A	
Approach Vol, veh/h					194			1304			571	
Approach Delay, s/veh					17.1			8.3			7.5	
Approach LOS					B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	3.7	26.8			6.4	24.2		10.1				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.1	5.0			3.7	11.0		4.0				
Green Ext Time (p_c), s	0.0	3.4			0.2	8.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				8.9								
HCM 2010 LOS				A								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	992	0	0	0	0	0	260	1	0
Future Volume (veh/h)	0	0	0	992	0	0	0	0	0	260	1	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1090	0	0				286	1	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1233	0	0				357	1	0
Arrive On Green				0.69	0.00	0.00				0.21	0.20	0.00
Sat Flow, veh/h				1792	0	0				1768	6	0
Grp Volume(v), veh/h				1090	0	0				287	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1774	0	0
Q Serve(g_s), s				38.5	0.0	0.0				12.3	0.0	0.0
Cycle Q Clear(g_c), s				38.5	0.0	0.0				12.3	0.0	0.0
Prop In Lane				1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h				1233	0	0				358	0	0
V/C Ratio(X)				0.88	0.00	0.00				0.80	0.00	0.00
Avail Cap(c_a), veh/h				2020	0	0				1334	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				9.7	0.0	0.0				30.1	0.0	0.0
Incr Delay (d2), s/veh				2.9	0.0	0.0				4.2	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.4	0.0	0.0				6.4	0.0	0.0
LnGrp Delay(d),s/veh				12.7	0.0	0.0				34.3	0.0	0.0
LnGrp LOS				B						C		
Approach Vol, veh/h					1090						287	
Approach Delay, s/veh					12.7						34.3	
Approach LOS					B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				20.5		59.3						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				14.3		40.5						
Green Ext Time (p_c), s				1.8		14.4						
Intersection Summary												
HCM 2010 Ctrl Delay				17.2								
HCM 2010 LOS				B								

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑	↗		↔	↗			
Traffic Vol, veh/h	7	247	0	0	995	422	4	2	1186	0	0	0
Future Vol, veh/h	7	247	0	0	995	422	4	2	1186	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	7	260	0	0	1047	444	4	2	1248	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1047	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	665	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	665	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.3	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	172	-	665	-	-
HCM Lane V/C Ratio	0.037	-	0.011	-	-
HCM Control Delay (s)	26.7	0	10.5	0	-
HCM Lane LOS	D	A	B	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Existing, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1002	326	248	941	3	412	2	295	9	12	34
Future Volume (veh/h)	6	1002	326	248	941	3	412	2	295	9	12	34
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	1044	140	258	980	3	429	2	73	9	12	4
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	107	1225	545	388	1443	4	555	247	207	108	85	27
Arrive On Green	0.06	0.34	0.34	0.11	0.39	0.39	0.16	0.13	0.13	0.06	0.03	0.03
Sat Flow, veh/h	1792	3574	1592	3476	3655	11	3510	1900	1589	1810	2683	838
Grp Volume(v), veh/h	6	1044	140	258	479	504	429	2	73	9	8	8
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1879	1755	1900	1589	1810	1805	1716
Q Serve(g_s), s	0.2	13.6	3.2	3.6	11.2	11.2	5.9	0.0	2.1	0.2	0.2	0.2
Cycle Q Clear(g_c), s	0.2	13.6	3.2	3.6	11.2	11.2	5.9	0.0	2.1	0.2	0.2	0.2
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	107	1225	545	388	705	742	555	247	207	108	57	54
V/C Ratio(X)	0.06	0.85	0.26	0.66	0.68	0.68	0.77	0.01	0.35	0.08	0.14	0.15
Avail Cap(c_a), veh/h	534	2132	950	1037	1066	1121	1396	793	663	360	754	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	15.4	11.9	21.4	12.6	12.6	20.3	19.0	19.9	22.4	23.7	23.7
Incr Delay (d2), s/veh	0.1	0.7	0.1	0.7	0.4	0.4	0.9	0.0	0.4	0.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.8	1.4	1.8	5.5	5.8	2.9	0.0	0.9	0.1	0.1	0.1
LnGrp Delay(d),s/veh	22.4	16.0	12.0	22.2	13.0	13.0	21.2	19.0	20.3	22.5	24.1	24.2
LnGrp LOS	C	B	B	C	B	B	C	B	C	C	C	C
Approach Vol, veh/h		1190			1241			504			25	
Approach Delay, s/veh		15.6			14.9			21.1			23.5	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	22.5	11.5	6.2	7.5	25.2	6.5	11.1				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	5.6	15.6	7.9	2.2	2.2	13.2	2.2	4.1				
Green Ext Time (p_c), s	0.0	1.5	0.1	0.0	0.0	1.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			16.3									
HCM 2010 LOS			B									

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Vol, veh/h	50	1290	8	21	1144	12	4	1	23	4	1	42
Future Vol, veh/h	50	1290	8	21	1144	12	4	1	23	4	1	42
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	300	-	-	85	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	51	1316	8	21	1167	12	4	1	23	4	1	43

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	1181	0	0	1325	0	0	2050	2646	663	1978	2644	593
Stage 1	-	-	-	-	-	-	1423	1423	-	1217	1217	-
Stage 2	-	-	-	-	-	-	627	1223	-	761	1427	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	593	-	-	522	-	-	33	24	409	38	24	454
Stage 1	-	-	-	-	-	-	145	204	-	195	256	-
Stage 2	-	-	-	-	-	-	443	254	-	368	203	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	592	-	-	522	-	-	26	21	409	31	21	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	21	-	31	21	-
Stage 1	-	-	-	-	-	-	132	186	-	178	245	-
Stage 2	-	-	-	-	-	-	383	243	-	315	185	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.4		0.2		43.2		28.9	
HCM LOS					E		D	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	26	231	592	-	-	522	-	-	31	306
HCM Lane V/C Ratio	0.157	0.106	0.086	-	-	0.041	-	-	0.132	0.143
HCM Control Delay (s)	167.7	22.4	11.7	-	-	12.2	-	-	138	18.7
HCM Lane LOS	F	C	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0.5	0.4	0.3	-	-	0.1	-	-	0.4	0.5

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	1406	7	0	1156	1	14	0	2	8	0	0
Future Vol, veh/h	2	1406	7	0	1156	1	14	0	2	8	0	0
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	330	-	-	330	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	2	1449	7	0	1192	1	14	0	2	8	0	0



















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1195	0	0	1456	0	0	2053	2652	728	1924	2655	599
Stage 1	-	-	-	-	-	-	1457	1457	-	1195	1195	-
Stage 2	-	-	-	-	-	-	596	1195	-	729	1460	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	586	-	-	466	-	-	33	23	370	41	23	450
Stage 1	-	-	-	-	-	-	139	196	-	201	262	-
Stage 2	-	-	-	-	-	-	462	262	-	385	196	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	585	-	-	466	-	-	33	23	370	41	23	449
Mov Cap-2 Maneuver	-	-	-	-	-	-	33	23	-	41	23	-
Stage 1	-	-	-	-	-	-	139	195	-	200	261	-
Stage 2	-	-	-	-	-	-	462	261	-	382	195	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0			164.9			113.7		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	37	585	-	-	466	-	-	41
HCM Lane V/C Ratio	0.446	0.004	-	-	-	-	-	0.201
HCM Control Delay (s)	164.9	11.2	-	-	0	-	-	113.7
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q(veh)	1.5	0	-	-	0	-	-	0.7

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Existing, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	1053	4	2	995	68	12	38	4	37	25	200
Future Volume (veh/h)	255	1053	4	2	995	68	12	38	4	37	25	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	263	1086	4	2	1026	64	12	39	1	38	26	37
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	328	1963	7	5	1217	76	153	135	3	191	41	56
Arrive On Green	0.18	0.54	0.54	0.00	0.36	0.36	0.11	0.09	0.09	0.11	0.09	0.09
Sat Flow, veh/h	1792	3652	13	1792	3417	213	338	1438	35	585	440	592
Grp Volume(v), veh/h	263	531	559	2	537	553	52	0	0	101	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1879	1792	1787	1843	1811	0	0	1617	0	0
Q Serve(g_s), s	5.1	7.2	7.2	0.0	10.1	10.1	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	5.1	7.2	7.2	0.0	10.1	10.1	0.9	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.12	0.23		0.02	0.38		0.37
Lane Grp Cap(c), veh/h	328	960	1010	5	636	656	322	0	0	314	0	0
V/C Ratio(X)	0.80	0.55	0.55	0.41	0.84	0.84	0.16	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	736	1468	1543	736	1468	1513	1108	0	0	1018	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.3	5.6	5.6	18.2	10.8	10.8	15.3	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.2	0.2	18.9	1.2	1.2	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.4	3.6	0.0	5.1	5.3	0.5	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	16.0	5.7	5.7	37.1	12.0	12.0	15.4	0.0	0.0	16.0	0.0	0.0
LnGrp LOS	B	A	A	D	B	B	B			B		
Approach Vol, veh/h		1353			1092			52			101	
Approach Delay, s/veh		7.7			12.0			15.4			16.0	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.6	24.9		8.0	10.2	18.3		8.0				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	2.0	9.2		4.1	7.1	12.1		2.9				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.0								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	2	8	15	378	211	2
Future Vol, veh/h	2	8	15	378	211	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	9	16	411	229	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	673	230	231	0	-	0
Stage 1	230	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	421	809	1337	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	416	809	1337	-	-	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	647	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1337	-	680	-	-
HCM Lane V/C Ratio	0.012	-	0.016	-	-
HCM Control Delay (s)	7.7	-	10.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Existing, PM
 06/11/2019

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↖	↑↑	↖↗	↗		
Traffic Volume (veh/h)	1036	54	74	901	136	94		
Future Volume (veh/h)	1036	54	74	901	136	94		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1091	54	78	948	143	33		
Adj No. of Lanes	2	0	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1315	65	94	2176	291	130		
Arrive On Green	0.38	0.38	0.05	0.61	0.08	0.08		
Sat Flow, veh/h	3561	172	1792	3668	3583	1599		
Grp Volume(v), veh/h	562	583	78	948	143	33		
Grp Sat Flow(s),veh/h/ln	1787	1851	1792	1787	1792	1599		
Q Serve(g_s), s	8.5	8.6	1.3	4.2	1.1	0.6		
Cycle Q Clear(g_c), s	8.5	8.6	1.3	4.2	1.1	0.6		
Prop In Lane		0.09	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	678	702	94	2176	291	130		
V/C Ratio(X)	0.83	0.83	0.83	0.44	0.49	0.25		
Avail Cap(c_a), veh/h	1787	1851	1194	3574	2628	1173		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	8.4	8.4	14.1	3.1	13.2	12.9		
Incr Delay (d2), s/veh	1.0	1.0	6.7	0.1	0.5	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.3	4.4	0.8	2.0	0.6	0.3		
LnGrp Delay(d),s/veh	9.4	9.4	20.8	3.2	13.7	13.3		
LnGrp LOS	A	A	C	A	B	B		
Approach Vol, veh/h	1145			1026	176			
Approach Delay, s/veh	9.4			4.5	13.6			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.9	16.7				23.6		6.4
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	3.3	10.6				6.2		3.1
Green Ext Time (p_c), s	0.0	0.8				1.0		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			7.6					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	880	114	159	796	53	109	20	161	24	14	84
Future Volume (veh/h)	92	880	114	159	796	53	109	20	161	24	14	84
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1900	1881	1881	1900	1863	1863
Adj Flow Rate, veh/h	99	946	0	171	856	0	117	22	0	26	15	0
Adj No. of Lanes	1	1	1	1	1	1	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	132	1090	926	211	1159	985	246	28	188	193	93	186
Arrive On Green	0.07	0.58	0.00	0.12	0.62	0.00	0.12	0.12	0.00	0.12	0.12	0.00
Sat Flow, veh/h	1792	1881	1599	1792	1881	1599	1280	241	1599	922	792	1583
Grp Volume(v), veh/h	99	946	0	171	856	0	139	0	0	41	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1881	1599	1520	0	1599	1714	0	1583
Q Serve(g_s), s	3.7	29.4	0.0	6.4	22.1	0.0	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.7	29.4	0.0	6.4	22.1	0.0	6.0	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.84		1.00	0.63		1.00
Lane Grp Cap(c), veh/h	132	1090	926	211	1159	985	275	0	188	287	0	186
V/C Ratio(X)	0.75	0.87	0.00	0.81	0.74	0.00	0.51	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	519	1362	1158	519	1362	1158	738	0	695	770	0	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.3	12.3	0.0	29.7	9.3	0.0	29.4	0.0	0.0	27.5	0.0	0.0
Incr Delay (d2), s/veh	3.1	4.4	0.0	2.8	1.4	0.0	0.5	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	16.3	0.0	3.3	11.6	0.0	2.6	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	34.5	16.7	0.0	32.5	10.7	0.0	30.0	0.0	0.0	27.6	0.0	0.0
LnGrp LOS	C	B		C	B		C			C		
Approach Vol, veh/h		1045			1027			139			41	
Approach Delay, s/veh		18.4			14.3			30.0			27.6	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.6	45.3		12.1	9.1	47.8		12.1				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+1/3), s	13.4	31.4		3.4	5.7	24.1		8.0				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.7		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Existing, PM
 06/11/2019



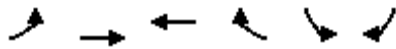
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	100	6	982	7	21	22	849	542	4	7	644	175
Future Volume (veh/h)	100	6	982	7	21	22	849	542	4	7	644	175
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	117	0	702	8	24	3	954	609	3	8	724	63
Adj No. of Lanes	2	0	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	665	0	1522	55	58	48	1013	2102	940	27	1089	487
Arrive On Green	0.19	0.00	0.19	0.03	0.03	0.03	0.29	0.59	0.59	0.01	0.30	0.30
Sat Flow, veh/h	3583	0	3181	1740	1827	1527	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	117	0	702	8	24	3	954	609	3	8	724	63
Grp Sat Flow(s),veh/h/ln	1792	0	1590	1740	1827	1527	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	3.1	0.0	16.5	0.5	1.4	0.2	29.9	9.4	0.1	0.3	19.7	3.2
Cycle Q Clear(g_c), s	3.1	0.0	16.5	0.5	1.4	0.2	29.9	9.4	0.1	0.3	19.7	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	665	0	1522	55	58	48	1013	2102	940	27	1089	487
V/C Ratio(X)	0.18	0.00	0.46	0.15	0.41	0.06	0.94	0.29	0.00	0.29	0.66	0.13
Avail Cap(c_a), veh/h	1126	0	1931	484	508	425	1092	2102	940	624	1925	861
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	0.0	19.6	52.5	52.9	52.3	38.5	11.4	9.5	54.9	33.8	28.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.4	1.8	0.2	14.3	0.2	0.0	2.2	1.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	7.3	0.2	0.8	0.1	16.3	4.7	0.0	0.1	9.9	1.4
LnGrp Delay(d),s/veh	38.2	0.0	19.6	52.9	54.7	52.5	52.9	11.6	9.5	57.1	35.7	28.4
LnGrp LOS	D		B	D	D	D	D	B	A	E	D	C
Approach Vol, veh/h		819			35			1566			795	
Approach Delay, s/veh		22.3			54.1			36.7			35.3	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.5	40.1		8.5	5.0	71.7		26.2				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q1), s	31.5	21.7		3.4	2.3	11.4		18.5				
Green Ext Time (p_c), s	0.6	12.3		0.1	0.0	9.4		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			32.9									
HCM 2010 LOS			C									
Notes												

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Existing, PM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶↷	↶↷	↶	↶	↶↷	↶↷		
Traffic Volume (veh/h)	1094	461	325	33	21	1085		
Future Volume (veh/h)	1094	461	325	33	21	1085		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1164	490	346	11	22	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	1	1	2	2	2	2		
Cap, veh/h	1314	2714	469	399	74	60		
Arrive On Green	0.38	0.76	0.25	0.25	0.02	0.00		
Sat Flow, veh/h	3476	3668	1863	1583	3442	2787		
Grp Volume(v), veh/h	1164	490	346	11	22	0		
Grp Sat Flow(s),veh/h/ln	1738	1787	1863	1583	1721	1393		
Q Serve(g_s), s	13.3	1.6	7.2	0.2	0.3	0.0		
Cycle Q Clear(g_c), s	13.3	1.6	7.2	0.2	0.3	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1314	2714	469	399	74	60		
V/C Ratio(X)	0.89	0.18	0.74	0.03	0.30	0.00		
Avail Cap(c_a), veh/h	3276	5054	2634	2239	2190	1773		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	12.3	1.4	14.6	12.0	20.4	0.0		
Incr Delay (d2), s/veh	0.8	0.0	1.7	0.0	0.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.5	0.8	3.9	0.1	0.1	0.0		
LnGrp Delay(d),s/veh	13.2	1.4	16.3	12.0	21.3	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1654	357		22			
Approach Delay, s/veh		9.7	16.2		21.3			
Approach LOS		A	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.0		4.4	21.5	16.5		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		3.6		2.3	15.3	9.2		
Green Ext Time (p_c), s		2.4		0.0	0.7	1.4		
Intersection Summary								
HCM 2010 Ctrl Delay			11.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Existing, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	45	301	78	327	433	45		
Future Volume (veh/h)	45	301	78	327	433	45		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	55	212	95	399	528	46		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	310	433	172	1937	1119	97		
Arrive On Green	0.17	0.17	0.10	0.55	0.34	0.34		
Sat Flow, veh/h	1792	1599	1757	3597	3422	289		
Grp Volume(v), veh/h	55	212	95	399	283	291		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1830		
Q Serve(g_s), s	1.0	4.4	2.0	2.3	5.0	5.0		
Cycle Q Clear(g_c), s	1.0	4.4	2.0	2.3	5.0	5.0		
Prop In Lane	1.00	1.00	1.00			0.16		
Lane Grp Cap(c), veh/h	310	433	172	1937	601	616		
V/C Ratio(X)	0.18	0.49	0.55	0.21	0.47	0.47		
Avail Cap(c_a), veh/h	1217	1243	884	5292	2698	2763		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.0	12.2	17.1	4.5	10.4	10.4		
Incr Delay (d2), s/veh	0.3	0.9	1.0	0.1	1.1	1.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	2.0	1.0	1.1	2.6	2.7		
LnGrp Delay(d),s/veh	14.3	13.0	18.1	4.6	11.5	11.5		
LnGrp LOS	B	B	B	A	B	B		
Approach Vol, veh/h	267			494	574			
Approach Delay, s/veh	13.3			7.2	11.5			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.6	19.8				28.4		11.4
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax)	20	60.0				60.0		27.0
Max Q Clear Time (g_c+14)	14.5	7.0				4.3		6.4
Green Ext Time (p_c), s	0.1	6.4				4.6		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			10.2					
HCM 2010 LOS			B					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 11.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↕		↖	↗			↖	↗
Traffic Vol, veh/h	26	0	10	10	2	3	19	327	25	3	209	30
Future Vol, veh/h	26	0	10	10	2	3	19	327	25	3	209	30
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	4	4	4
Mvmt Flow	29	0	11	11	2	3	21	359	27	3	230	33
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	9.3	9.4	12.6	9.9
HCM LOS	A	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	67%	1%	0%
Vol Thru, %	0%	93%	0%	0%	13%	99%	0%
Vol Right, %	0%	7%	0%	100%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	352	26	10	15	212	30
LT Vol	19	0	26	0	10	3	0
Through Vol	0	327	0	0	2	209	0
RT Vol	0	25	0	10	3	0	30
Lane Flow Rate	21	387	29	11	16	233	33
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.031	0.522	0.052	0.016	0.028	0.328	0.04
Departure Headway (Hd)	5.406	4.855	6.594	5.382	6.151	5.071	4.361
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	663	743	542	663	580	711	821
Service Time	3.13	2.579	4.348	3.135	4.209	2.799	2.088
HCM Lane V/C Ratio	0.032	0.521	0.054	0.017	0.028	0.328	0.04
HCM Control Delay	8.3	12.8	9.7	8.2	9.4	10.3	7.3
HCM Lane LOS	A	B	A	A	A	B	A
HCM 95th-tile Q	0.1	3.1	0.2	0	0.1	1.4	0.1

Intersection

Intersection Delay, s/veh 12.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑	↗		↖	↗	↙	↑	↗	↙	↗	
Traffic Vol, veh/h	2	0	1	5	0	3	3	365	5	2	231	2
Future Vol, veh/h	2	0	1	5	0	3	3	365	5	2	231	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	4	4	4
Mvmt Flow	2	0	1	5	0	3	3	388	5	2	246	2
Number of Lanes	1	1	1	0	1	1	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	9.2	9.2	13.8	11.3
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	0%	0%	99%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	365	5	2	0	1	5	3	2	233
LT Vol	3	0	0	2	0	0	5	0	2	0
Through Vol	0	365	0	0	0	0	0	0	0	231
RT Vol	0	0	5	0	0	1	0	3	0	2
Lane Flow Rate	3	388	5	2	0	1	5	3	2	248
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.005	0.549	0.006	0.004	0	0.002	0.01	0.005	0.003	0.371
Departure Headway (Hd)	5.595	5.094	4.392	6.769	6.265	5.561	6.755	5.548	5.898	5.392
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	639	707	813	526	0	638	527	640	606	667
Service Time	3.33	2.829	2.127	4.55	4.046	3.341	4.535	3.327	3.639	3.133
HCM Lane V/C Ratio	0.005	0.549	0.006	0.004	0	0.002	0.009	0.005	0.003	0.372
HCM Control Delay	8.4	13.9	7.2	9.6	9	8.4	9.6	8.4	8.7	11.3
HCM Lane LOS	A	B	A	A	N	A	A	A	A	B
HCM 95th-tile Q	0	3.4	0	0	0	0	0	0	0	1.7

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	24	6	43	42	203	2	27	41	106	16	3
Future Vol, veh/h	2	24	6	43	42	203	2	27	41	106	16	3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	3	3	3	1	1	1	0	0	0	2	2	2
Mvmt Flow	2	26	7	47	46	223	2	30	45	116	18	3
Number of Lanes	1	1	0	1	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	2
HCM Control Delay	8.8	9	8.8	10.4
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %		3%	100%	0%	100%	0%	0%	87%
Vol Thru, %		39%	0%	80%	0%	100%	0%	13%
Vol Right, %		59%	0%	20%	0%	0%	100%	0%
Sign Control		Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		70	2	30	43	42	203	122
LT Vol		2	2	0	43	0	0	106
Through Vol		27	0	24	0	42	0	16
RT Vol		41	0	6	0	0	203	0
Lane Flow Rate		77	2	33	47	46	223	134
Geometry Grp		8	8	8	8	8	8	8
Degree of Util (X)		0.113	0.004	0.052	0.076	0.068	0.283	0.223
Departure Headway (Hd)		5.308	6.324	5.678	5.779	5.277	4.573	6
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap		670	562	626	619	677	783	595
Service Time		3.081	4.102	3.456	3.525	3.022	2.318	3.769
HCM Lane V/C Ratio		0.115	0.004	0.053	0.076	0.068	0.285	0.225
HCM Control Delay		8.8	9.1	8.8	9	8.4	9.1	10.5
HCM Lane LOS		A	A	A	A	A	A	B
HCM 95th-tile Q		0.4	0	0.2	0.2	0.2	1.2	0.8

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	66	97	243	31	85	143
Future Vol, veh/h	66	97	243	31	85	143
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	68	100	251	32	88	147
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	9.1	10.5	9.5
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	31	66	97	85	143
LT Vol	0	0	66	0	85	0
Through Vol	243	0	0	0	0	143
RT Vol	0	31	0	97	0	0
Lane Flow Rate	251	32	68	100	88	147
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.363	0.04	0.118	0.14	0.14	0.215
Departure Headway (Hd)	5.21	4.505	6.256	5.048	5.757	5.253
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	689	790	571	706	620	680
Service Time	2.963	2.258	4.016	2.807	3.513	3.009
HCM Lane V/C Ratio	0.364	0.041	0.119	0.142	0.142	0.216
HCM Control Delay	10.9	7.4	9.9	8.6	9.5	9.5
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	1.7	0.1	0.4	0.5	0.5	0.8

Intersection												
Intersection Delay, s/veh	9.9											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	125	8	93	85	19	37	23	155	21	17	5
Future Vol, veh/h	6	125	8	93	85	19	37	23	155	21	17	5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	7	152	10	113	104	23	45	28	189	26	21	6
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	10.4	10	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	4%	47%	49%
Vol Thru, %	11%	90%	43%	40%
Vol Right, %	72%	6%	10%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	215	139	197	43
LT Vol	37	6	93	21
Through Vol	23	125	85	17
RT Vol	155	8	19	5
Lane Flow Rate	262	170	240	52
Geometry Grp	1	1	1	1
Degree of Util (X)	0.336	0.233	0.328	0.077
Departure Headway (Hd)	4.618	4.945	4.914	5.27
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	719	726	672
Service Time	2.685	3.023	2.987	3.362
HCM Lane V/C Ratio	0.339	0.236	0.331	0.077
HCM Control Delay	10	9.5	10.4	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.5	0.9	1.4	0.2

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	8	191	18	10	107	9	23	57	19	13	21	2
Future Vol, veh/h	8	191	18	10	107	9	23	57	19	13	21	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	1	1	1	4	4	4	5	5	5	0	0	0
Mvmt Flow	9	205	19	11	115	10	25	61	20	14	23	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.2	8.6	8.8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	23%	4%	8%	38%	0%
Vol Thru, %	58%	88%	85%	62%	0%
Vol Right, %	19%	8%	7%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	217	126	34	2
LT Vol	23	8	10	13	0
Through Vol	57	191	107	21	0
RT Vol	19	18	9	0	2
Lane Flow Rate	106	233	135	37	2
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.145	0.285	0.172	0.057	0.003
Departure Headway (Hd)	4.913	4.402	4.57	5.646	4.747
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	729	817	784	634	752
Service Time	2.949	2.426	2.598	3.387	2.488
HCM Lane V/C Ratio	0.145	0.285	0.172	0.058	0.003
HCM Control Delay	8.8	9.2	8.6	8.7	7.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	1.2	0.6	0.2	0

Intersection			
Intersection Delay, s/veh	8.6		
Intersection LOS	A		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	264	293	469
Demand Flow Rate, veh/h	269	299	469
Vehicles Circulating, veh/h	137	7	263
Vehicles Exiting, veh/h	169	725	143
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.5	5.8	11.6
Approach LOS	A	A	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	269	299	469
Cap Entry Lane, veh/h	985	1122	869
Entry HV Adj Factor	0.981	0.979	1.000
Flow Entry, veh/h	264	293	469
Cap Entry, veh/h	966	1099	869
V/C Ratio	0.273	0.266	0.540
Control Delay, s/veh	6.5	5.8	11.6
LOS	A	A	B
95th %tile Queue, veh	1	1	3

Intersection						
Intersection Delay, s/veh	12.8					
Intersection LOS	B					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	251	412	91	17	15	108
Future Vol, veh/h	251	412	91	17	15	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	6	6	4	4
Mvmt Flow	264	434	96	18	16	114
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	14	9.2	9.7
HCM LOS	B	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	412	91	17	15	108
LT Vol	251	0	0	0	15	0
Through Vol	0	412	91	0	0	0
RT Vol	0	0	0	17	0	108
Lane Flow Rate	264	434	96	18	16	114
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.405	0.604	0.152	0.025	0.03	0.179
Departure Headway (Hd)	5.513	5.01	5.695	4.988	6.889	5.679
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	650	720	626	711	518	629
Service Time	3.263	2.761	3.471	2.764	4.655	3.444
HCM Lane V/C Ratio	0.406	0.603	0.153	0.025	0.031	0.181
HCM Control Delay	12	15.2	9.5	7.9	9.9	9.7
HCM Lane LOS	B	C	A	A	A	A
HCM 95th-tile Q	2	4.1	0.5	0.1	0.1	0.6

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	94	353	89	13	11	24
Future Vol, veh/h	94	353	89	13	11	24
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	1	1	5	5	17	17
Mvmt Flow	109	410	103	15	13	28
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	11.9	8.5	8.8
HCM LOS	B	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	353	89	13	11	24
LT Vol	94	0	0	0	11	0
Through Vol	0	353	89	0	0	0
RT Vol	0	0	0	13	0	24
Lane Flow Rate	109	410	103	15	13	28
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.156	0.53	0.148	0.019	0.024	0.043
Departure Headway (Hd)	5.147	4.646	5.144	4.44	6.748	5.54
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	688	763	700	809	533	649
Service Time	2.946	2.445	2.855	2.152	4.459	3.25
HCM Lane V/C Ratio	0.158	0.537	0.147	0.019	0.024	0.043
HCM Control Delay	8.9	12.7	8.7	7.2	9.6	8.5
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.6	3.2	0.5	0.1	0.1	0.1

Intersection

Intersection Delay, s/veh 11.1
Intersection LOS B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	328	43	21	15	12	75
Future Vol, veh/h	328	43	21	15	12	75
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	377	49	24	17	14	86
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	12.1	7.7	8.4
HCM LOS	B	A	A

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	88%	0%	100%	0%
Vol Thru, %	12%	58%	0%	0%
Vol Right, %	0%	42%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	371	36	12	75
LT Vol	328	0	12	0
Through Vol	43	21	0	0
RT Vol	0	15	0	75
Lane Flow Rate	426	41	14	86
Geometry Grp	2	2	7	7
Degree of Util (X)	0.523	0.051	0.024	0.118
Departure Headway (Hd)	4.411	4.459	6.134	4.923
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	802	584	728
Service Time	2.411	2.49	3.864	2.653
HCM Lane V/C Ratio	0.518	0.051	0.024	0.118
HCM Control Delay	12.1	7.7	9	8.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	3.1	0.2	0.1	0.4

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	681	24	51	430	0	9	0	30	0	0	0
Future Volume (veh/h)	1	681	24	51	430	0	9	0	30	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	1	702	23	53	443	0	9	0	2			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	6	1677	55	106	1933	0	21	0	18			
Arrive On Green	0.00	0.48	0.48	0.06	0.54	0.00	0.01	0.00	0.01			
Sat Flow, veh/h	1774	3498	115	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	1	355	370	53	443	0	9	0	2			
Grp Sat Flow(s),veh/h/ln	1774	1770	1843	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	4.0	4.0	0.9	2.0	0.0	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	4.0	4.0	0.9	2.0	0.0	0.2	0.0	0.0			
Prop In Lane	1.00		0.06	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	6	848	883	106	1933	0	21	0	18			
V/C Ratio(X)	0.17	0.42	0.42	0.50	0.23	0.00	0.44	0.00	0.11			
Avail Cap(c_a), veh/h	1165	3485	3629	1176	7039	0	1557	0	1390			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.2	5.2	5.2	13.9	3.7	0.0	15.0	0.0	14.9			
Incr Delay (d2), s/veh	5.1	0.6	0.6	1.3	0.1	0.0	5.4	0.0	1.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.0	2.1	0.5	0.9	0.0	0.1	0.0	0.0			
LnGrp Delay(d),s/veh	20.2	5.8	5.8	15.2	3.7	0.0	20.3	0.0	15.9			
LnGrp LOS	C	A	A	B	A		C		B			
Approach Vol, veh/h		726			496			11				
Approach Delay, s/veh		5.8			5.0			19.5				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.4	20.0			3.5	21.9		5.1				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+1/2g), s	12	6.0			2.0	4.0		2.2				
Green Ext Time (p_c), s	0.0	8.6			0.0	3.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				5.6								
HCM 2010 LOS				A								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	482	0	0	716	0
Future Vol, veh/h	0	0	0	0	0	0	0	482	0	0	716	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	502	0	0	746	0




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1248	1248	746	1248	1248	502	746	0	0	502	0	0
Stage 1	746	746	-	502	502	-	-	-	-	-	-	-
Stage 2	502	502	-	746	746	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	150	173	413	150	173	569	867	-	-	1062	-	-
Stage 1	405	421	-	552	542	-	-	-	-	-	-	-
Stage 2	552	542	-	405	421	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	150	173	413	150	173	569	867	-	-	1062	-	-
Mov Cap-2 Maneuver	150	173	-	150	173	-	-	-	-	-	-	-
Stage 1	405	421	-	552	542	-	-	-	-	-	-	-
Stage 2	552	542	-	405	421	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	867	-	-	-	1062	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Existing, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	431	2	5	298	109	2	1	3	113	3	182
Future Volume (veh/h)	301	431	2	5	298	109	2	1	3	113	3	182
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1837	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	327	468	2	5	317	118	2	1	1	120	3	59
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	382	1015	4	9	434	161	5	2	2	176	4	505
Arrive On Green	0.22	0.55	0.55	0.01	0.34	0.34	0.02	0.01	0.01	0.12	0.10	0.10
Sat Flow, veh/h	1774	1853	8	1740	1277	475	889	444	444	1750	44	1599
Grp Volume(v), veh/h	327	0	470	5	0	435	4	0	0	123	0	59
Grp Sat Flow(s),veh/h/ln	1774	0	1861	1740	0	1753	1777	0	0	1794	0	1599
Q Serve(g_s), s	9.3	0.0	8.0	0.2	0.0	11.4	0.1	0.0	0.0	3.5	0.0	1.4
Cycle Q Clear(g_c), s	9.3	0.0	8.0	0.2	0.0	11.4	0.1	0.0	0.0	3.5	0.0	1.4
Prop In Lane	1.00		0.00	1.00		0.27	0.50		0.25	0.98		1.00
Lane Grp Cap(c), veh/h	382	0	1020	9	0	595	10	0	0	180	0	505
V/C Ratio(X)	0.86	0.00	0.46	0.54	0.00	0.73	0.42	0.00	0.00	0.68	0.00	0.12
Avail Cap(c_a), veh/h	1014	0	2127	994	0	2003	1016	0	0	1025	0	1258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	7.2	26.0	0.0	15.2	25.8	0.0	0.0	22.3	0.0	12.8
Incr Delay (d2), s/veh	2.2	0.0	0.5	16.6	0.0	2.8	10.3	0.0	0.0	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	4.2	0.1	0.0	5.9	0.1	0.0	0.0	1.8	0.0	0.6
LnGrp Delay(d),s/veh	22.0	0.0	7.7	42.6	0.0	18.0	36.1	0.0	0.0	24.0	0.0	12.8
LnGrp LOS	C		A	D		B	D			C		B
Approach Vol, veh/h		797			440			4				182
Approach Delay, s/veh		13.6			18.3			36.1				20.4
Approach LOS		B			B			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	33.8		10.3	15.1	22.8		4.3				
Change Period (Y+Rc), s	* 3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	* 30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	10.0		5.5	11.3	13.4		2.1				
Green Ext Time (p_c), s	0.0	4.7		0.2	0.1	4.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.9									
HCM 2010 LOS			B									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	9.4											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	↕
Traffic Vol, veh/h	5	0	2	27	4	39	8	226	4	10	191	8
Future Vol, veh/h	5	0	2	27	4	39	8	226	4	10	191	8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	5	0	2	29	4	41	9	240	4	11	203	9
Number of Lanes	0	1	0	0	1	1	1	2	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	8.9	8.6	9.2	10
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	71%	87%	0%	100%	0%	0%
Vol Thru, %	0%	100%	95%	0%	13%	0%	0%	100%	0%
Vol Right, %	0%	0%	5%	29%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	151	79	7	31	39	10	191	8
LT Vol	8	0	0	5	27	0	10	0	0
Through Vol	0	151	75	0	4	0	0	191	0
RT Vol	0	0	4	2	0	39	0	0	8
Lane Flow Rate	9	160	84	7	33	41	11	203	9
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.013	0.232	0.121	0.012	0.057	0.058	0.017	0.297	0.011
Departure Headway (Hd)	5.71	5.208	5.173	6.039	6.172	5.038	5.771	5.269	4.567
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	626	688	691	589	578	707	619	681	781
Service Time	3.454	2.952	2.917	3.813	3.932	2.799	3.515	3.013	2.311
HCM Lane V/C Ratio	0.014	0.233	0.122	0.012	0.057	0.058	0.018	0.298	0.012
HCM Control Delay	8.5	9.5	8.6	8.9	9.3	8.1	8.6	10.2	7.4
HCM Lane LOS	A	A	A	A	A	A	A	B	A
HCM 95th-tile Q	0	0.9	0.4	0	0.2	0.2	0.1	1.2	0

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	13	8	63	47	118	17	160	25	11	118	4
Future Vol, veh/h	4	13	8	63	47	118	17	160	25	11	118	4
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	5	15	9	74	55	139	20	188	29	13	139	5
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.4	10.3	10.5	9.7
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	16%	28%	100%	0%
Vol Thru, %	0%	86%	52%	21%	0%	97%
Vol Right, %	0%	14%	32%	52%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	17	185	25	228	11	122
LT Vol	17	0	4	63	11	0
Through Vol	0	160	13	47	0	118
RT Vol	0	25	8	118	0	4
Lane Flow Rate	20	218	29	268	13	144
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.033	0.32	0.042	0.351	0.022	0.218
Departure Headway (Hd)	5.894	5.293	5.114	4.706	5.999	5.47
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	603	673	692	759	592	650
Service Time	3.673	3.072	3.206	2.764	3.783	3.255
HCM Lane V/C Ratio	0.033	0.324	0.042	0.353	0.022	0.222
HCM Control Delay	8.9	10.6	8.4	10.3	8.9	9.8
HCM Lane LOS	A	B	A	B	A	A
HCM 95th-tile Q	0.1	1.4	0.1	1.6	0.1	0.8

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	453	103	14	971	0	195	0	22	1	0	20
Future Volume (veh/h)	0	453	103	14	971	0	195	0	22	1	0	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	477	0	15	1022	0	205	0	5	1	0	1
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	1878	840	16	2367	0	0	0	0	6	7	6
Arrive On Green	0.00	0.53	0.00	0.01	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	0	3668	1599	1792	3668	0	0	0	1723	1810	1538	
Grp Volume(v), veh/h	0	477	0	15	1022	0	0.0	0.0	0.0	1	0	1
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0	0.0	0.0	0.0	1723	1810	1538
Q Serve(g_s), s	0.0	2.0	0.0	0.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.0	0.0	0.2	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1878	840	16	2367	0	0	0	0	6	7	6
V/C Ratio(X)	0.00	0.25	0.00	0.95	0.43	0.00	0.00	0.00	0.00	0.16	0.00	0.18
Avail Cap(c_a), veh/h	0	5884	2632	1311	5884	0	0	0	0	1576	1655	1407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.6	0.0	13.5	2.2	0.0	0.0	0.0	0.0	13.6	0.0	13.6
Incr Delay (d2), s/veh	0.0	0.1	0.0	52.7	0.2	0.0	0.0	0.0	0.0	4.3	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.0	0.0	0.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	3.7	0.0	66.2	2.4	0.0	0.0	0.0	0.0	17.9	0.0	19.1
LnGrp LOS		A		E	A					B		B
Approach Vol, veh/h		477			1037						2	
Approach Delay, s/veh		3.7			3.3						18.5	
Approach LOS		A			A						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			3.7	19.0		4.6		22.7				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.2	4.0		2.0		5.7				
Green Ext Time (p_c), s			0.0	5.1		0.0		12.4				
Intersection Summary												
HCM 2010 Ctrl Delay			3.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	322	1	2	868	126	5	1	8	78	5	113
Future Volume (veh/h)	145	322	1	2	868	126	5	1	8	78	5	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	153	339	1	2	914	128	5	1	2	82	5	16
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	184	2832	8	4	2124	297	133	30	35	199	168	141
Arrive On Green	0.10	0.77	0.77	0.00	0.67	0.67	0.10	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1792	3656	11	1792	3149	441	818	330	383	1376	1845	1547
Grp Volume(v), veh/h	153	166	174	2	519	523	8	0	0	82	5	16
Grp Sat Flow(s),veh/h/ln	1792	1787	1879	1792	1787	1803	1531	0	0	1376	1845	1547
Q Serve(g_s), s	8.4	2.3	2.3	0.1	13.3	13.3	0.0	0.0	0.0	5.2	0.2	0.9
Cycle Q Clear(g_c), s	8.4	2.3	2.3	0.1	13.3	13.3	0.4	0.0	0.0	5.6	0.2	0.9
Prop In Lane	1.00		0.01	1.00		0.24	0.62		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	184	1385	1456	4	1205	1216	207	0	0	199	168	141
V/C Ratio(X)	0.83	0.12	0.12	0.52	0.43	0.43	0.04	0.00	0.00	0.41	0.03	0.11
Avail Cap(c_a), veh/h	222	1385	1456	222	1205	1216	674	0	0	629	745	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	0.37	0.37	0.37	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	2.8	2.8	49.8	7.5	7.5	41.3	0.0	0.0	43.8	41.4	41.7
Incr Delay (d2), s/veh	16.7	0.2	0.2	13.7	0.4	0.4	0.0	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	1.2	1.2	0.1	6.6	6.7	0.2	0.0	0.0	2.2	0.1	0.4
LnGrp Delay(d),s/veh	60.7	3.0	3.0	63.5	7.9	7.9	41.3	0.0	0.0	44.3	41.4	41.9
LnGrp LOS	E	A	A	E	A	A	D			D	D	D
Approach Vol, veh/h		493			1044			8			103	
Approach Delay, s/veh		20.9			8.0			41.3			43.8	
Approach LOS		C			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.2	82.1		13.7	14.3	72.0		13.7				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	4.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1/2), s	4.3	4.3		7.6	10.4	15.3		2.4				
Green Ext Time (p_c), s	0.0	1.1		0.1	0.0	3.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	66	138	200	8	213	7	649	108	7	7	86	137
Future Volume (veh/h)	66	138	200	8	213	7	649	108	7	7	86	137
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	69	144	0	8	222	6	676	112	5	7	90	31
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	92	438	372	15	349	9	776	625	28	13	357	118
Arrive On Green	0.05	0.23	0.00	0.01	0.19	0.19	0.22	0.35	0.35	0.01	0.13	0.13
Sat Flow, veh/h	1792	1881	1599	1810	1841	50	3476	1787	80	1810	2669	880
Grp Volume(v), veh/h	69	144	0	8	0	228	676	0	117	7	60	61
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1891	1738	0	1867	1810	1805	1745
Q Serve(g_s), s	1.7	2.8	0.0	0.2	0.0	5.0	8.4	0.0	1.9	0.2	1.3	1.4
Cycle Q Clear(g_c), s	1.7	2.8	0.0	0.2	0.0	5.0	8.4	0.0	1.9	0.2	1.3	1.4
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.04	1.00		0.50
Lane Grp Cap(c), veh/h	92	438	372	15	0	359	776	0	653	13	242	234
V/C Ratio(X)	0.75	0.33	0.00	0.52	0.00	0.64	0.87	0.00	0.18	0.52	0.25	0.26
Avail Cap(c_a), veh/h	800	1260	1071	808	0	1266	776	0	1250	606	1209	1168
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	14.3	0.0	22.1	0.0	16.7	16.8	0.0	10.1	22.2	17.4	17.4
Incr Delay (d2), s/veh	11.4	0.5	0.0	9.8	0.0	2.3	10.4	0.0	0.3	11.0	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.5	0.0	0.1	0.0	2.8	5.2	0.0	1.1	0.1	0.7	0.7
LnGrp Delay(d),s/veh	32.4	14.8	0.0	32.0	0.0	19.0	27.2	0.0	10.4	33.1	18.0	18.1
LnGrp LOS	C	B		C		B	C		B	C	B	B
Approach Vol, veh/h		213			236			793			128	
Approach Delay, s/veh		20.5			19.4			24.7			18.9	
Approach LOS		C			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	6.8	13.0	4.8	20.2	4.9	14.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	3.4	3.7	7.0	2.2	3.9	2.2	4.8					
Green Ext Time (p_c), s	0.0	0.7	0.1	1.6	0.0	1.1	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			22.6									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	167	45	5	115	37
Future Vol, veh/h	6	167	45	5	115	37
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	7	190	51	6	131	42
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	7.8	8.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	76%
Vol Thru, %	90%	0%	24%
Vol Right, %	10%	97%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	50	173	152
LT Vol	0	6	115
Through Vol	45	0	37
RT Vol	5	167	0
Lane Flow Rate	57	197	173
Geometry Grp	1	1	1
Degree of Util (X)	0.071	0.211	0.214
Departure Headway (Hd)	4.471	3.868	4.46
Convergence, Y/N	Yes	Yes	Yes
Cap	803	934	793
Service Time	2.487	1.871	2.551
HCM Lane V/C Ratio	0.071	0.211	0.218
HCM Control Delay	7.8	7.9	8.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.8	0.8

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	101	4	2	136	24	4
Future Vol, veh/h	101	4	2	136	24	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	119	5	2	160	28	5

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	124	0	286
Stage 1	-	-	-	-	122
Stage 2	-	-	-	-	164
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1475	-	709
Stage 1	-	-	-	-	908
Stage 2	-	-	-	-	870
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1475	-	708
Mov Cap-2 Maneuver	-	-	-	-	708
Stage 1	-	-	-	-	907
Stage 2	-	-	-	-	870

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	733	-	-	1475	-
HCM Lane V/C Ratio	0.045	-	-	0.002	-
HCM Control Delay (s)	10.1	-	-	7.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	91	0	0	71	0	30	15	5	1	14	38
Future Vol, veh/h	13	91	0	0	71	0	30	15	5	1	14	38
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	16	111	0	0	87	0	37	18	6	1	17	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.8	7.9	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	60%	12%	0%	2%
Vol Thru, %	30%	88%	100%	26%
Vol Right, %	10%	0%	0%	72%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	104	71	53
LT Vol	30	13	0	1
Through Vol	15	91	71	14
RT Vol	5	0	0	38
Lane Flow Rate	61	127	87	65
Geometry Grp	1	1	1	1
Degree of Util (X)	0.077	0.148	0.104	0.072
Departure Headway (Hd)	4.539	4.209	4.322	4.021
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	793	838	834	895
Service Time	2.547	2.307	2.322	2.028
HCM Lane V/C Ratio	0.077	0.152	0.104	0.073
HCM Control Delay	7.9	8.1	7.8	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.5	0.3	0.2

Intersection												
Int Delay, s/veh	7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	85	1	0	50	0	0	36	0	0	23	14
Future Vol, veh/h	17	85	1	0	50	0	0	36	0	0	23	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	23	115	1	0	68	0	0	49	0	0	31	19

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	124	90	41	148	99	49	50	0	0	49	0	0
Stage 1	41	41	-	49	49	-	-	-	-	-	-	-
Stage 2	83	49	-	99	50	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	848	798	1027	820	791	1020	1550	-	-	1520	-	-
Stage 1	971	859	-	964	854	-	-	-	-	-	-	-
Stage 2	923	852	-	907	853	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	793	798	1027	728	791	1020	1550	-	-	1520	-	-
Mov Cap-2 Maneuver	793	798	-	728	791	-	-	-	-	-	-	-
Stage 1	971	859	-	964	854	-	-	-	-	-	-	-
Stage 2	850	852	-	785	853	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.5		10		0		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1550	-	-	799	791	1520	-	-
HCM Lane V/C Ratio	-	-	-	0.174	0.085	-	-	-
HCM Control Delay (s)	0	-	-	10.5	10	0	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.3	0	-	-

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	86	1	0	340	117	54
Future Vol, veh/h	86	1	0	340	117	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	98	1	0	386	133	61
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	550	164	194	0	0
Stage 1	164	-	-	-	-
Stage 2	386	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	500	886	1379	-	-
Stage 1	870	-	-	-	-
Stage 2	691	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	500	886	1379	-	-
Mov Cap-2 Maneuver	500	-	-	-	-
Stage 1	870	-	-	-	-
Stage 2	691	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1379	-	503	-	-
HCM Lane V/C Ratio	-	-	0.197	-	-
HCM Control Delay (s)	0	-	13.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Existing, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	12	27	167	42	218	57	554	308	67	234	46
Future Volume (veh/h)	18	12	27	167	42	218	57	554	308	67	234	46
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	20	13	-1	188	47	0	64	622	0	75	263	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	42	153	0	240	366	311	114	856	383	127	881	394
Arrive On Green	0.03	0.09	0.00	0.13	0.19	0.00	0.06	0.24	0.00	0.07	0.25	0.00
Sat Flow, veh/h	1691	1776	0	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	20	12	0	188	47	0	64	622	0	75	263	0
Grp Sat Flow(s),veh/h/ln	1691	1776	0	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.4	0.2	0.0	3.9	0.8	0.0	1.3	6.2	0.0	1.6	2.3	0.0
Cycle Q Clear(g_c), s	0.4	0.2	0.0	3.9	0.8	0.0	1.3	6.2	0.0	1.6	2.3	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	153	0	240	366	311	114	856	383	127	881	394
V/C Ratio(X)	0.47	0.08	0.00	0.78	0.13	0.00	0.56	0.73	0.00	0.59	0.30	0.00
Avail Cap(c_a), veh/h	899	1405	0	953	1488	1265	483	2341	1047	483	2341	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.5	16.2	0.0	16.2	12.8	0.0	17.5	13.4	0.0	17.3	11.7	0.0
Incr Delay (d2), s/veh	3.0	0.1	0.0	2.1	0.1	0.0	1.6	0.4	0.0	1.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.0	2.1	0.4	0.0	0.7	3.1	0.0	0.8	1.1	0.0
LnGrp Delay(d),s/veh	21.6	16.3	0.0	18.3	12.9	0.0	19.1	13.9	0.0	19.0	11.8	0.0
LnGrp LOS	C	B		B	B		B	B		B	B	
Approach Vol, veh/h		32			235			686			338	
Approach Delay, s/veh		19.6			17.2			14.4			13.4	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	14.1	5.5	12.0	7.3	13.8	9.7	7.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.3	4.3	2.4	2.8	3.6	8.2	5.9	2.2				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.8	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.8									
HCM 2010 LOS			B									
Notes												

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	340	39	12	312	13	12	25	6	9	27	5
Future Vol, veh/h	3	340	39	12	312	13	12	25	6	9	27	5
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	3	374	43	13	343	14	13	27	7	10	30	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	358	0	0	419	0	0	798	788	398	796	802	351
Stage 1	-	-	-	-	-	-	404	404	-	377	377	-
Stage 2	-	-	-	-	-	-	394	384	-	419	425	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	1201	-	-	1145	-	-	306	326	656	301	314	686
Stage 1	-	-	-	-	-	-	627	603	-	638	611	-
Stage 2	-	-	-	-	-	-	635	615	-	606	581	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1200	-	-	1143	-	-	277	319	655	275	308	685
Mov Cap-2 Maneuver	-	-	-	-	-	-	277	319	-	275	308	-
Stage 1	-	-	-	-	-	-	624	600	-	635	602	-
Stage 2	-	-	-	-	-	-	590	606	-	571	578	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			17.8			18		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	1200	-	-	1143	-	-	321
HCM Lane V/C Ratio	0.144	0.003	-	-	0.012	-	-	0.14
HCM Control Delay (s)	17.8	8	0	-	8.2	0	-	18
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.5

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	2	316	8	12	284	2	65	21	21	0	3	0
Future Vol, veh/h	2	316	8	12	284	2	65	21	21	0	3	0
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	2	355	9	13	319	2	73	24	24	0	3	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	324	0	0	364	0	0	714	714	360	737	717	325
Stage 1	-	-	-	-	-	-	364	364	-	349	349	-
Stage 2	-	-	-	-	-	-	350	350	-	388	368	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1236	-	-	1200	-	-	349	359	689	337	358	721
Stage 1	-	-	-	-	-	-	659	627	-	671	637	-
Stage 2	-	-	-	-	-	-	671	636	-	640	625	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1232	-	-	1200	-	-	342	353	689	304	352	718
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	353	-	304	352	-
Stage 1	-	-	-	-	-	-	658	626	-	668	627	-
Stage 2	-	-	-	-	-	-	657	626	-	594	624	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.3			17.6			15.3		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	345	689	1232	-	-	1200	-	-	352
HCM Lane V/C Ratio	0.28	0.034	0.002	-	-	0.011	-	-	0.01
HCM Control Delay (s)	19.4	10.4	7.9	0	-	8	0	-	15.3
HCM Lane LOS	C	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.1	0.1	0	-	-	0	-	-	0

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	13	327	0	1	132	2	49	34	52	0	0	15
Future Vol, veh/h	13	327	0	1	132	2	49	34	52	0	0	15
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	14	344	0	1	139	2	52	36	55	0	0	16
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	11.2	8.9	9.1	7.9
HCM LOS	B	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	59%	0%	4%	1%	0%
Vol Thru, %	41%	0%	96%	98%	0%
Vol Right, %	0%	100%	0%	1%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	52	340	135	15
LT Vol	49	0	13	1	0
Through Vol	34	0	327	132	0
RT Vol	0	52	0	2	15
Lane Flow Rate	87	55	358	142	16
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.145	0.075	0.448	0.187	0.021
Departure Headway (Hd)	5.957	4.951	4.508	4.745	4.765
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	600	720	798	753	745
Service Time	3.713	2.707	2.543	2.791	2.835
HCM Lane V/C Ratio	0.145	0.076	0.449	0.189	0.021
HCM Control Delay	9.7	8.1	11.2	8.9	7.9
HCM Lane LOS	A	A	B	A	A
HCM 95th-tile Q	0.5	0.2	2.3	0.7	0.1

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	30	353	116	1	0	24
Future Vol, veh/h	30	353	116	1	0	24
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	31	368	121	1	0	25

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	122	0	-	0	552 123
Stage 1	-	-	-	-	122 -
Stage 2	-	-	-	-	430 -
Critical Hdwy	4.12	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1465	-	-	-	491 923
Stage 1	-	-	-	-	898 -
Stage 2	-	-	-	-	652 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1465	-	-	-	478 922
Mov Cap-2 Maneuver	-	-	-	-	478 -
Stage 1	-	-	-	-	874 -
Stage 2	-	-	-	-	652 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1465	-	-	-	922
HCM Lane V/C Ratio	0.021	-	-	-	0.027
HCM Control Delay (s)	7.5	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	340	0	5	0	0	0	2	0	0	0	0	114
Future Vol, veh/h	340	0	5	0	0	0	2	0	0	0	0	114
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	1	1	1
Mvmt Flow	374	0	5	0	0	0	2	0	0	0	0	125
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	0	8.2	7.9
HCM LOS	B	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	99%	0%	0%
Vol Thru, %	0%	0%	100%	0%
Vol Right, %	0%	1%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	345	0	114
LT Vol	2	340	0	0
Through Vol	0	0	0	0
RT Vol	0	5	0	114
Lane Flow Rate	2	379	0	125
Geometry Grp	1	1	1	1
Degree of Util (X)	0.003	0.457	0	0.147
Departure Headway (Hd)	5.145	4.343	4.619	4.216
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	699	823	0	856
Service Time	3.154	2.416	2.638	2.216
HCM Lane V/C Ratio	0.003	0.461	0	0.146
HCM Control Delay	8.2	11.1	7.6	7.9
HCM Lane LOS	A	B	N	A
HCM 95th-tile Q	0	2.4	0	0.5

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	45	27	33	44	28	6	49	729	67	31	361	45
Future Volume (veh/h)	45	27	33	44	28	6	49	729	67	31	361	45
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	29	11	48	30	4	53	792	50	34	392	-10
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	316	105	31	329	119	12	290	1065	67	75	692	310
Arrive On Green	0.18	0.16	0.16	0.18	0.16	0.16	0.16	0.31	0.31	0.04	0.19	0.00
Sat Flow, veh/h	723	667	196	776	756	79	1792	3414	216	1810	3610	1615
Grp Volume(v), veh/h	89	0	0	82	0	0	53	414	428	34	392	-10
Grp Sat Flow(s),veh/h/ln	1586	0	0	1611	0	0	1792	1787	1843	1810	1805	1615
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.7	5.7	5.7	0.5	2.7	0.0
Cycle Q Clear(g_c), s	1.2	0.0	0.0	1.1	0.0	0.0	0.7	5.7	5.7	0.5	2.7	0.0
Prop In Lane	0.55		0.12	0.59		0.05	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	480	0	0	489	0	0	290	558	575	75	692	310
V/C Ratio(X)	0.19	0.00	0.00	0.17	0.00	0.00	0.18	0.74	0.74	0.45	0.57	-0.03
Avail Cap(c_a), veh/h	2062	0	0	2082	0	0	520	1652	1704	525	3337	1493
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0	10.1	0.0	0.0	10.0	8.5	8.5	12.9	10.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.7	0.7	1.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.5	0.0	0.0	0.3	2.9	3.0	0.3	1.3	0.0
LnGrp Delay(d),s/veh	10.2	0.0	0.0	10.2	0.0	0.0	10.1	9.2	9.2	14.5	10.4	0.0
LnGrp LOS	B			B			B	A	A	B	B	
Approach Vol, veh/h		89			82			895			416	
Approach Delay, s/veh		10.2			10.2			9.3			11.0	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	9.8		8.8	5.6	13.1		8.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+1/2), s	4.7	4.7		3.1	2.5	7.7		3.2				
Green Ext Time (p_c), s	0.0	0.5		0.1	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				9.9								
HCM 2010 LOS				A								

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	97	153	838	308	85
Future Vol, veh/h	53	97	153	838	308	85
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	60	109	172	942	346	96
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	12.6	21.5	12.7
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	419	419	53	97	154	154	85
LT Vol	153	0	0	53	0	0	0	0
Through Vol	0	419	419	0	0	154	154	0
RT Vol	0	0	0	0	97	0	0	85
Lane Flow Rate	172	471	471	60	109	173	173	96
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.325	0.823	0.596	0.144	0.226	0.352	0.352	0.126
Departure Headway (Hd)	6.801	6.295	4.558	8.682	7.472	7.319	7.319	4.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	570	782	415	483	495	495	741
Service Time	4.598	4.091	2.353	6.396	5.186	5.019	5.019	2.567
HCM Lane V/C Ratio	0.328	0.826	0.602	0.145	0.226	0.349	0.349	0.13
HCM Control Delay	12.9	32.1	14	12.9	12.4	13.9	13.9	8.3
HCM Lane LOS	B	D	B	B	B	B	B	A
HCM 95th-tile Q	1.4	8.4	4	0.5	0.9	1.6	1.6	0.4

HCM 2010 Signalized Intersection Summary
 48: Fremont Boulevard/Hwy 1 SB Off-Ramp/ NB On-Ramp & Monterey Road

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘		↕		↖	↗		↖	↗	↘
Traffic Volume (veh/h)	213	223	57	89	161	55	111	972	226	78	576	198
Future Volume (veh/h)	213	223	57	89	161	55	111	972	226	78	576	198
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	220	230	12	92	166	51	114	1002	221	80	594	132
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	284	298	248	101	182	56	542	1291	284	101	671	297
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.30	0.44	0.44	0.06	0.19	0.19
Sat Flow, veh/h	1792	1881	1566	541	977	300	1792	2910	640	1774	3539	1568
Grp Volume(v), veh/h	220	230	12	309	0	0	114	614	609	80	594	132
Grp Sat Flow(s),veh/h/ln	1792	1881	1566	1818	0	0	1792	1787	1763	1774	1770	1568
Q Serve(g_s), s	14.7	14.7	0.8	20.8	0.0	0.0	5.9	36.4	36.7	5.6	20.4	9.3
Cycle Q Clear(g_c), s	14.7	14.7	0.8	20.8	0.0	0.0	5.9	36.4	36.7	5.6	20.4	9.3
Prop In Lane	1.00		1.00	0.30		0.17	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	284	298	248	339	0	0	542	793	782	101	671	297
V/C Ratio(X)	0.78	0.77	0.05	0.91	0.00	0.00	0.21	0.77	0.78	0.79	0.89	0.44
Avail Cap(c_a), veh/h	573	602	501	364	0	0	542	793	782	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	50.5	44.6	49.8	0.0	0.0	32.5	29.5	29.5	58.2	49.3	44.8
Incr Delay (d2), s/veh	3.1	2.9	0.1	26.1	0.0	0.0	0.1	7.3	7.5	5.1	15.8	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	7.8	0.4	12.9	0.0	0.0	3.0	19.5	19.4	2.9	11.5	4.4
LnGrp Delay(d),s/veh	53.6	53.4	44.7	75.9	0.0	0.0	32.6	36.8	37.1	63.2	65.2	49.6
LnGrp LOS	D	D	D	E			C	D	D	E	E	D
Approach Vol, veh/h		462			309			1337			806	
Approach Delay, s/veh		53.3			75.9			36.5			62.4	
Approach LOS		D			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.3	60.8		24.5	43.1	29.0		28.4				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	13	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+11), s	13	38.7		16.7	7.9	22.4		22.8				
Green Ext Time (p_c), s	0.1	0.0		2.0	0.1	0.5		0.5				

Intersection Summary




















HCM 2010 Ctrl Delay	50.5
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	204	120	272	0	190	0	112	285	1	1	0
Future Volume (veh/h)	0	204	120	272	0	190	0	112	285	1	1	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	0	224	14	299	0	135	0	123	34	1	1	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	0	2980	1331	0	0	0	0	154	131	59	44	0
Arrive On Green	0.00	0.84	0.84	0.00	0.00	0.00	0.00	0.08	0.08	0.09	0.08	0.00
Sat Flow, veh/h	0	3632	1581		0		0	1881	1599	190	536	0
Grp Volume(v), veh/h	0	224	14		0.0		0	123	34	2	0	0
Grp Sat Flow(s),veh/h/ln	0	1770	1581				0	1881	1599	726	0	0
Q Serve(g_s), s	0.0	1.3	0.2				0.0	8.0	2.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	1.3	0.2				0.0	8.0	2.5	8.0	0.0	0.0
Prop In Lane	0.00		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	0	2980	1331				0	154	131	106	0	0
V/C Ratio(X)	0.00	0.08	0.01				0.00	0.80	0.26	0.02	0.00	0.00
Avail Cap(c_a), veh/h	0	2980	1331				0	271	230	139	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	1.7	1.6				0.0	56.4	53.8	52.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.6	0.4	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.1				0.0	4.3	1.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	1.7	1.6				0.0	59.9	54.2	52.8	0.0	0.0
LnGrp LOS		A	A					E	D	D		
Approach Vol, veh/h		238						157			2	
Approach Delay, s/veh		1.7						58.7			52.8	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				14.4		110.6		14.4				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.0		3.3		10.0				
Green Ext Time (p_c), s				0.3		0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				24.5								
HCM 2010 LOS				C								
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Existing, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↑			↕	
Traffic Volume (veh/h)	0	0	0	411	0	239	134	216	0	0	490	125
Future Volume (veh/h)	0	0	0	411	0	239	134	216	0	0	490	125
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				437	0	72	143	230	0	0	521	123
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				488	0	435	178	1100	0	0	649	153
Arrive On Green				0.29	0.00	0.28	0.03	0.20	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1774	0	1580	1757	1845	0	0	1430	338
Grp Volume(v), veh/h				437	0	72	143	230	0	0	0	644
Grp Sat Flow(s),veh/h/ln				1774	0	1580	1757	1845	0	0	0	1767
Q Serve(g_s), s				20.1	0.0	2.9	6.9	8.9	0.0	0.0	0.0	26.6
Cycle Q Clear(g_c), s				20.1	0.0	2.9	6.9	8.9	0.0	0.0	0.0	26.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		0.19
Lane Grp Cap(c), veh/h				488	0	435	178	1100	0	0	0	803
V/C Ratio(X)				0.90	0.00	0.17	0.80	0.21	0.00	0.00	0.00	0.80
Avail Cap(c_a), veh/h				564	0	502	248	1100	0	0	0	803
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.96	0.96	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.2	0.0	23.4	40.2	17.3	0.0	0.0	0.0	19.9
Incr Delay (d2), s/veh				15.4	0.0	0.2	8.0	0.4	0.0	0.0	0.0	8.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				11.9	0.0	1.3	3.7	4.7	0.0	0.0	0.0	14.7
LnGrp Delay(d),s/veh				44.6	0.0	23.6	48.3	17.7	0.0	0.0	0.0	28.3
LnGrp LOS				D		C	D	B				C
Approach Vol, veh/h					509			373			644	
Approach Delay, s/veh					41.6			29.4			28.3	
Approach LOS					D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	2.1	44.6		28.3		56.7						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+1/3), s	2.0	28.6		22.1		10.9						
Green Ext Time (p_c), s	0.0	1.1		1.3		1.1						
Intersection Summary												
HCM 2010 Ctrl Delay				33.0								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp

Existing, PM
 06/11/2019























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	81	1	189	0	0	0	0	291	306	242	659	0
Future Volume (veh/h)	81	1	189	0	0	0	0	291	306	242	659	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	86	1	22				0	310	187	257	701	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	123	1	111				0	1092	928	288	1464	0
Arrive On Green	0.08	0.07	0.07				0.00	0.59	0.59	0.33	1.00	0.00
Sat Flow, veh/h	1755	20	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	87	0	22				0	310	187	257	701	0
Grp Sat Flow(s),veh/h/ln	1755	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	4.1	0.0	1.1				0.0	7.0	4.7	11.9	0.0	0.0
Cycle Q Clear(g_c), s	4.1	0.0	1.1				0.0	7.0	4.7	11.9	0.0	0.0
Prop In Lane	0.99		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	125	0	111				0	1092	928	288	1464	0
V/C Ratio(X)	0.70	0.00	0.20				0.00	0.28	0.20	0.89	0.48	0.00
Avail Cap(c_a), veh/h	522	0	466				0	1092	928	348	1464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.39	0.39	0.00
Uniform Delay (d), s/veh	38.2	0.0	37.3				0.0	8.5	8.0	27.7	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.0	0.9				0.0	0.7	0.5	9.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.5				0.0	3.7	2.2	6.4	0.2	0.0
LnGrp Delay(d),s/veh	45.0	0.0	38.1				0.0	9.2	8.5	37.4	0.4	0.0
LnGrp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		109						497			958	
Approach Delay, s/veh		43.6						8.9			10.4	
Approach LOS		D						A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		74.1			17.8	56.3		10.9				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			13.9	9.0		6.1				
Green Ext Time (p_c), s		4.8			0.2	2.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									

Intersection			
Intersection Delay, s/veh	223.8		
Intersection LOS	F		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	551	1414	391
Demand Flow Rate, veh/h	689	1428	402
Vehicles Circulating, veh/h	1219	47	157
Vehicles Exiting, veh/h	256	512	1750
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	521.8	167.1	8.6
Approach LOS	F	F	A
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	689	1428	402
Cap Entry Lane, veh/h	334	1078	966
Entry HV Adj Factor	0.800	0.990	0.973
Flow Entry, veh/h	551	1414	391
Cap Entry, veh/h	267	1067	939
V/C Ratio	2.063	1.325	0.416
Control Delay, s/veh	521.8	167.1	8.6
LOS	F	F	A
95th %tile Queue, veh	41	53	2

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Existing with Project, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	430	0	60	10	300	110	70	950	0
Future Volume (veh/h)	0	0	0	430	0	60	10	300	110	70	950	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				506	0	0	11	337	57	79	1067	0
Adj No. of Lanes				2	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				808	424	0	25	1407	628	124	1591	0
Arrive On Green				0.22	0.00	0.00	0.01	0.40	0.40	0.07	0.45	0.00
Sat Flow, veh/h				3619	1900	0	1774	3539	1579	1757	3597	0
Grp Volume(v), veh/h				506	0	0	11	337	57	79	1067	0
Grp Sat Flow(s),veh/h/ln				1810	1900	0	1774	1770	1579	1757	1752	0
Q Serve(g_s), s				5.5	0.0	0.0	0.3	2.8	1.0	1.9	10.5	0.0
Cycle Q Clear(g_c), s				5.5	0.0	0.0	0.3	2.8	1.0	1.9	10.5	0.0
Prop In Lane				1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				808	424	0	25	1407	628	124	1591	0
V/C Ratio(X)				0.63	0.00	0.00	0.43	0.24	0.09	0.64	0.67	0.00
Avail Cap(c_a), veh/h				2482	1303	0	1217	2427	1083	1205	2404	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				15.3	0.0	0.0	21.4	8.8	8.2	19.8	9.4	0.0
Incr Delay (d2), s/veh				0.8	0.0	0.0	11.2	0.1	0.1	5.3	0.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.8	0.0	0.0	0.2	1.4	0.4	1.1	5.0	0.0
LnGrp Delay(d),s/veh				16.1	0.0	0.0	32.6	8.9	8.3	25.1	9.9	0.0
LnGrp LOS				B			C	A	A	C	A	
Approach Vol, veh/h					506			405			1146	
Approach Delay, s/veh					16.1			9.4			10.9	
Approach LOS					B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.1	24.9			6.6	22.4		14.8				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.3	12.5			3.9	4.8		7.5				
Green Ext Time (p_c), s	0.0	7.4			0.2	2.3		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	940	0	0	0	0	0	520	10	0
Future Volume (veh/h)	0	0	0	940	0	0	0	0	0	520	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1033	0	0				571	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				1038	0	0				606	12	0
Arrive On Green				0.59	0.00	0.00				0.35	0.35	0.00
Sat Flow, veh/h				1757	0	0				1725	33	0
Grp Volume(v), veh/h				1033	0	0				582	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				88.8	0.0	0.0				48.9	0.0	0.0
Cycle Q Clear(g_c), s				88.8	0.0	0.0				48.9	0.0	0.0
Prop In Lane				1.00		0.00				0.98		0.00
Lane Grp Cap(c), veh/h				1038	0	0				617	0	0
V/C Ratio(X)				0.99	0.00	0.00				0.94	0.00	0.00
Avail Cap(c_a), veh/h				1038	0	0				693	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				30.9	0.0	0.0				47.9	0.0	0.0
Incr Delay (d2), s/veh				26.6	0.0	0.0				20.2	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				50.4	0.0	0.0				27.2	0.0	0.0
LnGrp Delay(d),s/veh				57.5	0.0	0.0				68.1	0.0	0.0
LnGrp LOS				E						E		
Approach Vol, veh/h					1033						582	
Approach Delay, s/veh					57.5						68.1	
Approach LOS					E						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				57.9		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				50.9		90.8						
Green Ext Time (p_c), s				2.6		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				61.3								
HCM 2010 LOS				E								

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	530	0	0	900	180	10	10	810	0	0	0
Future Vol, veh/h	10	530	0	0	900	180	10	10	810	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	10	546	0	0	928	186	10	10	835	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	928	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	733	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	733	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	37
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	133	-	733	-	-
HCM Lane V/C Ratio	0.155	-	0.014	-	-
HCM Control Delay (s)	37	0	10	0	-
HCM Lane LOS	E	A	A	A	-
HCM 95th %tile Q(veh)	0.5	-	0	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Existing with Project, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	910	430	330	840	20	110	10	140	10	10	10
Future Volume (veh/h)	20	910	430	330	840	20	110	10	140	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	20	929	220	337	857	20	112	10	21	10	10	5
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	130	1141	510	493	1386	32	225	71	60	105	71	33
Arrive On Green	0.07	0.32	0.32	0.14	0.39	0.39	0.07	0.04	0.04	0.06	0.03	0.03
Sat Flow, veh/h	1774	3539	1583	3442	3535	83	3343	1810	1534	1810	2398	1107
Grp Volume(v), veh/h	20	929	220	337	429	448	112	10	21	10	7	8
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1848	1672	1810	1534	1810	1805	1699
Q Serve(g_s), s	0.4	9.9	4.5	3.8	8.0	8.0	1.3	0.2	0.5	0.2	0.2	0.2
Cycle Q Clear(g_c), s	0.4	9.9	4.5	3.8	8.0	8.0	1.3	0.2	0.5	0.2	0.2	0.2
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	130	1141	510	493	694	725	225	71	60	105	54	50
V/C Ratio(X)	0.15	0.81	0.43	0.68	0.62	0.62	0.50	0.14	0.35	0.10	0.14	0.15
Avail Cap(c_a), veh/h	651	2596	1161	1262	1298	1355	1635	929	788	442	927	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	12.7	10.9	16.6	10.0	10.0	18.4	19.0	19.1	18.3	19.3	19.3
Incr Delay (d2), s/veh	0.2	0.5	0.2	0.6	0.3	0.3	0.6	0.3	1.3	0.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	4.9	2.0	1.8	3.9	4.0	0.6	0.1	0.3	0.1	0.1	0.1
LnGrp Delay(d),s/veh	18.0	13.3	11.1	17.3	10.3	10.3	19.0	19.3	20.4	18.4	19.8	19.9
LnGrp LOS	B	B	B	B	B	B	B	B	C	B	B	B
Approach Vol, veh/h		1169			1214			143			25	
Approach Delay, s/veh		13.0			12.2			19.3			19.2	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.4	18.5	6.3	5.8	7.5	21.3	5.9	6.2				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	5.8	11.9	3.3	2.2	2.4	10.0	2.2	2.5				
Green Ext Time (p_c), s	0.1	1.3	0.0	0.0	0.0	0.9	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.0									
HCM 2010 LOS			B									

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Vol, veh/h	50	870	20	240	1250	30	10	10	20	10	10	40
Future Vol, veh/h	50	870	20	240	1250	30	10	10	20	10	10	40
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	300	-	-	85	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	2	2	2
Mvmt Flow	52	906	21	250	1302	31	10	10	21	10	10	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1334	0	0	928	0	0	2178	2856	467	2383	2851	668
Stage 1	-	-	-	-	-	-	1022	1022	-	1819	1819	-
Stage 2	-	-	-	-	-	-	1156	1834	-	564	1032	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.6	6.6	7	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.6	5.6	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.6	5.6	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.55	4.05	3.35	3.52	4.02	3.32
Pot Cap-1 Maneuver	513	-	-	733	-	-	25	16	534	18	17	401
Stage 1	-	-	-	-	-	-	247	305	-	80	127	-
Stage 2	-	-	-	-	-	-	204	121	-	478	308	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	513	-	-	732	-	-	~9	532	-	~10	401	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	~9	-	-	~10	-	-
Stage 1	-	-	-	-	-	-	222	274	-	72	83	-
Stage 2	-	-	-	-	-	-	105	79	-	396	277	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	26	513	-	-	732	-	-	-	45
HCM Lane V/C Ratio	-	1.202	0.102	-	-	0.342	-	-	-	1.157
HCM Control Delay (s)	-	\$ 466.3	12.8	-	-	12.4	-	-	-	\$ 327.6
HCM Lane LOS	-	F	B	-	-	B	-	-	-	F
HCM 95th %tile Q(veh)	-	3.8	0.3	-	-	1.5	-	-	-	4.9

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	17.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	10	960	20	10	1440	10	10	10	10	10	10	10
Future Vol, veh/h	10	960	20	10	1440	10	10	10	10	10	10	10
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	330	-	-	330	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	50	50	50	0	0	0
Mvmt Flow	10	1000	21	10	1500	10	10	10	10	10	10	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1511	0	0	1022	0	0	1807	2563	512	2051	2568	756
Stage 1	-	-	-	-	-	-	1032	1032	-	1526	1526	-
Stage 2	-	-	-	-	-	-	775	1531	-	525	1042	-
Critical Hdwy	4.14	-	-	4.14	-	-	8.5	7.5	7.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.5	6.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.5	6.5	-	6.5	5.5	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	4	4.5	3.8	3.5	4	3.3
Pot Cap-1 Maneuver	439	-	-	675	-	-	29	13	399	33	26	355
Stage 1	-	-	-	-	-	-	176	221	-	126	182	-
Stage 2	-	-	-	-	-	-	267	113	-	509	309	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	439	-	-	674	-	-	18	12	399	~ 8	25	355
Mov Cap-2 Maneuver	-	-	-	-	-	-	18	12	-	~ 8	25	-
Stage 1	-	-	-	-	-	-	172	216	-	123	179	-
Stage 2	-	-	-	-	-	-	240	111	-	461	302	-



















Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.1	\$ 642.4	\$ 799.2
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	21	439	-	-	674	-	-	18
HCM Lane V/C Ratio	1.488	0.024	-	-	0.015	-	-	1.736
HCM Control Delay (s)	\$ 642.4	13.4	-	-	10.4	-	-	\$ 799.2
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	4.1	0.1	-	-	0	-	-	4.4

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Existing with Project, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	830	20	10	970	80	20	20	10	100	150	400
Future Volume (veh/h)	120	830	20	10	970	80	20	20	10	100	150	400
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	126	874	19	11	1021	78	21	21	10	105	158	347
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	161	1505	33	15	1131	86	183	160	61	148	165	318
Arrive On Green	0.09	0.42	0.42	0.01	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1792	3575	78	1774	3333	255	282	468	178	223	482	930
Grp Volume(v), veh/h	126	437	456	11	542	557	52	0	0	610	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1866	1774	1770	1818	928	0	0	1635	0	0
Q Serve(g_s), s	4.0	11.0	11.0	0.4	17.1	17.1	0.0	0.0	0.0	16.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	11.0	11.0	0.4	17.1	17.1	1.3	0.0	0.0	20.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.14	0.40		0.19	0.17		0.57
Lane Grp Cap(c), veh/h	161	752	785	15	600	617	404	0	0	631	0	0
V/C Ratio(X)	0.78	0.58	0.58	0.74	0.90	0.90	0.13	0.00	0.00	0.97	0.00	0.00
Avail Cap(c_a), veh/h	459	916	956	455	907	932	404	0	0	631	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.1	13.0	13.0	29.0	18.4	18.4	13.1	0.0	0.0	20.0	0.0	0.0
Incr Delay (d2), s/veh	3.1	0.3	0.3	22.9	6.3	6.2	0.1	0.0	0.0	27.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.4	5.6	0.3	9.3	9.6	0.6	0.0	0.0	14.5	0.0	0.0
LnGrp Delay(d),s/veh	29.2	13.3	13.2	51.8	24.7	24.6	13.2	0.0	0.0	47.5	0.0	0.0
LnGrp LOS	C	B	B	D	C	C	B			D		
Approach Vol, veh/h		1019			1110			52			610	
Approach Delay, s/veh		15.2			24.9			13.2			47.5	
Approach LOS		B			C			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	29.9		24.6	8.8	25.2		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	2.4	13.0		22.0	6.0	19.1		3.3				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				26.1								
HCM 2010 LOS				C								

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	30	30	210	600	80
Future Vol, veh/h	30	30	30	210	600	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	33	33	228	652	87
















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	990	696	739	0	-	0
Stage 1	696	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	273	442	867	-	-	-
Stage 1	495	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	263	442	867	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	476	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	867	-	330	-	-
HCM Lane V/C Ratio	0.038	-	0.198	-	-
HCM Control Delay (s)	9.3	-	18.6	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Existing with Project, AM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	 			 	  			
Traffic Volume (veh/h)	750	210	410	960	80	100		
Future Volume (veh/h)	750	210	410	960	80	100		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	789	208	432	1011	63	127		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	908	239	490	2529	132	235		
Arrive On Green	0.33	0.33	0.28	0.72	0.08	0.08		
Sat Flow, veh/h	2866	731	1757	3597	1723	3076		
Grp Volume(v), veh/h	504	493	432	1011	63	127		
Grp Sat Flow(s),veh/h/ln	1770	1734	1757	1752	1723	1538		
Q Serve(g_s), s	12.3	12.3	10.8	5.2	1.6	1.8		
Cycle Q Clear(g_c), s	12.3	12.3	10.8	5.2	1.6	1.8		
Prop In Lane		0.42	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	579	568	490	2529	132	235		
V/C Ratio(X)	0.87	0.87	0.88	0.40	0.48	0.54		
Avail Cap(c_a), veh/h	1152	1129	763	2529	823	1469		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.6	14.6	15.9	2.5	20.4	20.5		
Incr Delay (d2), s/veh	1.6	1.6	5.0	0.0	1.0	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.1	6.0	5.8	2.4	0.8	0.8		
LnGrp Delay(d),s/veh	16.2	16.2	20.9	2.5	21.4	21.2		
LnGrp LOS	B	B	C	A	C	C		
Approach Vol, veh/h	997			1443	190			
Approach Delay, s/veh	16.2			8.0	21.3			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.2	20.4				38.5		7.5
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	12.8	14.3				7.2		3.8
Green Ext Time (p_c), s	0.1	0.8				1.1		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			12.1					
HCM 2010 LOS			B					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	680	70	80	900	20	320	20	60	40	50	190
Future Volume (veh/h)	40	680	70	80	900	20	320	20	60	40	50	190
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1863	1863	1863	1900	1845	1845	1900	1863	1863
Adj Flow Rate, veh/h	43	731	0	86	968	0	344	22	0	43	54	0
Adj No. of Lanes	1	1	1	1	1	1	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	79	978	831	110	992	843	444	23	433	255	300	438
Arrive On Green	0.04	0.52	0.00	0.06	0.53	0.00	0.28	0.28	0.00	0.28	0.28	0.00
Sat Flow, veh/h	1792	1881	1599	1774	1863	1583	1327	85	1568	714	1085	1583
Grp Volume(v), veh/h	43	731	0	86	968	0	366	0	0	97	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1774	1863	1583	1412	0	1568	1799	0	1583
Q Serve(g_s), s	2.1	27.5	0.0	4.3	45.7	0.0	19.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.1	27.5	0.0	4.3	45.7	0.0	22.7	0.0	0.0	3.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.94		1.00	0.44		1.00
Lane Grp Cap(c), veh/h	79	978	831	110	992	843	468	0	433	555	0	438
V/C Ratio(X)	0.55	0.75	0.00	0.78	0.98	0.00	0.78	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	397	1042	886	393	1032	877	544	0	521	645	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.3	17.0	0.0	41.7	20.5	0.0	31.4	0.0	0.0	24.9	0.0	0.0
Incr Delay (d2), s/veh	2.2	2.4	0.0	4.5	21.8	0.0	5.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	14.9	0.0	2.2	29.1	0.0	9.5	0.0	0.0	1.8	0.0	0.0
LnGrp Delay(d),s/veh	44.5	19.4	0.0	46.2	42.3	0.0	36.7	0.0	0.0	25.0	0.0	0.0
LnGrp LOS	D	B		D	D		D			C		
Approach Vol, veh/h		774			1054			366			97	
Approach Delay, s/veh		20.8			42.6			36.7			25.0	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	52.2		28.9	8.0	53.3		28.9				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+10), s	10.3	29.5		5.6	4.1	47.7		24.7				
Green Ext Time (p_c), s	0.0	0.5		0.1	0.0	0.4		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				33.6								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Existing with Project, AM
 06/11/2019



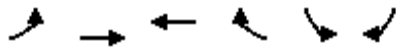
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	30	690	10	10	20	880	620	20	40	540	90
Future Volume (veh/h)	130	30	690	10	10	20	880	620	20	40	540	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	163	0	328	11	11	9	946	667	16	43	581	34
Adj No. of Lanes	2	0	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	390	0	1308	46	48	40	1044	1991	889	107	1027	447
Arrive On Green	0.11	0.00	0.11	0.03	0.03	0.03	0.30	0.56	0.56	0.03	0.29	0.29
Sat Flow, veh/h	3548	0	3152	1560	1638	1384	3442	3539	1581	3442	3539	1542
Grp Volume(v), veh/h	163	0	328	11	11	9	946	667	16	43	581	34
Grp Sat Flow(s),veh/h/ln	1774	0	1576	1560	1638	1384	1721	1770	1581	1721	1770	1542
Q Serve(g_s), s	3.3	0.0	5.3	0.5	0.5	0.5	20.6	7.9	0.3	1.0	10.9	1.2
Cycle Q Clear(g_c), s	3.3	0.0	5.3	0.5	0.5	0.5	20.6	7.9	0.3	1.0	10.9	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	390	0	1308	46	48	40	1044	1991	889	107	1027	447
V/C Ratio(X)	0.42	0.00	0.25	0.24	0.23	0.22	0.91	0.34	0.02	0.40	0.57	0.08
Avail Cap(c_a), veh/h	1595	0	2378	621	652	551	1548	2273	1015	884	2728	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	14.9	36.9	36.9	36.9	26.0	9.2	7.5	37.0	23.5	20.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.0	0.9	1.0	4.3	0.3	0.0	0.9	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	2.3	0.2	0.2	0.2	10.3	3.9	0.2	0.5	5.4	0.6
LnGrp Delay(d),s/veh	32.6	0.0	15.0	37.9	37.8	37.9	30.3	9.5	7.5	37.9	24.8	20.3
LnGrp LOS	C		B	D	D	D	C	A	A	D	C	C
Approach Vol, veh/h		491			31			1629			658	
Approach Delay, s/veh		20.8			37.9			21.6			25.4	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.7			7.3	6.5	50.0		14.1				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+T), s	22.6	12.9		2.5	3.0	9.9		7.3				
Green Ext Time (p_c), s	1.1	9.6		0.0	0.0	10.7		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			22.5									
HCM 2010 LOS			C									
Notes												

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖↖	↗↗	↖	↗	↖↖	↗↗		
Traffic Volume (veh/h)	1000	270	390	30	30	1140		
Future Volume (veh/h)	1000	270	390	30	30	1140		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1075	290	419	13	32	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1215	2711	538	458	100	81		
Arrive On Green	0.35	0.77	0.29	0.29	0.03	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1075	290	419	13	32	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	13.3	0.9	9.5	0.3	0.4	0.0		
Cycle Q Clear(g_c), s	13.3	0.9	9.5	0.3	0.4	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1215	2711	538	458	100	81		
V/C Ratio(X)	0.88	0.11	0.78	0.03	0.32	0.00		
Avail Cap(c_a), veh/h	3032	4676	2437	2072	2027	1641		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	13.8	1.4	14.7	11.5	21.6	0.0		
Incr Delay (d2), s/veh	0.9	0.0	1.8	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.4	0.4	5.0	0.1	0.2	0.0		
LnGrp Delay(d),s/veh	14.7	1.4	16.6	11.5	22.3	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1365	432		32			
Approach Delay, s/veh		11.9	16.4		22.3			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.6		4.8	21.5	19.1		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		2.9		2.4	15.3	11.5		
Green Ext Time (p_c), s		1.3		0.0	0.7	1.8		
Intersection Summary								
HCM 2010 Ctrl Delay			13.1					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Existing with Project, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	60	240	500	390	240	50		
Future Volume (veh/h)	60	240	500	390	240	50		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	64	216	532	415	255	37		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	249	750	597	2198	561	80		
Arrive On Green	0.14	0.14	0.34	0.62	0.18	0.18		
Sat Flow, veh/h	1757	1568	1774	3632	3170	441		
Grp Volume(v), veh/h	64	216	532	415	144	148		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1767		
Q Serve(g_s), s	1.5	3.8	13.1	2.3	3.4	3.4		
Cycle Q Clear(g_c), s	1.5	3.8	13.1	2.3	3.4	3.4		
Prop In Lane	1.00	1.00	1.00			0.25		
Lane Grp Cap(c), veh/h	249	750	597	2198	319	322		
V/C Ratio(X)	0.26	0.29	0.89	0.19	0.45	0.46		
Avail Cap(c_a), veh/h	1031	1448	771	4617	2286	2305		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.6	7.3	14.5	3.7	16.8	16.8		
Incr Delay (d2), s/veh	0.5	0.2	8.9	0.1	1.8	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	1.7	7.8	1.1	1.8	1.9		
LnGrp Delay(d),s/veh	18.1	7.5	23.4	3.8	18.6	18.7		
LnGrp LOS	B	A	C	A	B	B		
Approach Vol, veh/h	280			947	292			
Approach Delay, s/veh	9.9			14.8	18.6			
Approach LOS	A			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	20.2	14.8				35.0		11.0
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	20	60.0				60.0		27.0
Max Q Clear Time (g_c+11.5, s)	11.5	5.4				4.3		5.8
Green Ext Time (p_c), s	0.4	2.9				4.8		0.9
Intersection Summary								
HCM 2010 Ctrl Delay			14.6					
HCM 2010 LOS			B					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Intersection Delay, s/veh 39.4

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↕	↗			↕	↗
Traffic Vol, veh/h	40	10	50	250	10	10	10	140	10	10	520	30
Future Vol, veh/h	40	10	50	250	10	10	10	140	10	10	520	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	43	11	53	266	11	11	11	149	11	11	553	32
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	11.4	20.4	12.9	61.1
HCM LOS	B	C	B	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	80%	0%	93%	2%	0%
Vol Thru, %	0%	93%	20%	0%	4%	98%	0%
Vol Right, %	0%	7%	0%	100%	4%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	150	50	50	270	530	30
LT Vol	10	0	40	0	250	10	0
Through Vol	0	140	10	0	10	520	0
RT Vol	0	10	0	50	10	0	30
Lane Flow Rate	11	160	53	53	287	564	32
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.023	0.314	0.121	0.104	0.587	1.005	0.05
Departure Headway (Hd)	7.644	7.082	8.177	7.046	7.351	6.416	5.694
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	506	437	506	491	569	633
Service Time	5.405	4.842	5.95	4.818	5.407	4.116	3.394
HCM Lane V/C Ratio	0.024	0.316	0.121	0.105	0.585	0.991	0.051
HCM Control Delay	10.6	13.1	12.1	10.6	20.4	64.1	8.7
HCM Lane LOS	B	B	B	B	C	F	A
HCM 95th-tile Q	0.1	1.3	0.4	0.3	3.7	14.7	0.2

Intersection												
Intersection Delay, s/veh	69.8											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	270	10	30	10	210	130	60	770	10
Future Vol, veh/h	10	10	10	270	10	30	10	210	130	60	770	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	20	20	20	2	2	2	1	1	1
Mvmt Flow	11	11	11	284	11	32	11	221	137	63	811	11
Number of Lanes	1	1	1	0	1	1	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	13.3	30.2	17	290.5
HCM LOS	B	D	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	96%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	4%	0%	0%	99%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	210	130	10	10	10	280	30	60	780
LT Vol	10	0	0	10	0	0	270	0	60	0
Through Vol	0	210	0	0	10	0	10	0	0	770
RT Vol	0	0	130	0	0	10	0	30	0	10
Lane Flow Rate	11	221	137	11	11	11	295	32	63	821
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.024	0.476	0.268	0.028	0.026	0.024	0.701	0.065	0.135	1.632
Departure Headway (Hd)	9.317	8.802	8.08	10.88	10.357	9.624	9.69	8.48	7.672	7.157
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	387	413	447	331	348	374	377	425	467	509
Service Time	7.017	6.502	5.78	8.58	8.057	7.324	7.39	6.18	5.434	4.918
HCM Lane V/C Ratio	0.028	0.535	0.306	0.033	0.032	0.029	0.782	0.075	0.135	1.613
HCM Control Delay	12.2	19.2	13.7	13.9	13.3	12.6	32.2	11.8	11.6	311.9
HCM Lane LOS	B	C	B	B	B	B	D	B	B	F
HCM 95th-tile Q	0.1	2.5	1.1	0.1	0.1	0.1	5.1	0.2	0.5	46

Intersection

Intersection Delay, s/veh 12.5
 Intersection LOS B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	130	60	290	270	30	180
Future Vol, veh/h	130	60	290	270	30	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	141	65	315	293	33	196
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10	13.9	11.1
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	180	130	60	290	270
LT Vol	30	0	0	0	290	0
Through Vol	0	0	130	0	0	270
RT Vol	0	180	0	60	0	0
Lane Flow Rate	33	196	141	65	315	293
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.064	0.316	0.236	0.096	0.526	0.449
Departure Headway (Hd)	7.033	5.82	6.015	5.306	6.008	5.503
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	618	598	676	602	657
Service Time	4.763	3.55	3.745	3.035	3.728	3.223
HCM Lane V/C Ratio	0.065	0.317	0.236	0.096	0.523	0.446
HCM Control Delay	10.2	11.2	10.6	8.6	15.2	12.6
HCM Lane LOS	B	B	B	A	C	B
HCM 95th-tile Q	0.2	1.4	0.9	0.3	3.1	2.3

Intersection												
Intersection Delay, s/veh	37.3											
Intersection LOS	E											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	70	10	10	90	170	10	20	10	420	10	190
Future Vol, veh/h	50	70	10	10	90	170	10	20	10	420	10	190
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	3	3	3	5	5	5	0	0	0	1	1	1
Mvmt Flow	62	86	12	12	111	210	12	25	12	519	12	235
Number of Lanes	1	1	0	1	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	2
HCM Control Delay	13	13.8	12	54.2
HCM LOS	B	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	25%	100%	0%	100%	0%	0%	98%	0%
Vol Thru, %	50%	0%	88%	0%	100%	0%	2%	0%
Vol Right, %	25%	0%	12%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	50	80	10	90	170	430	190
LT Vol	10	50	0	10	0	0	420	0
Through Vol	20	0	70	0	90	0	10	0
RT Vol	10	0	10	0	0	170	0	190
Lane Flow Rate	49	62	99	12	111	210	531	235
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.111	0.145	0.219	0.028	0.237	0.406	1.026	0.376
Departure Headway (Hd)	8.278	8.734	8.126	8.301	7.789	7.071	6.961	5.764
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	436	413	444	434	463	512	520	619
Service Time	5.978	6.434	5.826	6.001	5.489	4.771	4.746	3.548
HCM Lane V/C Ratio	0.112	0.15	0.223	0.028	0.24	0.41	1.021	0.38
HCM Control Delay	12	12.9	13.1	11.2	12.9	14.5	72.9	12
HCM Lane LOS	B	B	B	B	B	B	F	B
HCM 95th-tile Q	0.4	0.5	0.8	0.1	0.9	1.9	14.9	1.7

Intersection

Intersection Delay, s/veh 192.8

Intersection LOS F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	30	10	340	40	10	1030
Future Vol, veh/h	30	10	340	40	10	1030
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	1	1	1	1
Mvmt Flow	32	11	366	43	11	1108
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	11.4	13.6	265.3
HCM LOS	B	B	F

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	340	40	30	10	10	1030
LT Vol	0	0	30	0	10	0
Through Vol	340	0	0	0	0	1030
RT Vol	0	40	0	10	0	0
Lane Flow Rate	366	43	32	11	11	1108
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.523	0.054	0.068	0.019	0.017	1.548
Departure Headway (Hd)	5.62	4.912	8.515	7.28	5.536	5.033
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	647	733	423	495	649	731
Service Time	3.32	2.612	6.215	4.98	3.244	2.741
HCM Lane V/C Ratio	0.566	0.059	0.076	0.022	0.017	1.516
HCM Control Delay	14.3	7.9	11.8	10.1	8.3	267.8
HCM Lane LOS	B	A	B	B	A	F
HCM 95th-tile Q	3	0.2	0.2	0.1	0.1	56.3

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	10	10	30	10	170	10	30	150	10
Future Vol, veh/h	10	10	10	10	10	30	10	170	10	30	150	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	12	12	12	12	12	35	12	200	12	35	176	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	8.1	9.1	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	33%	20%	16%
Vol Thru, %	89%	33%	20%	79%
Vol Right, %	5%	33%	60%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	30	50	190
LT Vol	10	10	10	30
Through Vol	170	10	10	150
RT Vol	10	10	30	10
Lane Flow Rate	224	35	59	224
Geometry Grp	1	1	1	1
Degree of Util (X)	0.274	0.048	0.076	0.271
Departure Headway (Hd)	4.409	4.938	4.652	4.365
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	816	725	769	825
Service Time	2.429	2.972	2.683	2.384
HCM Lane V/C Ratio	0.275	0.048	0.077	0.272
HCM Control Delay	9.1	8.2	8.1	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.2	0.2	1.1

Intersection												
Intersection Delay, s/veh	25.8											
Intersection LOS	D											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	10	70	0	0	180	40	10	150	50	370	0	10
Future Vol, veh/h	10	70	0	0	180	40	10	150	50	370	0	10
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	8	8	8	3	3	3	19	19	19	7	7	7
Mvmt Flow	12	86	0	0	222	49	12	185	62	457	0	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	12.1	15.7	15.2	40.3
HCM LOS	B	C	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	12%	0%	100%	0%
Vol Thru, %	71%	88%	82%	0%	0%
Vol Right, %	24%	0%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	80	220	370	10
LT Vol	10	10	0	370	0
Through Vol	150	70	180	0	0
RT Vol	50	0	40	0	10
Lane Flow Rate	259	99	272	457	12
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.469	0.199	0.49	0.878	0.02
Departure Headway (Hd)	6.512	7.243	6.499	6.918	5.697
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	552	494	554	525	632
Service Time	4.566	5.31	4.551	4.618	3.397
HCM Lane V/C Ratio	0.469	0.2	0.491	0.87	0.019
HCM Control Delay	15.2	12.1	15.7	41.2	8.5
HCM Lane LOS	C	B	C	E	A
HCM 95th-tile Q	2.5	0.7	2.7	9.7	0.1

Intersection	
Intersection Delay, s/veh	202.6
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	210	200	740	10	30	490
Future Vol, veh/h	210	200	740	10	30	490
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	8	8	1	1	1	1
Mvmt Flow	247	235	871	12	35	576
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	22.5	381.7	86.4
HCM LOS	C	F	F

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	200	740	10	30	490
LT Vol	210	0	0	0	30	0
Through Vol	0	200	740	0	0	0
RT Vol	0	0	0	10	0	490
Lane Flow Rate	247	235	871	12	35	576
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.566	0.506	1.799	0.022	0.077	1.074
Departure Headway (Hd)	9.666	9.138	7.771	7.047	9.071	7.822
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	398	479	511	397	467
Service Time	7.366	6.838	5.471	4.747	6.771	5.522
HCM Lane V/C Ratio	0.657	0.59	1.818	0.023	0.088	1.233
HCM Control Delay	24.2	20.8	386.7	9.9	12.5	90.9
HCM Lane LOS	C	C	F	A	B	F
HCM 95th-tile Q	3.4	2.8	52.2	0.1	0.2	15.9

Intersection

Intersection Delay, s/veh 79.1

Intersection LOS F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↗
Traffic Vol, veh/h	30	200	590	10	50	160
Future Vol, veh/h	30	200	590	10	50	160
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	5	5	1	1	3	3
Mvmt Flow	38	253	747	13	63	203
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	13.7	127.4	12.7
HCM LOS	B	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	200	590	10	50	160
LT Vol	30	0	0	0	50	0
Through Vol	0	200	590	0	0	0
RT Vol	0	0	0	10	0	160
Lane Flow Rate	38	253	747	13	63	203
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.071	0.439	1.21	0.018	0.131	0.352
Departure Headway (Hd)	7.017	6.506	5.831	5.121	7.954	6.729
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	514	557	627	702	454	539
Service Time	4.717	4.206	3.539	2.829	5.654	4.429
HCM Lane V/C Ratio	0.074	0.454	1.191	0.019	0.139	0.377
HCM Control Delay	10.3	14.2	129.4	7.9	11.8	13
HCM Lane LOS	B	B	F	A	B	B
HCM 95th-tile Q	0.2	2.2	26.7	0.1	0.4	1.6

Intersection	
Intersection Delay, s/veh	27
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	240	10	80	20	20	520
Future Vol, veh/h	240	10	80	20	20	520
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	293	12	98	24	24	634
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	15.7	10.8	35.3
HCM LOS	C	B	E

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	96%	0%	100%	0%
Vol Thru, %	4%	80%	0%	0%
Vol Right, %	0%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	100	20	520
LT Vol	240	0	20	0
Through Vol	10	80	0	0
RT Vol	0	20	0	520
Lane Flow Rate	305	122	24	634
Geometry Grp	2	2	7	7
Degree of Util (X)	0.521	0.208	0.043	0.9
Departure Headway (Hd)	6.148	6.138	6.32	5.107
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	585	582	566	710
Service Time	4.201	4.203	4.062	2.849
HCM Lane V/C Ratio	0.521	0.21	0.042	0.893
HCM Control Delay	15.7	10.8	9.3	36.3
HCM Lane LOS	C	B	A	E
HCM 95th-tile Q	3	0.8	0.1	11.6

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	480	10	40	890	0	40	0	80	0	0	0
Future Volume (veh/h)	0	480	10	40	890	0	40	0	80	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	539	9	45	1000	0	45	0	18			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	6	1411	24	94	2070	0	99	0	88			
Arrive On Green	0.00	0.40	0.40	0.05	0.58	0.00	0.06	0.00	0.06			
Sat Flow, veh/h	1740	3494	58	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	268	280	45	1000	0	45	0	18			
Grp Sat Flow(s),veh/h/ln	1740	1736	1817	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	3.1	3.1	0.7	4.6	0.0	0.7	0.0	0.3			
Cycle Q Clear(g_c), s	0.0	3.1	3.1	0.7	4.6	0.0	0.7	0.0	0.3			
Prop In Lane	1.00		0.03	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	6	701	734	94	2070	0	99	0	88			
V/C Ratio(X)	0.00	0.38	0.38	0.48	0.48	0.00	0.45	0.00	0.20			
Avail Cap(c_a), veh/h	1240	3710	3883	1264	7566	0	1723	0	1538			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.9	5.9	12.9	3.4	0.0	12.8	0.0	12.7			
Incr Delay (d2), s/veh	0.0	0.6	0.6	1.4	0.2	0.0	1.2	0.0	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.5	1.6	0.4	2.1	0.0	0.4	0.0	0.1			
LnGrp Delay(d),s/veh	0.0	6.5	6.5	14.3	3.6	0.0	14.0	0.0	13.1			
LnGrp LOS		A	A	B	A		B		B			
Approach Vol, veh/h		548			1045			63				
Approach Delay, s/veh		6.5			4.1			13.8				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.1	16.7			0.0	21.8		6.3				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax)	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+1)	2	5.1			0.0	6.6		2.7				
Green Ext Time (p_c), s	0.0	6.0			0.0	9.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				5.2								
HCM 2010 LOS				A								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	780	0	0	400	0
Future Vol, veh/h	0	0	0	0	0	0	0	780	0	0	400	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	886	0	0	455	0




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1341	1341	455	1341	1341	886	455	0	0	886	0	0
Stage 1	455	455	-	886	886	-	-	-	-	-	-	-
Stage 2	886	886	-	455	455	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	129	152	605	129	152	343	1106	-	-	764	-	-
Stage 1	585	569	-	339	363	-	-	-	-	-	-	-
Stage 2	339	363	-	585	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	129	152	605	129	152	343	1106	-	-	764	-	-
Mov Cap-2 Maneuver	129	152	-	129	152	-	-	-	-	-	-	-
Stage 1	585	569	-	339	363	-	-	-	-	-	-	-
Stage 2	339	363	-	585	569	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		0		0	
HCM LOS	A		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1106	-	-	-	764	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Existing with Project, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	280	10	10	500	110	10	10	10	150	10	430
Future Volume (veh/h)	280	280	10	10	500	110	10	10	10	150	10	430
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	304	304	11	12	581	120	12	12	9	174	12	258
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.92	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	335	1110	40	20	666	138	20	20	15	254	18	538
Arrive On Green	0.19	0.62	0.62	0.01	0.44	0.44	0.03	0.03	0.03	0.15	0.15	0.15
Sat Flow, veh/h	1774	1787	65	1774	1499	310	648	648	486	1649	114	1568
Grp Volume(v), veh/h	304	0	315	12	0	701	33	0	0	186	0	258
Grp Sat Flow(s),veh/h/ln	1774	0	1851	1774	0	1808	1782	0	0	1762	0	1568
Q Serve(g_s), s	16.4	0.0	7.6	0.7	0.0	34.4	1.8	0.0	0.0	9.8	0.0	12.6
Cycle Q Clear(g_c), s	16.4	0.0	7.6	0.7	0.0	34.4	1.8	0.0	0.0	9.8	0.0	12.6
Prop In Lane	1.00		0.03	1.00		0.17	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	335	0	1150	20	0	804	54	0	0	272	0	538
V/C Ratio(X)	0.91	0.00	0.27	0.59	0.00	0.87	0.61	0.00	0.00	0.68	0.00	0.48
Avail Cap(c_a), veh/h	545	0	1150	545	0	1110	547	0	0	541	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	0.0	8.5	48.1	0.0	24.6	46.8	0.0	0.0	39.1	0.0	25.2
Incr Delay (d2), s/veh	8.2	0.0	0.2	9.9	0.0	7.0	4.1	0.0	0.0	1.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	3.9	0.4	0.0	18.7	0.9	0.0	0.0	4.8	0.0	5.5
LnGrp Delay(d),s/veh	46.9	0.0	8.7	58.0	0.0	31.7	50.9	0.0	0.0	40.2	0.0	25.5
LnGrp LOS	D		A	E		C	D			D		C
Approach Vol, veh/h		619			713			33				444
Approach Delay, s/veh		27.4			32.1			50.9				31.7
Approach LOS		C			C			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	65.7		20.1	22.3	48.4		7.0				
Change Period (Y+Rc), s	* 3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	* 30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+I1), s	2.7	9.6		14.6	18.4	36.4		3.8				
Green Ext Time (p_c), s	0.0	2.9		0.4	0.1	7.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			30.7									
HCM 2010 LOS			C									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	12.9											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	↕
Traffic Vol, veh/h	10	10	10	70	10	10	10	370	120	10	1040	10
Future Vol, veh/h	10	10	10	70	10	10	10	370	120	10	1040	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	14	14	14	0	0	0	2	2	2	1	1	1
Mvmt Flow	11	11	11	77	11	11	11	407	132	11	1143	11
Number of Lanes	0	1	0	0	1	1	1	2	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	13.7	15.1	18	485.7
HCM LOS	B	C	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	33%	88%	0%	100%	0%	0%
Vol Thru, %	0%	100%	51%	33%	12%	0%	0%	100%	0%
Vol Right, %	0%	0%	49%	33%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	247	243	30	80	10	10	1040	10
LT Vol	10	0	0	10	70	0	10	0	0
Through Vol	0	247	123	10	10	0	0	1040	0
RT Vol	0	0	120	10	0	10	0	0	10
Lane Flow Rate	11	271	267	33	88	11	11	1143	11
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.022	0.498	0.465	0.076	0.203	0.022	0.021	2.052	0.018
Departure Headway (Hd)	8.795	8.286	7.935	10.179	10.226	9.053	6.97	6.465	5.758
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	439	457	354	353	398	517	571	625
Service Time	6.495	5.986	5.635	7.879	7.926	6.753	4.67	4.165	3.458
HCM Lane V/C Ratio	0.027	0.617	0.584	0.093	0.249	0.028	0.021	2.002	0.018
HCM Control Delay	11.7	18.9	17.3	13.7	15.5	12	9.8	494.9	8.6
HCM Lane LOS	B	C	C	B	C	B	A	F	A
HCM 95th-tile Q	0.1	2.7	2.4	0.2	0.7	0.1	0.1	78.7	0.1

Intersection												
Intersection Delay, s/veh	8.8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	10	10	10	10	20	10	160	10	20	140	10
Future Vol, veh/h	10	10	10	10	10	20	10	160	10	20	140	10
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	11	11	11	11	11	22	11	176	11	22	154	11
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8	7.9	9.1	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	25%	100%	0%
Vol Thru, %	0%	94%	33%	25%	0%	93%
Vol Right, %	0%	6%	33%	50%	0%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	170	30	40	20	150
LT Vol	10	0	10	10	20	0
Through Vol	0	160	10	10	0	140
RT Vol	0	10	10	20	0	10
Lane Flow Rate	11	187	33	44	22	165
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.016	0.251	0.043	0.056	0.033	0.22
Departure Headway (Hd)	5.371	4.828	4.738	4.624	5.361	4.812
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	669	745	757	775	670	748
Service Time	3.086	2.543	2.762	2.647	3.075	2.527
HCM Lane V/C Ratio	0.016	0.251	0.044	0.057	0.033	0.221
HCM Control Delay	8.2	9.2	8	7.9	8.3	8.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	1	0.1	0.2	0.1	0.8

HCM 2010 Signalized Intersection Summary
31: 1st Avenue & Lightfighter Drive

Existing with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	860	130	30	890	0	160	0	20	20	10	20
Future Volume (veh/h)	0	860	130	30	890	0	160	0	20	20	10	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1024	0	36	1060	0	190	0	10	24	12	5
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2104	941	41	2535	0	0	0	0	41	43	36
Arrive On Green	0.00	0.59	0.00	0.02	0.72	0.00	0.00	0.00	0.00	0.02	0.02	0.02
Sat Flow, veh/h	0	3632	1583	1774	3632	0	0	0	0	1707	1792	1524
Grp Volume(v), veh/h	0	1024	0	36	1060	0	0	0	0	24	12	5
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0	0	0	0	1707	1792	1524
Q Serve(g_s), s	0.0	5.8	0.0	0.7	4.3	0.0	0.0	0.0	0.0	0.5	0.2	0.1
Cycle Q Clear(g_c), s	0.0	5.8	0.0	0.7	4.3	0.0	0.0	0.0	0.0	0.5	0.2	0.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2104	941	41	2535	0	0	0	0	41	43	36
V/C Ratio(X)	0.00	0.49	0.00	0.88	0.42	0.00	0.00	0.00	0.00	0.59	0.28	0.14
Avail Cap(c_a), veh/h	0	4499	2013	1002	4499	0	0	0	0	1206	1266	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.1	0.0	17.2	2.0	0.0	0.0	0.0	0.0	17.1	17.0	16.9
Incr Delay (d2), s/veh	0.0	0.2	0.0	19.1	0.2	0.0	0.0	0.0	0.0	5.0	1.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.0	0.6	2.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
LnGrp Delay(d),s/veh	0.0	4.3	0.0	36.3	2.2	0.0	0.0	0.0	0.0	22.1	18.3	17.6
LnGrp LOS		A		D	A					C	B	B
Approach Vol, veh/h		1024			1096						41	
Approach Delay, s/veh		4.3			3.3						20.4	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.3	25.6		5.4		30.0				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.7	7.8		2.5		6.3				
Green Ext Time (p_c), s			0.0	13.2		0.0		13.0				
Intersection Summary												
HCM 2010 Ctrl Delay			4.1									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	810	10	10	560	70	10	10	10	280	10	350
Future Volume (veh/h)	80	810	10	10	560	70	10	10	10	280	10	350
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	89	900	11	11	622	69	11	11	10	311	11	113
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	113	2215	27	18	1782	197	156	155	119	412	450	382
Arrive On Green	0.06	0.62	0.62	0.01	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3581	44	1740	3152	349	451	647	499	1399	1881	1599
Grp Volume(v), veh/h	89	445	466	11	342	349	32	0	0	311	11	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1855	1740	1736	1765	1597	0	0	1399	1881	1599
Q Serve(g_s), s	4.9	12.8	12.8	0.6	10.7	10.7	0.0	0.0	0.0	19.9	0.4	5.8
Cycle Q Clear(g_c), s	4.9	12.8	12.8	0.6	10.7	10.7	1.4	0.0	0.0	21.3	0.4	5.8
Prop In Lane	1.00		0.02	1.00		0.20	0.34		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	113	1095	1147	18	981	998	430	0	0	412	450	382
V/C Ratio(X)	0.79	0.41	0.41	0.60	0.35	0.35	0.07	0.00	0.00	0.76	0.02	0.30
Avail Cap(c_a), veh/h	220	1095	1147	216	981	998	687	0	0	643	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.68	0.68	0.68	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	9.7	9.7	49.3	11.8	11.8	29.5	0.0	0.0	36.9	29.1	31.2
Incr Delay (d2), s/veh	3.8	0.9	0.9	7.7	0.7	0.7	0.0	0.0	0.0	1.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.5	6.8	0.3	5.2	5.3	0.7	0.0	0.0	8.5	0.2	2.6
LnGrp Delay(d),s/veh	49.9	10.7	10.6	57.0	12.4	12.4	29.5	0.0	0.0	37.9	29.1	31.3
LnGrp LOS	D	B	B	E	B	B	C			D	C	C
Approach Vol, veh/h		1000			702			32			435	
Approach Delay, s/veh		14.1			13.1			29.5			36.0	
Approach LOS		B			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	66.5		28.5	10.4	61.1		28.5				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1/2), s	12.6	14.8		23.3	6.9	12.7		3.4				
Green Ext Time (p_c), s	0.0	3.3		0.6	0.0	2.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				18.4								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	170	750	10	70	20	540	30	10	20	20	10
Future Volume (veh/h)	10	170	750	10	70	20	540	30	10	20	20	10
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	191	0	11	79	20	607	34	10	22	22	11
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	20	308	262	20	228	58	832	517	152	38	359	166
Arrive On Green	0.01	0.17	0.00	0.01	0.17	0.17	0.24	0.37	0.37	0.02	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1707	1379	349	3476	1397	411	1774	2349	1087
Grp Volume(v), veh/h	11	191	0	11	0	99	607	0	44	22	16	17
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1728	1738	0	1808	1774	1770	1666
Q Serve(g_s), s	0.3	4.0	0.0	0.3	0.0	2.1	6.7	0.0	0.7	0.5	0.3	0.4
Cycle Q Clear(g_c), s	0.3	4.0	0.0	0.3	0.0	2.1	6.7	0.0	0.7	0.5	0.3	0.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.23	1.00		0.65
Lane Grp Cap(c), veh/h	20	308	262	20	0	286	832	0	670	38	270	254
V/C Ratio(X)	0.54	0.62	0.00	0.56	0.00	0.35	0.73	0.00	0.07	0.57	0.06	0.07
Avail Cap(c_a), veh/h	850	1338	1138	818	0	1242	832	0	1299	637	1271	1197
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	16.2	0.0	20.5	0.0	15.4	14.6	0.0	8.5	20.2	15.1	15.1
Incr Delay (d2), s/veh	20.4	2.4	0.0	9.0	0.0	0.9	3.1	0.0	0.1	5.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.2	0.0	0.2	0.0	1.1	3.6	0.0	0.3	0.3	0.2	0.2
LnGrp Delay(d),s/veh	41.0	18.6	0.0	29.5	0.0	16.3	17.7	0.0	8.6	25.2	15.2	15.3
LnGrp LOS	D	B		C		B	B		A	C	B	B
Approach Vol, veh/h		202			110			651			55	
Approach Delay, s/veh		19.9			17.6			17.1			19.2	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.9	5.0	11.4	5.4	20.0	5.0	11.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1/3), s	2.4	2.3	4.1	2.5	2.7	2.3	6.0					
Green Ext Time (p_c), s	0.3	0.1	0.0	0.6	0.0	0.3	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	70	20	10	150	40
Future Vol, veh/h	20	70	20	10	150	40
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	26	91	26	13	195	52
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.9	7.5	9.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	22%	79%
Vol Thru, %	67%	0%	21%
Vol Right, %	33%	78%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	90	190
LT Vol	0	20	150
Through Vol	20	0	40
RT Vol	10	70	0
Lane Flow Rate	39	117	247
Geometry Grp	1	1	1
Degree of Util (X)	0.046	0.136	0.297
Departure Headway (Hd)	4.272	4.203	4.328
Convergence, Y/N	Yes	Yes	Yes
Cap	841	858	822
Service Time	2.283	2.204	2.402
HCM Lane V/C Ratio	0.046	0.136	0.3
HCM Control Delay	7.5	7.9	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.5	1.2

Intersection						
Int Delay, s/veh	1.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	20	10	80	10	10
Future Vol, veh/h	130	20	10	80	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	167	26	13	103	13	13

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	193	0	309
Stage 1	-	-	-	-	180
Stage 2	-	-	-	-	129
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	1368	-	687
Stage 1	-	-	-	-	856
Stage 2	-	-	-	-	902
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1368	-	680
Mov Cap-2 Maneuver	-	-	-	-	680
Stage 1	-	-	-	-	847
Stage 2	-	-	-	-	902

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	763	-	-	1368	-
HCM Lane V/C Ratio	0.034	-	-	0.009	-
HCM Control Delay (s)	9.9	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection

Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	120	10	10	80	10	10	140	10	10	120	10
Future Vol, veh/h	10	120	10	10	80	10	10	140	10	10	120	10
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	13	152	13	13	101	13	13	177	13	13	152	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	9.4	10.5	9.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	7%	10%	7%
Vol Thru, %	88%	86%	80%	86%
Vol Right, %	6%	7%	10%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	140	100	140
LT Vol	10	10	10	10
Through Vol	140	120	80	120
RT Vol	10	10	10	10
Lane Flow Rate	203	177	127	177
Geometry Grp	1	1	1	1
Degree of Util (X)	0.293	0.251	0.18	0.244
Departure Headway (Hd)	5.209	5.098	5.126	4.948
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	698	692	718
Service Time	3.291	3.182	3.217	3.031
HCM Lane V/C Ratio	0.297	0.254	0.184	0.247
HCM Control Delay	10.5	9.9	9.4	9.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.2	1	0.7	1

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	40	70	10	50	10	30	100	10	0	0	0
Future Vol, veh/h	20	40	70	10	50	10	30	100	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	24	49	85	12	61	12	37	122	12	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	240	210	1	271	204	129	1	0	0	135	0	0
Stage 1	1	1	-	203	203	-	-	-	-	-	-	-
Stage 2	239	209	-	68	1	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	694	670	1055	686	696	926	1571	-	-	1401	-	-
Stage 1	997	875	-	804	737	-	-	-	-	-	-	-
Stage 2	742	711	-	947	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	626	653	1055	582	678	925	1571	-	-	1400	-	-
Mov Cap-2 Maneuver	626	653	-	582	678	-	-	-	-	-	-	-
Stage 1	972	875	-	783	718	-	-	-	-	-	-	-
Stage 2	653	693	-	822	899	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.5		11		1.6		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	815	688	1400	-
HCM Lane V/C Ratio	0.023	-	-	0.195	0.124	-	-
HCM Control Delay (s)	7.3	0	-	10.5	11	0	-
HCM Lane LOS	A	A	-	B	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.4	0	-

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	40	10	10	110	720	50
Future Vol, veh/h	40	10	10	110	720	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	45	11	11	124	809	56

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	983	837	865	0	-	0
Stage 1	837	-	-	-	-	-
Stage 2	146	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	263	350	778	-	-	-
Stage 1	407	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	259	350	778	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	401	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.6	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	778	-	273	-	-
HCM Lane V/C Ratio	0.014	-	0.206	-	-
HCM Control Delay (s)	9.7	0	21.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Existing with Project, AM
 06/11/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	440	40	60	50	330	220	170	690	50
Future Volume (veh/h)	30	100	80	440	40	60	50	330	220	170	690	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	506	46	0	57	379	0	195	793	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	60	148	77	530	738	628	86	620	277	236	915	409
Arrive On Green	0.03	0.13	0.13	0.30	0.40	0.00	0.05	0.17	0.00	0.13	0.26	0.00
Sat Flow, veh/h	1723	1120	585	1774	1863	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	0	175	506	46	0	57	379	0	195	793	0
Grp Sat Flow(s),veh/h/ln	1723	0	1705	1774	1863	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	0.0	6.8	19.2	1.0	0.0	2.1	6.7	0.0	7.3	14.7	0.0
Cycle Q Clear(g_c), s	1.3	0.0	6.8	19.2	1.0	0.0	2.1	6.7	0.0	7.3	14.7	0.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	0	226	530	738	628	86	620	277	236	915	409
V/C Ratio(X)	0.57	0.00	0.77	0.96	0.06	0.00	0.66	0.61	0.00	0.82	0.87	0.00
Avail Cap(c_a), veh/h	264	0	770	530	1112	946	144	1301	582	401	1804	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.6	0.0	28.8	23.6	12.8	0.0	32.1	26.2	0.0	29.0	24.3	0.0
Incr Delay (d2), s/veh	3.1	0.0	2.1	27.9	0.0	0.0	3.2	0.4	0.0	2.8	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	3.3	13.5	0.5	0.0	1.1	3.3	0.0	3.8	7.3	0.0
LnGrp Delay(d),s/veh	35.7	0.0	30.9	51.5	12.8	0.0	35.3	26.6	0.0	31.7	25.3	0.0
LnGrp LOS	D		C	D	B		D	C		C	C	
Approach Vol, veh/h		209			552			436			988	
Approach Delay, s/veh		31.7			48.3			27.7			26.6	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	22.2	6.9	31.7	13.6	16.4	25.0	13.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	4.1	16.7	3.3	3.0	9.3	8.7	21.2	8.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			32.8									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	460	50	10	860	10	20	10	10	10	30	20
Future Vol, veh/h	10	460	50	10	860	10	20	10	10	10	30	20
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	4	4	4
Mvmt Flow	11	523	57	11	977	11	23	11	11	11	34	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	988	0	0	581	0	0	1608	1585	553	1590	1608	983
Stage 1	-	-	-	-	-	-	575	575	-	1005	1005	-
Stage 2	-	-	-	-	-	-	1033	1010	-	585	603	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.14	5.54	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.536	4.036	3.336
Pot Cap-1 Maneuver	696	-	-	988	-	-	84	108	533	86	104	299
Stage 1	-	-	-	-	-	-	503	503	-	289	317	-
Stage 2	-	-	-	-	-	-	281	317	-	494	485	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	696	-	-	987	-	-	55	103	532	74	99	299
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	103	-	74	99	-
Stage 1	-	-	-	-	-	-	490	490	-	282	309	-
Stage 2	-	-	-	-	-	-	225	309	-	461	473	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			91.7			69.7		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	83	696	-	-	987	-	-	119
HCM Lane V/C Ratio	0.548	0.016	-	-	0.012	-	-	0.573
HCM Control Delay (s)	91.7	10.3	0	-	8.7	0	-	69.7
HCM Lane LOS	F	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	2.4	0.1	-	-	0	-	-	2.8

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	10	370	110	20	830	10	50	10	10	10	10	10
Future Vol, veh/h	10	370	110	20	830	10	50	10	10	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	3	3	3	2	2	2	2	2	2	0	0	0
Mvmt Flow	12	440	131	24	988	12	60	12	12	12	12	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1000	0	0	571	0	0	1584	1578	506	1584	1637	994
Stage 1	-	-	-	-	-	-	530	530	-	1042	1042	-
Stage 2	-	-	-	-	-	-	1054	1048	-	542	595	-
Critical Hdwy	4.13	-	-	4.12	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.218	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	688	-	-	1002	-	-	88	109	566	89	102	300
Stage 1	-	-	-	-	-	-	533	527	-	280	309	-
Stage 2	-	-	-	-	-	-	273	305	-	528	496	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	688	-	-	1002	-	-	72	100	566	74	94	300
Mov Cap-2 Maneuver	-	-	-	-	-	-	72	100	-	74	94	-
Stage 1	-	-	-	-	-	-	519	513	-	273	292	-
Stage 2	-	-	-	-	-	-	238	289	-	492	483	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.2			156.8			53.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	76	566	688	-	-	1002	-	-	109
HCM Lane V/C Ratio	0.94	0.021	0.017	-	-	0.024	-	-	0.328
HCM Control Delay (s)	181	11.5	10.3	0	-	8.7	0	-	53.3
HCM Lane LOS	F	B	B	A	-	A	A	-	F
HCM 95th %tile Q(veh)	4.9	0.1	0.1	-	-	0.1	-	-	1.3

Intersection	
Intersection Delay, s/veh	86.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	140	250	10	10	730	10	10	10	10	10	10	120
Future Vol, veh/h	140	250	10	10	730	10	10	10	10	10	10	120
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	3	3	3	2	2	2	33	33	33	2	2	2
Mvmt Flow	157	281	11	11	820	11	11	11	11	11	11	135
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	21.1	138.6	11.9	12.6
HCM LOS	C	F	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	35%	1%	7%
Vol Thru, %	50%	0%	62%	97%	7%
Vol Right, %	0%	100%	3%	1%	86%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	10	400	750	140
LT Vol	10	0	140	10	10
Through Vol	10	0	250	730	10
RT Vol	0	10	10	10	120
Lane Flow Rate	22	11	449	843	157
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.053	0.024	0.69	1.239	0.28
Departure Headway (Hd)	9.136	8.152	5.941	5.291	6.918
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	394	442	611	691	522
Service Time	6.836	5.852	3.941	3.304	4.918
HCM Lane V/C Ratio	0.056	0.025	0.735	1.22	0.301
HCM Control Delay	12.3	11.1	21.1	138.6	12.6
HCM Lane LOS	B	B	C	F	B
HCM 95th-tile Q	0.2	0.1	5.4	30.6	1.1

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	100	110	720	10	10	10
Future Vol, veh/h	100	110	720	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	3	3	0	0	8	8
Mvmt Flow	116	128	837	12	12	12

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	849	0	-	0	1203 843
Stage 1	-	-	-	-	843 -
Stage 2	-	-	-	-	360 -
Critical Hdwy	4.13	-	-	-	6.48 6.28
Critical Hdwy Stg 1	-	-	-	-	5.48 -
Critical Hdwy Stg 2	-	-	-	-	5.48 -
Follow-up Hdwy	2.227	-	-	-	3.572 3.372
Pot Cap-1 Maneuver	785	-	-	-	198 355
Stage 1	-	-	-	-	412 -
Stage 2	-	-	-	-	693 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	785	-	-	-	167 355
Mov Cap-2 Maneuver	-	-	-	-	167 -
Stage 1	-	-	-	-	346 -
Stage 2	-	-	-	-	693 -

Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	22.7
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	785	-	-	-	227
HCM Lane V/C Ratio	0.148	-	-	-	0.102
HCM Control Delay (s)	10.4	0	-	-	22.7
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.3

Intersection	
Intersection Delay, s/veh	32.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	110	10	10	10	10	10	10	10	10	10	10	720
Future Vol, veh/h	110	10	10	10	10	10	10	10	10	10	10	720
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	0	0	0
Mvmt Flow	129	12	12	12	12	12	12	12	12	12	12	847
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.2	9.4	8.6	38.5
HCM LOS	B	A	A	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	85%	33%	1%
Vol Thru, %	33%	8%	33%	1%
Vol Right, %	33%	8%	33%	97%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	130	30	740
LT Vol	10	110	10	10
Through Vol	10	10	10	10
RT Vol	10	10	10	720
Lane Flow Rate	35	153	35	871
Geometry Grp	1	1	1	1
Degree of Util (X)	0.052	0.258	0.059	0.95
Departure Headway (Hd)	5.312	6.065	6.059	3.929
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	678	595	594	914
Service Time	3.312	4.067	4.068	1.977
HCM Lane V/C Ratio	0.052	0.257	0.059	0.953
HCM Control Delay	8.6	11.2	9.4	38.5
HCM Lane LOS	A	B	A	E
HCM 95th-tile Q	0.2	1	0.2	15.4

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	70	80	120	150	70	40	130	370	110	80	790	150
Future Volume (veh/h)	70	80	120	150	70	40	130	370	110	80	790	150
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	90	103	125	192	90	47	167	474	114	103	1013	123
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	197	225	228	340	152	68	207	613	146	389	1128	499
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.12	0.21	0.21	0.22	0.32	0.32
Sat Flow, veh/h	353	626	634	702	423	187	1792	2853	681	1774	3539	1566
Grp Volume(v), veh/h	318	0	0	329	0	0	167	296	292	103	1013	123
Grp Sat Flow(s),veh/h/ln	1613	0	0	1312	0	0	1792	1787	1748	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	4.4	0.0	0.0	6.0	10.2	10.4	3.2	18.0	3.8
Cycle Q Clear(g_c), s	9.8	0.0	0.0	14.2	0.0	0.0	6.0	10.2	10.4	3.2	18.0	3.8
Prop In Lane	0.28		0.39	0.58		0.14	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	651	0	0	559	0	0	207	384	376	389	1128	499
V/C Ratio(X)	0.49	0.00	0.00	0.59	0.00	0.00	0.81	0.77	0.78	0.26	0.90	0.25
Avail Cap(c_a), veh/h	869	0	0	747	0	0	218	693	678	389	1373	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	0.0	17.9	0.0	0.0	28.4	24.3	24.3	21.3	21.4	16.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	17.2	1.2	1.3	0.1	6.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	0.0	5.1	0.0	0.0	4.0	5.1	5.1	1.6	9.7	1.7
LnGrp Delay(d),s/veh	16.7	0.0	0.0	18.2	0.0	0.0	45.6	25.5	25.7	21.4	27.8	16.6
LnGrp LOS	B			B			D	C	C	C	C	B
Approach Vol, veh/h		318			329			755			1239	
Approach Delay, s/veh		16.7			18.2			30.0			26.1	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.1	25.5		28.2	18.9	18.6		28.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.0	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+1/3), s	10.0	20.0		16.2	5.2	12.4		11.8				
Green Ext Time (p_c), s	0.0	1.0		0.5	0.0	0.5		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				25.1								
HCM 2010 LOS				C								

Intersection

Intersection Delay, s/veh^{103.2}

Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	120	430	230	370	900	140
Future Vol, veh/h	120	430	230	370	900	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	133	478	256	411	1000	156
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	124.3	27.2	135.9
HCM LOS	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	185	185	120	430	450	450	140
LT Vol	230	0	0	120	0	0	0	0
Through Vol	0	185	185	0	0	450	450	0
RT Vol	0	0	0	0	430	0	0	140
Lane Flow Rate	256	206	206	133	478	500	500	156
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.702	0.537	0.439	0.387	1.227	1.235	1.235	0.279
Departure Headway (Hd)	11.131	10.607	8.806	11.06	9.84	9.546	9.546	6.996
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	327	343	411	328	373	385	385	516
Service Time	8.831	8.307	6.506	8.76	7.54	7.246	7.246	4.696
HCM Lane V/C Ratio	0.783	0.601	0.501	0.405	1.282	1.299	1.299	0.302
HCM Control Delay	36.3	25	18.2	20.6	153.3	155.1	155.1	12.4
HCM Lane LOS	E	C	C	C	F	F	F	B
HCM 95th-tile Q	5	3	2.2	1.8	19.2	19.9	19.9	1.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	140	100	120	280	20	200	520	140	100	820	160
Future Volume (veh/h)	70	140	100	120	280	20	200	520	140	100	820	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	77	154	21	132	308	20	220	571	139	110	901	109
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	234	245	200	118	276	18	394	1137	276	134	880	388
Arrive On Green	0.13	0.13	0.13	0.22	0.22	0.22	0.23	0.41	0.41	0.08	0.25	0.25
Sat Flow, veh/h	1757	1845	1502	527	1230	80	1740	2762	670	1740	3471	1529
Grp Volume(v), veh/h	77	154	21	460	0	0	220	358	352	110	901	109
Grp Sat Flow(s),veh/h/ln	1757	1845	1502	1838	0	0	1740	1736	1696	1740	1736	1529
Q Serve(g_s), s	5.0	9.9	1.5	28.0	0.0	0.0	14.0	19.1	19.3	7.8	31.7	7.2
Cycle Q Clear(g_c), s	5.0	9.9	1.5	28.0	0.0	0.0	14.0	19.1	19.3	7.8	31.7	7.2
Prop In Lane	1.00		1.00	0.29		0.04	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	234	245	200	412	0	0	394	714	698	134	880	388
V/C Ratio(X)	0.33	0.63	0.11	1.12	0.00	0.00	0.56	0.50	0.50	0.82	1.02	0.28
Avail Cap(c_a), veh/h	436	457	372	412	0	0	394	714	698	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	51.3	47.6	48.5	0.0	0.0	42.8	27.3	27.3	56.8	46.7	37.5
Incr Delay (d2), s/veh	0.6	2.0	0.2	80.3	0.0	0.0	1.1	2.5	2.6	7.3	36.4	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.2	0.6	23.4	0.0	0.0	6.8	9.7	9.5	4.0	19.6	3.2
LnGrp Delay(d),s/veh	49.8	53.3	47.8	128.8	0.0	0.0	43.9	29.8	29.9	64.2	83.1	39.3
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		252			460			930			1120	
Approach Delay, s/veh		51.8			128.8			33.2			77.0	
Approach LOS		D			F			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	56.7		21.3	33.6	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+1/9), s	19.8	21.3		11.9	16.0	33.7		30.0				
Green Ext Time (p_c), s	0.1	2.7		1.0	0.0	0.0		0.0				

Intersection Summary

HCM 2010 Ctrl Delay	68.5
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	200	110	230	0	420	0	50	110	10	10	0
Future Volume (veh/h)	10	200	110	230	0	420	0	50	110	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	10	206	19	237	0	294	0	52	10	10	10	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	137	2951	1347	0	0	0	0	117	100	72	57	0
Arrive On Green	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.06	0.06	0.06	0.06	0.00
Sat Flow, veh/h	159	3430	1566		0		0	1845	1568	455	902	0
Grp Volume(v), veh/h	116	100	19		0.0		0	52	10	20	0	0
Grp Sat Flow(s),veh/h/ln	1837	1752	1566				0	1845	1568	1357	0	0
Q Serve(g_s), s	1.2	1.1	0.2				0.0	3.4	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.2				0.0	3.4	0.8	3.4	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1580	1508	1347				0	117	100	130	0	0
V/C Ratio(X)	0.07	0.07	0.01				0.00	0.44	0.10	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1580	1508	1347				0	148	125	155	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.3	1.3	1.2				0.0	56.4	55.2	55.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	1.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1				0.0	1.8	0.3	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.3	1.3	1.2				0.0	57.4	55.3	55.6	0.0	0.0
LnGrp LOS	A	A	A					E	E	E		
Approach Vol, veh/h		235						62			20	
Approach Delay, s/veh		1.3						57.0			55.6	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				12.2		112.8		12.2				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				5.4		3.2		5.4				
Green Ext Time (p_c), s				0.0		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.6									
HCM 2010 LOS			B									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Existing with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	250	10	300	130	370	0	0	340	110
Future Volume (veh/h)	0	0	0	250	10	300	130	370	0	0	340	110
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				263	11	64	137	389	0	0	358	107
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				377	16	350	222	1003	0	0	456	136
Arrive On Green				0.23	0.23	0.23	0.13	0.54	0.00	0.00	0.34	0.34
Sat Flow, veh/h				1673	70	1553	1774	1863	0	0	1352	404
Grp Volume(v), veh/h				274	0	64	137	389	0	0	0	465
Grp Sat Flow(s),veh/h/ln				1743	0	1553	1774	1863	0	0	0	1756
Q Serve(g_s), s				6.7	0.0	1.5	3.4	5.6	0.0	0.0	0.0	11.0
Cycle Q Clear(g_c), s				6.7	0.0	1.5	3.4	5.6	0.0	0.0	0.0	11.0
Prop In Lane				0.96		1.00	1.00		0.00	0.00		0.23
Lane Grp Cap(c), veh/h				393	0	350	222	1003	0	0	0	592
V/C Ratio(X)				0.70	0.00	0.18	0.62	0.39	0.00	0.00	0.00	0.79
Avail Cap(c_a), veh/h				1509	0	1344	998	1532	0	0	0	1444
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				16.4	0.0	14.5	19.2	6.2	0.0	0.0	0.0	13.8
Incr Delay (d2), s/veh				2.2	0.0	0.2	1.0	0.2	0.0	0.0	0.0	2.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.4	0.0	0.7	1.7	2.9	0.0	0.0	0.0	5.7
LnGrp Delay(d),s/veh				18.7	0.0	14.7	20.2	6.5	0.0	0.0	0.0	16.1
LnGrp LOS				B		B	C	A				B
Approach Vol, veh/h					338			526			465	
Approach Delay, s/veh					17.9			10.0			16.1	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.3	21.6		15.3		30.9						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+1), s	15.4	13.0		8.7		7.6						
Green Ext Time (p_c), s	0.1	2.6		1.9		2.0						
Intersection Summary												
HCM 2010 Ctrl Delay				14.2								
HCM 2010 LOS				B								























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	100	10	110	0	0	0	0	380	670	230	350	0
Future Volume (veh/h)	100	10	110	0	0	0	0	380	670	230	350	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	109	11	19				0	413	399	250	380	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	161	16	158				0	665	565	328	1156	0
Arrive On Green	0.10	0.10	0.10				0.00	0.35	0.35	0.19	0.63	0.00
Sat Flow, veh/h	1635	165	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	120	0	19				0	413	399	250	380	0
Grp Sat Flow(s),veh/h/ln	1799	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	2.6	0.0	0.4				0.0	7.4	8.7	5.5	3.9	0.0
Cycle Q Clear(g_c), s	2.6	0.0	0.4				0.0	7.4	8.7	5.5	3.9	0.0
Prop In Lane	0.91		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	177	0	158				0	665	565	328	1156	0
V/C Ratio(X)	0.68	0.00	0.12				0.00	0.62	0.71	0.76	0.33	0.00
Avail Cap(c_a), veh/h	1774	0	1577				0	1716	1458	1029	1666	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	16.7				0.0	10.9	11.3	15.6	3.5	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.1				0.0	1.0	1.6	3.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.2				0.0	4.0	4.0	3.0	2.0	0.0
LnGrp Delay(d),s/veh	19.3	0.0	16.8				0.0	11.8	12.9	19.3	3.6	0.0
LnGrp LOS	B		B					B	B	B	A	
Approach Vol, veh/h		139						812			630	
Approach Delay, s/veh		19.0						12.4			9.8	
Approach LOS		B						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.7			11.3	20.3		8.9				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		5.9			7.5	10.7		4.6				
Green Ext Time (p_c), s		2.1			0.6	3.6		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			11.9									
HCM 2010 LOS			B									

Intersection			
Intersection Delay, s/veh	37.0		
Intersection LOS	E		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	536	701	815
Demand Flow Rate, veh/h	547	715	815
Vehicles Circulating, veh/h	600	21	337
Vehicles Exiting, veh/h	136	1131	810
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	39.1	12.4	56.9
Approach LOS	E	B	F
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	547	715	815
Cap Entry Lane, veh/h	620	1106	807
Entry HV Adj Factor	0.981	0.980	1.000
Flow Entry, veh/h	536	701	815
Cap Entry, veh/h	608	1084	807
V/C Ratio	0.882	0.646	1.010
Control Delay, s/veh	39.1	12.4	56.9
LOS	E	B	F
95th %tile Queue, veh	10	5	18

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Existing with Project, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	180	0	90	10	1020	320	70	490	0
Future Volume (veh/h)	0	0	0	180	0	90	10	1020	320	70	490	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				209	0	0	10	1062	250	73	510	0
Adj No. of Lanes				2	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				459	241	0	24	1691	756	123	1890	0
Arrive On Green				0.13	0.00	0.00	0.01	0.47	0.47	0.07	0.53	0.00
Sat Flow, veh/h				3583	1881	0	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				209	0	0	10	1062	250	73	510	0
Grp Sat Flow(s),veh/h/ln				1792	1881	0	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				2.2	0.0	0.0	0.2	9.1	4.0	1.6	3.2	0.0
Cycle Q Clear(g_c), s				2.2	0.0	0.0	0.2	9.1	4.0	1.6	3.2	0.0
Prop In Lane				1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				459	241	0	24	1691	756	123	1890	0
V/C Ratio(X)				0.46	0.00	0.00	0.43	0.63	0.33	0.59	0.27	0.00
Avail Cap(c_a), veh/h				2628	1380	0	1314	2622	1173	1314	2622	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				16.5	0.0	0.0	20.0	8.1	6.7	18.5	5.3	0.0
Incr Delay (d2), s/veh				0.7	0.0	0.0	11.7	0.4	0.3	4.5	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.1	0.0	0.0	0.2	4.5	1.8	0.9	1.6	0.0
LnGrp Delay(d),s/veh				17.2	0.0	0.0	31.7	8.5	7.0	22.9	5.4	0.0
LnGrp LOS				B			C	A	A	C	A	
Approach Vol, veh/h					209			1322			583	
Approach Delay, s/veh					17.2			8.4			7.6	
Approach LOS					B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.0	26.6			6.3	24.3		10.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.2	5.2			3.6	11.1		4.2				
Green Ext Time (p_c), s	0.0	3.6			0.2	8.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				9.0								
HCM 2010 LOS				A								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	970	0	0	0	0	0	290	10	0
Future Volume (veh/h)	0	0	0	970	0	0	0	0	0	290	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1066	0	0				319	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1200	0	0				388	13	0
Arrive On Green				0.67	0.00	0.00				0.23	0.23	0.00
Sat Flow, veh/h				1792	0	0				1718	59	0
Grp Volume(v), veh/h				1066	0	0				330	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1777	0	0
Q Serve(g_s), s				40.9	0.0	0.0				14.9	0.0	0.0
Cycle Q Clear(g_c), s				40.9	0.0	0.0				14.9	0.0	0.0
Prop In Lane				1.00		0.00				0.97		0.00
Lane Grp Cap(c), veh/h				1200	0	0				401	0	0
V/C Ratio(X)				0.89	0.00	0.00				0.82	0.00	0.00
Avail Cap(c_a), veh/h				1913	0	0				1265	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				11.3	0.0	0.0				31.0	0.0	0.0
Incr Delay (d2), s/veh				3.4	0.0	0.0				4.3	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.0	0.0	0.0				7.7	0.0	0.0
LnGrp Delay(d),s/veh				14.8	0.0	0.0				35.3	0.0	0.0
LnGrp LOS				B						D		
Approach Vol, veh/h					1066						330	
Approach Delay, s/veh					14.8						35.3	
Approach LOS					B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				23.4		60.8						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				16.9		42.9						
Green Ext Time (p_c), s				2.2		13.5						
Intersection Summary												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑	↗		↔	↗			
Traffic Vol, veh/h	10	270	0	0	970	550	10	10	1150	0	0	0
Future Vol, veh/h	10	270	0	0	970	550	10	10	1150	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	11	284	0	0	1021	579	11	11	1211	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1021	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	680	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	680	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.4	0	29.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	169	-	680	-	-
HCM Lane V/C Ratio	0.125	-	0.015	-	-
HCM Control Delay (s)	29.3	0	10.4	0	-
HCM Lane LOS	D	A	B	A	-
HCM 95th %tile Q(veh)	0.4	-	0	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Existing with Project, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	960	360	250	980	10	470	10	300	20	20	40
Future Volume (veh/h)	10	960	360	250	980	10	470	10	300	20	20	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1000	175	260	1021	10	490	10	78	21	21	11
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	104	1174	523	386	1385	14	611	298	250	105	95	45
Arrive On Green	0.06	0.33	0.33	0.11	0.38	0.38	0.17	0.16	0.16	0.06	0.04	0.04
Sat Flow, veh/h	1792	3574	1592	3476	3626	36	3510	1900	1593	1810	2345	1114
Grp Volume(v), veh/h	10	1000	175	260	503	528	490	10	78	21	16	16
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1875	1755	1900	1593	1810	1805	1654
Q Serve(g_s), s	0.3	13.5	4.3	3.7	12.5	12.5	6.9	0.2	2.2	0.6	0.4	0.5
Cycle Q Clear(g_c), s	0.3	13.5	4.3	3.7	12.5	12.5	6.9	0.2	2.2	0.6	0.4	0.5
Prop In Lane	1.00		1.00	1.00		0.02	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	104	1174	523	386	682	716	611	298	250	105	73	67
V/C Ratio(X)	0.10	0.85	0.33	0.67	0.74	0.74	0.80	0.03	0.31	0.20	0.21	0.24
Avail Cap(c_a), veh/h	519	2071	922	1007	1035	1086	1356	771	646	349	732	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.1	16.2	13.1	22.1	13.8	13.8	20.5	18.5	19.4	23.2	24.0	24.1
Incr Delay (d2), s/veh	0.1	0.7	0.1	0.8	0.6	0.6	0.9	0.0	0.3	0.3	0.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.6	1.9	1.8	6.3	6.6	3.4	0.1	1.0	0.3	0.2	0.2
LnGrp Delay(d),s/veh	23.3	16.9	13.3	22.9	14.4	14.3	21.5	18.5	19.6	23.6	24.6	24.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1185			1291			578			53	
Approach Delay, s/veh		16.4			16.1			21.2			24.2	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	22.3	12.5	6.7	7.5	25.1	6.5	12.7				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	5.7	15.5	8.9	2.5	2.3	14.5	2.6	4.2				
Green Ext Time (p_c), s	0.0	1.4	0.1	0.0	0.0	1.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.3									
HCM 2010 LOS			B									

Intersection												
Int Delay, s/veh	7.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕↗		↵	↕↗		↵	↗		↵	↗	
Traffic Vol, veh/h	50	1250	10	30	1180	20	10	10	30	10	10	50
Future Vol, veh/h	50	1250	10	30	1180	20	10	10	30	10	10	50
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	300	-	-	300	-	-	85	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	51	1276	10	31	1204	20	10	10	31	10	10	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1226	0	0	1287	0	0	2054	2672	644	2023	2667	615
Stage 1	-	-	-	-	-	-	1384	1384	-	1278	1278	-
Stage 2	-	-	-	-	-	-	670	1288	-	745	1389	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	570	-	-	540	-	-	33	23	420	35	23	439
Stage 1	-	-	-	-	-	-	154	213	-	179	239	-
Stage 2	-	-	-	-	-	-	417	237	-	377	212	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	569	-	-	539	-	-	16	20	420	17	20	438
Mov Cap-2 Maneuver	-	-	-	-	-	-	16	20	-	17	20	-
Stage 1	-	-	-	-	-	-	140	194	-	163	225	-
Stage 2	-	-	-	-	-	-	331	223	-	301	193	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.3			172.6			131.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	16	70	569	-	-	539	-	-	17	98
HCM Lane V/C Ratio	0.638	0.583	0.09	-	-	0.057	-	-	0.6	0.625
HCM Control Delay (s)	\$ 415.4	111.9	11.9	-	-	12.1	-	-	\$ 382.3	89.4
HCM Lane LOS	F	F	B	-	-	B	-	-	F	F
HCM 95th %tile Q(veh)	1.6	2.5	0.3	-	-	0.2	-	-	1.6	3

Intersection												
Int Delay, s/veh	13.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	↕
Traffic Vol, veh/h	10	1370	10	10	1190	10	20	10	10	10	10	10
Future Vol, veh/h	10	1370	10	10	1190	10	20	10	10	10	10	10
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	330	-	-	330	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	0	0	0
Mvmt Flow	10	1412	10	10	1227	10	21	10	10	10	10	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1239	0	0	1422	0	0	2076	2696	711	1985	2696	621
Stage 1	-	-	-	-	-	-	1437	1437	-	1254	1254	-
Stage 2	-	-	-	-	-	-	639	1259	-	731	1442	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	563	-	-	480	-	-	32	22	380	37	22	435
Stage 1	-	-	-	-	-	-	143	201	-	185	246	-
Stage 2	-	-	-	-	-	-	436	244	-	384	199	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	562	-	-	480	-	-	~ 19	21	380	21	21	434
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 19	21	-	21	21	-
Stage 1	-	-	-	-	-	-	140	197	-	181	240	-
Stage 2	-	-	-	-	-	-	399	238	-	348	195	-



















Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.1			\$ 616.2			\$ 331.3		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	26	562	-	-	480	-	-	32
HCM Lane V/C Ratio	1.586	0.018	-	-	0.021	-	-	0.966
HCM Control Delay (s)	\$ 616.2	11.5	-	-	12.7	-	-	\$ 331.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	5	0.1	-	-	0.1	-	-	3.3

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Existing with Project, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	1020	10	10	1030	100	20	40	10	70	30	200
Future Volume (veh/h)	260	1020	10	10	1030	100	20	40	10	70	30	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	268	1052	10	10	1062	97	21	41	7	72	31	37
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	330	1976	19	14	1220	111	159	155	23	224	53	52
Arrive On Green	0.18	0.54	0.54	0.01	0.37	0.37	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1792	3628	34	1792	3311	302	368	1248	182	747	425	421
Grp Volume(v), veh/h	268	518	544	10	573	586	69	0	0	140	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1875	1792	1787	1826	1799	0	0	1592	0	0
Q Serve(g_s), s	6.0	7.7	7.7	0.2	12.4	12.4	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	7.7	7.7	0.2	12.4	12.4	1.4	0.0	0.0	3.4	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.17	0.30		0.10	0.51		0.26
Lane Grp Cap(c), veh/h	330	974	1021	14	659	673	337	0	0	330	0	0
V/C Ratio(X)	0.81	0.53	0.53	0.71	0.87	0.87	0.20	0.00	0.00	0.42	0.00	0.00
Avail Cap(c_a), veh/h	648	1292	1355	648	1292	1320	932	0	0	869	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.2	6.1	6.1	20.5	12.2	12.2	16.5	0.0	0.0	17.3	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.2	0.2	21.4	1.4	1.4	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	3.8	4.0	0.2	6.3	6.4	0.7	0.0	0.0	1.5	0.0	0.0
LnGrp Delay(d),s/veh	18.1	6.2	6.2	41.9	13.6	13.6	16.6	0.0	0.0	17.6	0.0	0.0
LnGrp LOS	B	A	A	D	B	B	B			B		
Approach Vol, veh/h		1330			1169			69			140	
Approach Delay, s/veh		8.6			13.8			16.6			17.6	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	27.9		9.8	11.1	20.6		9.8				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+I1), s	2.2	9.7		5.4	8.0	14.4		3.4				
Green Ext Time (p_c), s	0.0	0.7		0.1	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.5								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	
Traffic Vol, veh/h	10	10	20	410	240	10
Future Vol, veh/h	10	10	20	410	240	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	446	261	11












Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	757	267	272	0	-	0
Stage 1	267	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	375	772	1291	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	772	1291	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	765	-	-	-	-	-
Stage 2	616	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1291	-	499	-	-
HCM Lane V/C Ratio	0.017	-	0.044	-	-
HCM Control Delay (s)	7.8	-	12.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Existing with Project, PM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	970	110	200	870	240	390		
Future Volume (veh/h)	970	110	200	870	240	390		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1021	113	211	916	199	402		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1163	129	265	2233	299	533		
Arrive On Green	0.36	0.36	0.15	0.62	0.17	0.17		
Sat Flow, veh/h	3340	359	1792	3668	1792	3198		
Grp Volume(v), veh/h	562	572	211	916	199	402		
Grp Sat Flow(s),veh/h/ln	1787	1818	1792	1787	1792	1599		
Q Serve(g_s), s	13.1	13.2	5.1	5.8	4.6	5.3		
Cycle Q Clear(g_c), s	13.1	13.2	5.1	5.8	4.6	5.3		
Prop In Lane		0.20	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	640	651	265	2233	299	533		
V/C Ratio(X)	0.88	0.88	0.80	0.41	0.67	0.75		
Avail Cap(c_a), veh/h	1202	1222	803	2403	883	1577		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.4	13.4	18.4	4.2	17.4	17.7		
Incr Delay (d2), s/veh	1.6	1.6	2.1	0.0	1.0	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.7	6.8	2.7	2.8	2.3	2.4		
LnGrp Delay(d),s/veh	15.0	15.0	20.4	4.3	18.4	18.5		
LnGrp LOS	B	B	C	A	B	B		
Approach Vol, veh/h	1134			1127	601			
Approach Delay, s/veh	15.0			7.3	18.5			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.9	21.3				33.2		11.4
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	7.1	15.2				7.8		7.3
Green Ext Time (p_c), s	0.0	0.8				1.0		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			12.7					
HCM 2010 LOS			B					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	960	250	170	830	60	160	20	160	30	20	90
Future Volume (veh/h)	100	960	250	170	830	60	160	20	160	30	20	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1900	1881	1881	1900	1863	1863
Adj Flow Rate, veh/h	108	1032	0	183	892	0	172	22	0	32	22	0
Adj No. of Lanes	1	1	1	1	1	1	0	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	138	1060	901	220	1136	965	288	26	245	208	126	242
Arrive On Green	0.08	0.56	0.00	0.12	0.60	0.00	0.15	0.15	0.00	0.15	0.15	0.00
Sat Flow, veh/h	1792	1881	1599	1792	1881	1599	1329	170	1599	893	822	1583
Grp Volume(v), veh/h	108	1032	0	183	892	0	194	0	0	54	0	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1881	1599	1498	0	1599	1715	0	1583
Q Serve(g_s), s	4.7	42.4	0.0	8.0	28.5	0.0	7.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	42.4	0.0	8.0	28.5	0.0	10.0	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.89		1.00	0.59		1.00
Lane Grp Cap(c), veh/h	138	1060	901	220	1136	965	314	0	245	334	0	242
V/C Ratio(X)	0.78	0.97	0.00	0.83	0.79	0.00	0.62	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	448	1177	1001	448	1177	1001	634	0	600	678	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.2	16.8	0.0	34.2	11.9	0.0	32.7	0.0	0.0	29.5	0.0	0.0
Incr Delay (d2), s/veh	3.7	18.7	0.0	3.1	3.1	0.0	0.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	27.3	0.0	4.1	15.6	0.0	4.2	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	39.9	35.5	0.0	37.3	15.0	0.0	33.4	0.0	0.0	29.6	0.0	0.0
LnGrp LOS	D	D		D	B		C			C		
Approach Vol, veh/h		1140			1075			194			54	
Approach Delay, s/veh		35.9			18.8			33.4			29.6	
Approach LOS		D			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.3	50.3		16.2	10.1	53.5		16.2				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+110), s	11.0	44.4		4.1	6.7	30.5		12.0				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				28.1								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Existing with Project, PM
 06/11/2019



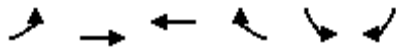
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	1070	10	30	30	890	540	10	10	650	190
Future Volume (veh/h)	100	10	1070	10	30	30	890	540	10	10	650	190
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	120	0	801	11	34	12	1000	607	10	11	730	79
Adj No. of Lanes	2	0	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	735	0	1573	66	70	58	1001	2057	920	35	1065	476
Arrive On Green	0.21	0.00	0.21	0.04	0.04	0.04	0.29	0.58	0.58	0.01	0.30	0.30
Sat Flow, veh/h	3583	0	3182	1740	1827	1528	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	120	0	801	11	34	12	1000	607	10	11	730	79
Grp Sat Flow(s),veh/h/ln	1792	0	1591	1740	1827	1528	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	3.3	0.0	20.7	0.7	2.2	0.9	35.0	10.6	0.3	0.4	21.9	4.4
Cycle Q Clear(g_c), s	3.3	0.0	20.7	0.7	2.2	0.9	35.0	10.6	0.3	0.4	21.9	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	735	0	1573	66	70	58	1001	2057	920	35	1065	476
V/C Ratio(X)	0.16	0.00	0.51	0.17	0.49	0.21	1.00	0.30	0.01	0.31	0.69	0.17
Avail Cap(c_a), veh/h	1032	0	1837	444	466	390	1001	2057	920	572	1764	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	20.9	56.6	57.3	56.7	43.3	13.2	11.0	59.7	37.7	31.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.4	2.0	0.6	28.3	0.2	0.0	1.8	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	9.1	0.4	1.2	0.4	20.6	5.3	0.1	0.2	11.2	2.0
LnGrp Delay(d),s/veh	39.8	0.0	21.0	57.0	59.3	57.3	71.6	13.4	11.0	61.6	39.8	32.0
LnGrp LOS	D		C	E	E	E	E	B	B	E	D	C
Approach Vol, veh/h		921			57			1617			820	
Approach Delay, s/veh		23.4			58.4			49.4			39.4	
Approach LOS		C			E			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	42.4		9.6	5.3	76.2		30.4				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	23.9		4.2	2.4	12.6		22.7				
Green Ext Time (p_c), s	0.0	12.3		0.1	0.0	9.3		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			40.1									
HCM 2010 LOS			D									
Notes												

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖↖	↗↗	↖	↗	↖↖	↗↗		
Traffic Volume (veh/h)	1080	560	340	40	30	1110		
Future Volume (veh/h)	1080	560	340	40	30	1110		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1863	1863	1863	1863		
Adj Flow Rate, veh/h	1149	596	362	19	32	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	1	1	2	2	2	2		
Cap, veh/h	1295	2708	483	411	101	82		
Arrive On Green	0.37	0.76	0.26	0.26	0.03	0.00		
Sat Flow, veh/h	3476	3668	1863	1583	3442	2787		
Grp Volume(v), veh/h	1149	596	362	19	32	0		
Grp Sat Flow(s),veh/h/ln	1738	1787	1863	1583	1721	1393		
Q Serve(g_s), s	13.5	2.1	7.8	0.4	0.4	0.0		
Cycle Q Clear(g_c), s	13.5	2.1	7.8	0.4	0.4	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1295	2708	483	411	101	82		
V/C Ratio(X)	0.89	0.22	0.75	0.05	0.32	0.00		
Avail Cap(c_a), veh/h	3181	4907	2557	2174	2126	1721		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	12.9	1.5	14.9	12.1	20.8	0.0		
Incr Delay (d2), s/veh	0.9	0.0	1.8	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.5	1.0	4.2	0.2	0.2	0.0		
LnGrp Delay(d),s/veh	13.7	1.6	16.6	12.2	21.4	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1745	381		32			
Approach Delay, s/veh		9.6	16.4		21.4			
Approach LOS		A	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.9		4.8	21.8	17.1		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		4.1		2.4	15.5	9.8		
Green Ext Time (p_c), s		3.0		0.0	0.7	1.5		
Intersection Summary								
HCM 2010 Ctrl Delay			11.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Existing with Project, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	50	350	200	340	530	50		
Future Volume (veh/h)	50	350	200	340	530	50		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	61	272	244	415	646	52		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	336	573	300	2128	1164	94		
Arrive On Green	0.19	0.19	0.17	0.61	0.35	0.35		
Sat Flow, veh/h	1792	1599	1757	3597	3445	269		
Grp Volume(v), veh/h	61	272	244	415	344	354		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1834		
Q Serve(g_s), s	1.5	7.0	7.1	2.8	8.3	8.3		
Cycle Q Clear(g_c), s	1.5	7.0	7.1	2.8	8.3	8.3		
Prop In Lane	1.00	1.00	1.00			0.15		
Lane Grp Cap(c), veh/h	336	573	300	2128	621	637		
V/C Ratio(X)	0.18	0.47	0.81	0.20	0.55	0.56		
Avail Cap(c_a), veh/h	912	1087	662	3965	2022	2074		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.1	13.2	21.2	4.6	14.0	14.0		
Incr Delay (d2), s/veh	0.3	0.6	2.0	0.1	1.4	1.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.8	3.1	3.6	1.4	4.3	4.4		
LnGrp Delay(d),s/veh	18.4	13.8	23.2	4.7	15.4	15.4		
LnGrp LOS	B	B	C	A	B	B		
Approach Vol, veh/h	333			659	698			
Approach Delay, s/veh	14.6			11.6	15.4			
Approach LOS	B			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	3.8	24.8				38.6		14.4
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	20	60.0				60.0		27.0
Max Q Clear Time (g_c+19), s	10.3					4.8		9.0
Green Ext Time (p_c), s	0.2	8.2				4.8		1.0
Intersection Summary								
HCM 2010 Ctrl Delay			13.8					
HCM 2010 LOS			B					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	14.3											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕		↕	↕			↕	↕
Traffic Vol, veh/h	30	10	10	10	10	10	20	400	30	10	260	30
Future Vol, veh/h	30	10	10	10	10	10	20	400	30	10	260	30
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	4	4	4
Mvmt Flow	33	11	11	11	11	11	22	440	33	11	286	33
Number of Lanes	0	1	1	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	10	9.9	16.8	11.6
HCM LOS	A	A	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	75%	0%	33%	4%	0%
Vol Thru, %	0%	93%	25%	0%	33%	96%	0%
Vol Right, %	0%	7%	0%	100%	33%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	430	40	10	30	270	30
LT Vol	20	0	30	0	10	10	0
Through Vol	0	400	10	0	10	260	0
RT Vol	0	30	0	10	10	0	30
Lane Flow Rate	22	473	44	11	33	297	33
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.034	0.661	0.085	0.018	0.06	0.436	0.042
Departure Headway (Hd)	5.591	5.039	6.966	5.875	6.519	5.294	4.571
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	714	517	613	553	676	777
Service Time	3.35	2.798	4.668	3.576	4.52	3.059	2.335
HCM Lane V/C Ratio	0.034	0.662	0.085	0.018	0.06	0.439	0.042
HCM Control Delay	8.5	17.2	10.3	8.7	9.9	12.1	7.5
HCM Lane LOS	A	C	B	A	A	B	A
HCM 95th-tile Q	0.1	5	0.3	0.1	0.2	2.2	0.1

Intersection												
Intersection Delay, s/veh	23.3											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑	↗		↖	↗	↙	↑	↗	↙	↗	
Traffic Vol, veh/h	10	10	10	180	10	50	10	400	160	50	310	10
Future Vol, veh/h	10	10	10	180	10	50	10	400	160	50	310	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	1	1	1	4	4	4
Mvmt Flow	11	11	11	191	11	53	11	426	170	53	330	11
Number of Lanes	1	1	1	0	1	1	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	11.6	16.5	27.1	22.7
HCM LOS	B	C	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	95%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	5%	0%	0%	97%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	100%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	400	160	10	10	10	190	50	50	320
LT Vol	10	0	0	10	0	0	180	0	50	0
Through Vol	0	400	0	0	10	0	10	0	0	310
RT Vol	0	0	160	0	0	10	0	50	0	10
Lane Flow Rate	11	426	170	11	11	11	202	53	53	340
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.022	0.817	0.293	0.027	0.026	0.024	0.464	0.104	0.115	0.686
Departure Headway (Hd)	7.42	6.914	6.205	9.22	8.706	7.985	8.257	7.063	7.783	7.255
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	523	579	388	411	447	437	507	461	497
Service Time	5.161	4.654	3.945	6.985	6.47	5.75	6.001	4.807	5.525	4.998
HCM Lane V/C Ratio	0.023	0.815	0.294	0.028	0.027	0.025	0.462	0.105	0.115	0.684
HCM Control Delay	10.3	33.7	11.5	12.2	11.7	10.9	18	10.6	11.5	24.5
HCM Lane LOS	B	D	B	B	B	B	C	B	B	C
HCM 95th-tile Q	0.1	8	1.2	0.1	0.1	0.1	2.4	0.3	0.4	5.2

Intersection

Intersection Delay, s/veh 12.3

Intersection LOS B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	170	50	220	180	50	270
Future Vol, veh/h	170	50	220	180	50	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	185	54	239	196	54	293
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	11.1	12.7	12.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	270	170	50	220	180
LT Vol	50	0	0	0	220	0
Through Vol	0	0	170	0	0	180
RT Vol	0	270	0	50	0	0
Lane Flow Rate	54	293	185	54	239	196
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.103	0.459	0.318	0.083	0.426	0.321
Departure Headway (Hd)	6.838	5.626	6.19	5.478	6.411	5.904
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	640	580	653	562	608
Service Time	4.578	3.365	3.931	3.219	4.147	3.64
HCM Lane V/C Ratio	0.103	0.458	0.319	0.083	0.425	0.322
HCM Control Delay	10.4	13.1	11.8	8.7	13.8	11.4
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.3	2.4	1.4	0.3	2.1	1.4

Intersection												
Intersection Delay, s/veh	21.7											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷	↶		↷			↶	↷
Traffic Vol, veh/h	190	60	20	10	50	370	20	20	20	260	20	90
Future Vol, veh/h	190	60	20	10	50	370	20	20	20	260	20	90
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	3	3	3	1	1	1	0	0	0	2	2	2
Mvmt Flow	209	66	22	11	55	407	22	22	22	286	22	99
Number of Lanes	1	1	0	1	1	1	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	2
HCM Control Delay	16.8	25.3	12.9	22.6
HCM LOS	C	D	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	
Vol Left, %	33%	100%	0%	100%	0%	0%	93%	0%	
Vol Thru, %	33%	0%	75%	0%	100%	0%	7%	0%	
Vol Right, %	33%	0%	25%	0%	0%	100%	0%	100%	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	
Traffic Vol by Lane	60	190	80	10	50	370	280	90	
LT Vol	20	190	0	10	0	0	260	0	
Through Vol	20	0	60	0	50	0	20	0	
RT Vol	20	0	20	0	0	370	0	90	
Lane Flow Rate	66	209	88	11	55	407	308	99	
Geometry Grp	8	8	8	8	8	8	8	8	
Degree of Util (X)	0.156	0.484	0.187	0.024	0.113	0.758	0.682	0.187	
Departure Headway (Hd)	8.543	8.34	7.644	7.941	7.429	6.712	7.984	6.801	
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cap	418	432	469	450	481	537	452	526	
Service Time	6.331	6.108	5.411	5.7	5.188	4.471	5.748	4.564	
HCM Lane V/C Ratio	0.158	0.484	0.188	0.024	0.114	0.758	0.681	0.188	
HCM Control Delay	12.9	18.7	12.2	10.9	11.1	27.6	26.3	11.1	
HCM Lane LOS		B	C	B	B	B	D	D	B
HCM 95th-tile Q		0.5	2.6	0.7	0.1	0.4	6.6	5	0.7

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	40	10	550	30	10	490
Future Vol, veh/h	40	10	550	30	10	490
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	41	10	567	31	10	505
Number of Lanes	1	1	1	1	1	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	2	2	0
HCM Control Delay	10.7	24.8	20.6
HCM LOS	B	C	C

Lane	NBLn1	NBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	100%	0%	100%	0%
Vol Thru, %	100%	0%	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	550	30	40	10	10	490
LT Vol	0	0	40	0	10	0
Through Vol	550	0	0	0	0	490
RT Vol	0	30	0	10	0	0
Lane Flow Rate	567	31	41	10	10	505
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.807	0.038	0.087	0.018	0.016	0.73
Departure Headway (Hd)	5.124	4.419	7.631	6.406	5.709	5.205
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	806	473	562	625	692
Service Time	2.876	2.171	5.331	4.106	3.466	2.962
HCM Lane V/C Ratio	0.807	0.038	0.087	0.018	0.016	0.73
HCM Control Delay	25.8	7.3	11.1	9.2	8.6	20.8
HCM Lane LOS	D	A	B	A	A	C
HCM 95th-tile Q	8.4	0.1	0.3	0.1	0	6.4

Intersection												
Intersection Delay, s/veh	7.9											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	10	10	10	10	20	10	80	10	20	90	10
Future Vol, veh/h	10	10	10	10	10	20	10	80	10	20	90	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	12	12	12	12	12	24	12	98	12	24	110	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.6	8	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	33%	25%	17%
Vol Thru, %	80%	33%	25%	75%
Vol Right, %	10%	33%	50%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	30	40	120
LT Vol	10	10	10	20
Through Vol	80	10	10	90
RT Vol	10	10	20	10
Lane Flow Rate	122	37	49	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.141	0.045	0.058	0.168
Departure Headway (Hd)	4.172	4.428	4.298	4.125
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	848	813	838	858
Service Time	2.259	2.43	2.299	2.207
HCM Lane V/C Ratio	0.144	0.046	0.058	0.17
HCM Control Delay	8	7.6	7.6	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.2	0.6

Intersection												
Intersection Delay, s/veh	15.3											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	↔
Traffic Vol, veh/h	10	150	0	0	90	40	10	260	150	220	0	10
Future Vol, veh/h	10	150	0	0	90	40	10	260	150	220	0	10
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	1	1	1	4	4	4	5	5	5	0	0	0
Mvmt Flow	11	161	0	0	97	43	11	280	161	237	0	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	11.9	11.1	18.5	14
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	2%	6%	0%	100%	0%
Vol Thru, %	62%	94%	69%	0%	0%
Vol Right, %	36%	0%	31%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	420	160	130	220	10
LT Vol	10	10	0	220	0
Through Vol	260	150	90	0	0
RT Vol	150	0	40	0	10
Lane Flow Rate	452	172	140	237	11
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.667	0.296	0.238	0.432	0.016
Departure Headway (Hd)	5.317	6.187	6.128	6.572	5.353
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	677	576	582	546	664
Service Time	3.377	4.269	4.214	4.342	3.121
HCM Lane V/C Ratio	0.668	0.299	0.241	0.434	0.017
HCM Control Delay	18.5	11.9	11.1	14.3	8.2
HCM Lane LOS	C	B	B	B	A
HCM 95th-tile Q	5.1	1.2	0.9	2.2	0

Intersection						
Intersection Delay, s/veh	78.8					
Intersection LOS	F					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	540	550	260	20	10	420
Future Vol, veh/h	540	550	260	20	10	420
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	6	6	4	4
Mvmt Flow	568	579	274	21	11	442
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	110.4	20.3	36.6
HCM LOS	F	C	E

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	540	550	260	20	10	420
LT Vol	540	0	0	0	10	0
Through Vol	0	550	260	0	0	0
RT Vol	0	0	0	20	0	420
Lane Flow Rate	568	579	274	21	11	442
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1.172	1.111	0.584	0.041	0.024	0.841
Departure Headway (Hd)	7.424	6.911	7.917	7.194	8.362	7.137
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	495	527	460	501	431	513
Service Time	5.137	4.624	5.617	4.894	6.062	4.837
HCM Lane V/C Ratio	1.147	1.099	0.596	0.042	0.026	0.862
HCM Control Delay	122.5	98.5	21.1	10.2	11.3	37.2
HCM Lane LOS	F	F	C	B	B	E
HCM 95th-tile Q	20.7	18.8	3.6	0.1	0.1	8.6

Intersection	
Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	150	410	210	30	10	70
Future Vol, veh/h	150	410	210	30	10	70
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	1	1	5	5	17	17
Mvmt Flow	174	477	244	35	12	81
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	15.6	11.1	10
HCM LOS	C	B	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	410	210	30	10	70
LT Vol	150	0	0	0	10	0
Through Vol	0	410	210	0	0	0
RT Vol	0	0	0	30	0	70
Lane Flow Rate	174	477	244	35	12	81
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.269	0.669	0.374	0.047	0.024	0.139
Departure Headway (Hd)	5.557	5.054	5.507	4.801	7.352	6.137
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	644	710	650	740	484	580
Service Time	3.315	2.812	3.279	2.572	5.145	3.929
HCM Lane V/C Ratio	0.27	0.672	0.375	0.047	0.025	0.14
HCM Control Delay	10.4	17.5	11.6	7.8	10.3	9.9
HCM Lane LOS	B	C	B	A	B	A
HCM 95th-tile Q	1.1	5.2	1.7	0.1	0.1	0.5

Intersection						
Intersection Delay, s/veh	13.7					
Intersection LOS	B					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	370	50	30	20	20	190
Future Vol, veh/h	370	50	30	20	20	190
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	425	57	34	23	23	218
Number of Lanes	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	1
HCM Control Delay	16.1	8.5	10.2
HCM LOS	C	A	B

Lane	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	88%	0%	100%	0%
Vol Thru, %	12%	60%	0%	0%
Vol Right, %	0%	40%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	420	50	20	190
LT Vol	370	0	20	0
Through Vol	50	30	0	0
RT Vol	0	20	0	190
Lane Flow Rate	483	57	23	218
Geometry Grp	2	2	7	7
Degree of Util (X)	0.641	0.079	0.041	0.313
Departure Headway (Hd)	4.783	4.973	6.367	5.154
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	713	560	692
Service Time	2.837	3.058	4.136	2.922
HCM Lane V/C Ratio	0.641	0.08	0.041	0.315
HCM Control Delay	16.1	8.5	9.4	10.3
HCM Lane LOS	C	A	A	B
HCM 95th-tile Q	4.7	0.3	0.1	1.3

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	820	30	60	550	0	10	0	30	0	0	0
Future Volume (veh/h)	0	820	30	60	550	0	10	0	30	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	0	845	29	62	567	0	10	0	2			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	5	1849	63	116	2493	0	22	0	20			
Arrive On Green	0.00	0.53	0.53	0.06	0.70	0.00	0.01	0.00	0.01			
Sat Flow, veh/h	1774	3491	120	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	0	428	446	62	567	0	10	0	2			
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	5.2	5.2	1.2	2.0	0.0	0.2	0.0	0.0			
Cycle Q Clear(g_c), s	0.0	5.2	5.2	1.2	2.0	0.0	0.2	0.0	0.0			
Prop In Lane	1.00		0.07	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	5	937	975	116	2493	0	22	0	20			
V/C Ratio(X)	0.00	0.46	0.46	0.53	0.23	0.00	0.45	0.00	0.10			
Avail Cap(c_a), veh/h	1018	3047	3171	1028	6155	0	1361	0	1215			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.1	5.1	15.8	1.9	0.0	17.1	0.0	17.0			
Incr Delay (d2), s/veh	0.0	0.7	0.6	1.4	0.1	0.0	5.3	0.0	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.7	2.8	0.6	1.0	0.0	0.1	0.0	0.0			
LnGrp Delay(d),s/veh	0.0	5.7	5.7	17.2	2.0	0.0	22.3	0.0	17.8			
LnGrp LOS		A	A	B	A		C		B			
Approach Vol, veh/h		874			629			12				
Approach Delay, s/veh		5.7			3.5			21.6				
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	5.9	23.8			0.0	29.7		5.1				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+13), s	2	7.2			0.0	4.0		2.2				
Green Ext Time (p_c), s	0.0	11.2			0.0	4.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				4.9								
HCM 2010 LOS				A								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	490	0	0	720	0
Future Vol, veh/h	0	0	0	0	0	0	0	490	0	0	720	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	510	0	0	750	0




















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1260	1260	750	1260	1260	510	750	0	0	510	0	0
Stage 1	750	750	-	510	510	-	-	-	-	-	-	-
Stage 2	510	510	-	750	750	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.11	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.209	-	-	2.218	-	-
Pot Cap-1 Maneuver	147	170	411	147	170	563	864	-	-	1055	-	-
Stage 1	403	419	-	546	538	-	-	-	-	-	-	-
Stage 2	546	538	-	403	419	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	147	170	411	147	170	563	864	-	-	1055	-	-
Mov Cap-2 Maneuver	147	170	-	147	170	-	-	-	-	-	-	-
Stage 1	403	419	-	546	538	-	-	-	-	-	-	-
Stage 2	546	538	-	403	419	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	0		0		0		0			
HCM LOS	A		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	-	1055	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	-	-
HCM Lane LOS	A	-	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Existing with Project, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	440	10	10	320	110	10	10	10	120	10	290
Future Volume (veh/h)	430	440	10	10	320	110	10	10	10	120	10	290
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1836	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	467	478	11	11	340	120	11	11	9	128	11	174
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.94	0.94	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	506	1093	25	19	428	151	20	20	17	176	15	626
Arrive On Green	0.29	0.60	0.60	0.01	0.33	0.33	0.03	0.03	0.03	0.11	0.11	0.11
Sat Flow, veh/h	1774	1814	42	1740	1297	458	631	631	516	1656	142	1599
Grp Volume(v), veh/h	467	0	489	11	0	460	31	0	0	139	0	174
Grp Sat Flow(s),veh/h/ln	1774	0	1855	1740	0	1755	1777	0	0	1798	0	1599
Q Serve(g_s), s	18.4	0.0	10.3	0.5	0.0	17.2	1.2	0.0	0.0	5.4	0.0	5.4
Cycle Q Clear(g_c), s	18.4	0.0	10.3	0.5	0.0	17.2	1.2	0.0	0.0	5.4	0.0	5.4
Prop In Lane	1.00		0.02	1.00		0.26	0.35		0.29	0.92		1.00
Lane Grp Cap(c), veh/h	506	0	1118	19	0	579	57	0	0	192	0	626
V/C Ratio(X)	0.92	0.00	0.44	0.58	0.00	0.79	0.54	0.00	0.00	0.73	0.00	0.28
Avail Cap(c_a), veh/h	737	0	1541	723	0	1458	738	0	0	747	0	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	7.7	35.5	0.0	22.0	34.4	0.0	0.0	31.2	0.0	15.0
Incr Delay (d2), s/veh	10.7	0.0	0.4	9.8	0.0	3.9	3.0	0.0	0.0	2.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	5.3	0.3	0.0	8.9	0.7	0.0	0.0	2.8	0.0	2.4
LnGrp Delay(d),s/veh	35.8	0.0	8.2	45.3	0.0	25.9	37.4	0.0	0.0	33.2	0.0	15.1
LnGrp LOS	D		A	D		C	D			C		B
Approach Vol, veh/h		956			471			31				313
Approach Delay, s/veh		21.6			26.4			37.4				23.1
Approach LOS		C			C			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	48.5		12.7	24.4	28.8		6.3				
Change Period (Y+Rc), s	* 3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	* 30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	12.3		7.4	20.4	19.2		3.2				
Green Ext Time (p_c), s	0.0	5.0		0.3	0.1	4.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			23.4									
HCM 2010 LOS			C									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Intersection Delay, s/veh	50.9											
Intersection LOS	F											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	↕
Traffic Vol, veh/h	10	10	10	130	10	10	10	580	110	10	520	10
Future Vol, veh/h	10	10	10	130	10	10	10	580	110	10	520	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	1	1	1
Mvmt Flow	11	11	11	138	11	11	11	617	117	11	553	11
Number of Lanes	0	1	0	0	1	1	1	2	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	2	1
HCM Control Delay	12.6	16.5	26.3	94.6
HCM LOS	B	C	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	33%	93%	0%	100%	0%	0%
Vol Thru, %	0%	100%	64%	33%	7%	0%	0%	100%	0%
Vol Right, %	0%	0%	36%	33%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	387	303	30	140	10	10	520	10
LT Vol	10	0	0	10	130	0	10	0	0
Through Vol	0	387	193	10	10	0	0	520	0
RT Vol	0	0	110	10	0	10	0	0	10
Lane Flow Rate	11	411	323	32	149	11	11	553	11
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.022	0.792	0.599	0.078	0.363	0.023	0.023	1.104	0.019
Departure Headway (Hd)	7.721	7.211	6.953	9.153	9.111	7.923	7.691	7.182	6.471
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	466	506	523	394	398	455	462	503	548
Service Time	5.421	4.911	4.653	6.853	6.811	5.623	5.487	4.978	4.266
HCM Lane V/C Ratio	0.024	0.812	0.618	0.081	0.374	0.024	0.024	1.099	0.02
HCM Control Delay	10.6	32.1	19.5	12.6	16.9	10.8	10.7	97.9	9.4
HCM Lane LOS	B	D	C	B	C	B	B	F	A
HCM 95th-tile Q	0.1	7.3	3.9	0.3	1.6	0.1	0.1	17.9	0.1

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	10	10	10	10	10	10	80	10	10	80	10
Future Vol, veh/h	10	10	10	10	10	10	10	80	10	10	80	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	12	12	12	12	12	12	12	94	12	12	94	12
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	7.6	7.6	8.1	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	33%	100%	0%
Vol Thru, %	0%	89%	33%	33%	0%	89%
Vol Right, %	0%	11%	33%	33%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	90	30	30	10	90
LT Vol	10	0	10	10	10	0
Through Vol	0	80	10	10	0	80
RT Vol	0	10	10	10	0	10
Lane Flow Rate	12	106	35	35	12	106
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.017	0.135	0.043	0.043	0.017	0.136
Departure Headway (Hd)	5.183	4.604	4.367	4.384	5.2	4.621
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	684	771	824	821	682	768
Service Time	2.962	2.383	2.369	2.386	2.978	2.399
HCM Lane V/C Ratio	0.018	0.137	0.042	0.043	0.018	0.138
HCM Control Delay	8.1	8.1	7.6	7.6	8.1	8.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.5	0.1	0.1	0.1	0.5

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	620	110	20	1120	0	200	0	30	10	10	30
Future Volume (veh/h)	0	620	110	20	1120	0	200	0	30	10	10	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	653	0	21	1179	0	211	0	14	11	11	12
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2027	907	23	2468	0	0	0	0	32	34	29
Arrive On Green	0.00	0.57	0.00	0.01	0.69	0.00	0.00	0.00	0.00	0.02	0.02	0.02
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	653	0	21	1179	0		0.0		11	11	12
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	3.1	0.0	0.4	4.8	0.0				0.2	0.2	0.2
Cycle Q Clear(g_c), s	0.0	3.1	0.0	0.4	4.8	0.0				0.2	0.2	0.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2027	907	23	2468	0				32	34	29
V/C Ratio(X)	0.00	0.32	0.00	0.92	0.48	0.00				0.34	0.33	0.42
Avail Cap(c_a), veh/h	0	5087	2276	1133	5087	0				1363	1431	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	3.6	0.0	15.6	2.3	0.0				15.3	15.3	15.3
Incr Delay (d2), s/veh	0.0	0.1	0.0	37.2	0.2	0.0				2.3	2.1	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.5	0.0	0.4	2.4	0.0				0.1	0.1	0.1
LnGrp Delay(d),s/veh	0.0	3.8	0.0	52.8	2.5	0.0				17.6	17.4	18.9
LnGrp LOS		A		D	A					B	B	B
Approach Vol, veh/h		653			1200						34	
Approach Delay, s/veh		3.8			3.3						18.0	
Approach LOS		A			A						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			3.9	22.5		5.2		26.4				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.4	5.1		2.2		6.8				
Green Ext Time (p_c), s			0.0	7.5		0.0		15.0				
Intersection Summary												
HCM 2010 Ctrl Delay			3.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	480	10	10	1020	130	10	10	10	80	10	120
Future Volume (veh/h)	150	480	10	10	1020	130	10	10	10	80	10	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	158	505	11	11	1074	132	11	11	5	84	11	23
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	189	2736	60	19	2147	264	94	83	29	203	171	143
Arrive On Green	0.11	0.76	0.76	0.01	0.67	0.67	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1792	3577	78	1792	3205	393	465	893	308	1362	1845	1548
Grp Volume(v), veh/h	158	252	264	11	598	608	27	0	0	84	11	23
Grp Sat Flow(s),veh/h/ln	1792	1787	1867	1792	1787	1811	1666	0	0	1362	1845	1548
Q Serve(g_s), s	8.7	3.9	3.9	0.6	16.6	16.7	0.0	0.0	0.0	4.2	0.5	1.4
Cycle Q Clear(g_c), s	8.7	3.9	3.9	0.6	16.6	16.7	1.4	0.0	0.0	5.6	0.5	1.4
Prop In Lane	1.00		0.04	1.00		0.22	0.41		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	189	1367	1428	19	1197	1214	205	0	0	203	171	143
V/C Ratio(X)	0.84	0.18	0.18	0.58	0.50	0.50	0.13	0.00	0.00	0.41	0.06	0.16
Avail Cap(c_a), veh/h	222	1367	1428	222	1197	1214	702	0	0	627	745	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.77	0.77	0.77	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	3.2	3.2	49.3	8.2	8.2	41.8	0.0	0.0	43.6	41.4	41.8
Incr Delay (d2), s/veh	17.6	0.3	0.3	7.9	1.2	1.1	0.1	0.0	0.0	0.5	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	2.0	2.1	0.3	8.5	8.7	0.7	0.0	0.0	2.3	0.3	0.6
LnGrp Delay(d),s/veh	61.4	3.5	3.5	57.2	9.3	9.3	41.9	0.0	0.0	44.1	41.5	42.0
LnGrp LOS	E	A	A	E	A	A	D			D	D	D
Approach Vol, veh/h		674			1217			27			118	
Approach Delay, s/veh		17.1			9.8			41.9			43.4	
Approach LOS		B			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	81.1		13.9	14.5	71.6		13.9				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1), s	12.6	5.9		7.6	10.7	18.7		3.4				
Green Ext Time (p_c), s	0.0	1.8		0.2	0.0	2.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			14.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	140	460	10	170	10	510	30	10	10	30	10
Future Volume (veh/h)	10	140	460	10	170	10	510	30	10	10	30	10
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	146	0	10	177	9	531	31	8	10	31	-102
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	19	334	284	19	318	16	989	413	107	19	22	429
Arrive On Green	0.01	0.18	0.00	0.01	0.18	0.18	0.28	0.29	0.29	0.01	0.01	0.00
Sat Flow, veh/h	1792	1881	1599	1810	1793	91	3476	1443	372	1810	3705	0
Grp Volume(v), veh/h	10	146	0	10	0	186	531	0	39	10	-71	-102
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1884	1738	0	1815	1810	1805	1615
Q Serve(g_s), s	0.2	2.4	0.0	0.2	0.0	3.1	4.5	0.0	0.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	2.4	0.0	0.2	0.0	3.1	4.5	0.0	0.5	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	19	334	284	19	0	334	989	0	520	19	22	0
V/C Ratio(X)	0.53	0.44	0.00	0.52	0.00	0.56	0.54	0.00	0.08	0.52	-3.21	0.00
Avail Cap(c_a), veh/h	1025	1615	1373	1036	0	1617	995	0	1559	777	1550	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	12.8	0.0	17.2	0.0	13.1	10.6	0.0	9.1	17.2	0.0	0.0
Incr Delay (d2), s/veh	20.8	1.1	0.0	7.9	0.0	1.7	0.5	0.0	0.1	7.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	0.0	0.1	0.0	1.8	2.2	0.0	0.3	0.1	0.0	0.0
LnGrp Delay(d),s/veh	38.0	13.9	0.0	25.1	0.0	14.9	11.0	0.0	9.2	25.1	0.0	0.0
LnGrp LOS	D	B		C		B	B		A	C		
Approach Vol, veh/h		156			196			570			-163	
Approach Delay, s/veh		15.4			15.4			10.9			-1.5	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.4	4.9	4.9	10.7	4.9	14.5	4.9	10.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1/5), s	0.0	0.0	2.2	5.1	2.2	2.5	2.2	4.4				
Green Ext Time (p_c), s	0.6	0.0	0.0	1.3	0.0	0.3	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				15.7								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	120	60	10	120	40
Future Vol, veh/h	10	120	60	10	120	40
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	11	136	68	11	136	45
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.7	7.8	8.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	8%	75%
Vol Thru, %	86%	0%	25%
Vol Right, %	14%	92%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	70	130	160
LT Vol	0	10	120
Through Vol	60	0	40
RT Vol	10	120	0
Lane Flow Rate	80	148	182
Geometry Grp	1	1	1
Degree of Util (X)	0.096	0.163	0.222
Departure Headway (Hd)	4.355	3.962	4.389
Convergence, Y/N	Yes	Yes	Yes
Cap	825	910	807
Service Time	2.37	1.965	2.476
HCM Lane V/C Ratio	0.097	0.163	0.226
HCM Control Delay	7.8	7.7	8.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.6	0.8

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	20	10	110	20	10
Future Vol, veh/h	110	20	10	110	20	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	129	24	12	129	24	12

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	153	0	294
Stage 1	-	-	-	-	141
Stage 2	-	-	-	-	153
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1440	-	701
Stage 1	-	-	-	-	891
Stage 2	-	-	-	-	880
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1440	-	695
Mov Cap-2 Maneuver	-	-	-	-	695
Stage 1	-	-	-	-	883
Stage 2	-	-	-	-	880

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	755	-	-	1440	-
HCM Lane V/C Ratio	0.047	-	-	0.008	-
HCM Control Delay (s)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	100	10	10	100	10	10	180	10	10	200	10
Future Vol, veh/h	10	100	10	10	100	10	10	180	10	10	200	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	12	122	12	12	122	12	12	220	12	12	244	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	10	10.9	11.1
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	8%	8%	5%
Vol Thru, %	90%	83%	83%	91%
Vol Right, %	5%	8%	8%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	120	120	220
LT Vol	10	10	10	10
Through Vol	180	100	100	200
RT Vol	10	10	10	10
Lane Flow Rate	244	146	146	268
Geometry Grp	1	1	1	1
Degree of Util (X)	0.347	0.221	0.221	0.377
Departure Headway (Hd)	5.122	5.442	5.442	5.059
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	702	660	660	711
Service Time	3.151	3.476	3.476	3.086
HCM Lane V/C Ratio	0.348	0.221	0.221	0.377
HCM Control Delay	10.9	10	10	11.1
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	1.6	0.8	0.8	1.8

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	60	20	10	30	10	70	160	10	0	0	0
Future Vol, veh/h	20	60	20	10	30	10	70	160	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	27	81	27	14	41	14	95	216	14	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	442	421	1	468	414	223	1	0	0	230	0	0
Stage 1	1	1	-	413	413	-	-	-	-	-	-	-
Stage 2	441	420	-	55	1	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	524	522	1081	505	529	817	1615	-	-	1303	-	-
Stage 1	1019	893	-	616	594	-	-	-	-	-	-	-
Stage 2	593	588	-	957	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	458	487	1081	408	493	817	1615	-	-	1303	-	-
Mov Cap-2 Maneuver	458	487	-	408	493	-	-	-	-	-	-	-
Stage 1	950	893	-	574	554	-	-	-	-	-	-	-
Stage 2	504	548	-	848	895	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.9		13.1		2.1		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1615	-	-	539	512	1303	-	-
HCM Lane V/C Ratio	0.059	-	-	0.251	0.132	-	-	-
HCM Control Delay (s)	7.4	0	-	13.9	13.1	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1	0.5	0	-	-

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	60	10	10	360	330	30
Future Vol, veh/h	60	10	10	360	330	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	68	11	11	409	375	34
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	823	392	409	0	0
Stage 1	392	-	-	-	-
Stage 2	431	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	346	661	1150	-	-
Stage 1	687	-	-	-	-
Stage 2	660	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	342	661	1150	-	-
Mov Cap-2 Maneuver	342	-	-	-	-
Stage 1	679	-	-	-	-
Stage 2	660	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1150	-	367	-	-
HCM Lane V/C Ratio	0.01	-	0.217	-	-
HCM Control Delay (s)	8.2	0	17.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Existing with Project, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	220	50	220	60	490	150	100	240	50
Future Volume (veh/h)	20	20	30	220	50	220	60	490	150	100	240	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	247	56	0	67	551	0	112	270	0
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	46	145	20	307	450	382	115	767	343	154	846	378
Arrive On Green	0.03	0.09	0.09	0.17	0.24	0.00	0.06	0.22	0.00	0.09	0.24	0.00
Sat Flow, veh/h	1691	1529	209	1792	1881	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	0	25	247	56	0	67	551	0	112	270	0
Grp Sat Flow(s),veh/h/ln	1691	0	1738	1792	1881	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.5	0.0	0.6	5.5	1.0	0.0	1.5	6.0	0.0	2.6	2.6	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.6	5.5	1.0	0.0	1.5	6.0	0.0	2.6	2.6	0.0
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	0	165	307	450	382	115	767	343	154	846	378
V/C Ratio(X)	0.48	0.00	0.15	0.80	0.12	0.00	0.58	0.72	0.00	0.73	0.32	0.00
Avail Cap(c_a), veh/h	829	0	1267	878	1371	1166	445	2157	965	445	2157	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	0.0	17.4	16.7	12.5	0.0	19.0	15.2	0.0	18.6	13.1	0.0
Incr Delay (d2), s/veh	2.9	0.0	0.2	1.9	0.0	0.0	1.7	0.5	0.0	2.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	2.9	0.5	0.0	0.8	3.0	0.0	1.3	1.3	0.0
LnGrp Delay(d),s/veh	23.0	0.0	17.5	18.6	12.5	0.0	20.8	15.7	0.0	21.0	13.2	0.0
LnGrp LOS	C		B	B	B		C	B		C	B	
Approach Vol, veh/h		47			303			618			382	
Approach Delay, s/veh		20.1			17.4			16.2			15.5	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	14.5	5.6	14.5	8.1	13.6	11.7	8.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.5	4.6	2.5	3.0	4.6	8.0	7.5	2.6				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.7	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			16.4									
HCM 2010 LOS			B									
Notes												

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	590	10	10	530	30	30	30	20	30	10	10
Future Vol, veh/h	10	590	10	10	530	30	30	30	20	30	10	10
Conflicting Peds, #/hr	1	0	2	2	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	5	5	5
Mvmt Flow	11	648	11	11	582	33	33	33	22	33	11	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	616	0	0	661	0	0	1310	1316	656	1325	1305	600
Stage 1	-	-	-	-	-	-	678	678	-	622	622	-
Stage 2	-	-	-	-	-	-	632	638	-	703	683	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.15	6.55	6.25
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.15	5.55	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.545	4.045	3.345
Pot Cap-1 Maneuver	964	-	-	932	-	-	137	159	469	131	158	495
Stage 1	-	-	-	-	-	-	445	455	-	469	474	-
Stage 2	-	-	-	-	-	-	472	474	-	423	445	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	963	-	-	930	-	-	123	153	468	101	152	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	123	153	-	101	152	-
Stage 1	-	-	-	-	-	-	436	446	-	460	465	-
Stage 2	-	-	-	-	-	-	443	465	-	367	436	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			48.8			51		
HCM LOS							E			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	166	963	-	-	930	-	-	131
HCM Lane V/C Ratio	0.53	0.011	-	-	0.012	-	-	0.419
HCM Control Delay (s)	48.8	8.8	0	-	8.9	0	-	51
HCM Lane LOS	E	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	2.7	0	-	-	0	-	-	1.8

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	10	610	20	20	490	20	80	10	50	10	10	10
Future Vol, veh/h	10	610	20	20	490	20	80	10	50	10	10	10
Conflicting Peds, #/hr	3	0	0	0	0	3	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	1	1	1	0	0	0	0	0	0
Mvmt Flow	11	685	22	22	551	22	90	11	56	11	11	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	576	0	0	707	0	0	1337	1338	696	1361	1338	567
Stage 1	-	-	-	-	-	-	718	718	-	609	609	-
Stage 2	-	-	-	-	-	-	619	620	-	752	729	-
Critical Hdwy	4.12	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	997	-	-	896	-	-	132	154	445	127	154	527
Stage 1	-	-	-	-	-	-	423	436	-	486	488	-
Stage 2	-	-	-	-	-	-	480	483	-	405	431	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	994	-	-	896	-	-	116	145	445	100	145	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	116	145	-	100	145	-
Stage 1	-	-	-	-	-	-	415	428	-	476	469	-
Stage 2	-	-	-	-	-	-	441	464	-	338	423	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.3			78.5			33.4		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	119	445	994	-	-	896	-	-	160
HCM Lane V/C Ratio	0.85	0.126	0.011	-	-	0.025	-	-	0.211
HCM Control Delay (s)	114.2	14.3	8.7	0	-	9.1	0	-	33.4
HCM Lane LOS	F	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	5.1	0.4	0	-	-	0.1	-	-	0.8

Intersection	
Intersection Delay, s/veh	55.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	180	500	10	10	320	10	10	10	20	10	10	200
Future Vol, veh/h	180	500	10	10	320	10	10	10	20	10	10	200
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	189	526	11	11	337	11	11	11	21	11	11	211
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	89.6	17	11	13.8
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	26%	3%	5%
Vol Thru, %	50%	0%	72%	94%	5%
Vol Right, %	0%	100%	1%	3%	91%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	20	690	340	220
LT Vol	10	0	180	10	10
Through Vol	10	0	500	320	10
RT Vol	0	20	10	10	200
Lane Flow Rate	21	21	726	358	232
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.047	0.041	1.105	0.579	0.4
Departure Headway (Hd)	8.386	7.404	5.479	6.043	6.512
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	430	487	661	601	556
Service Time	6.086	5.104	3.509	4.043	4.512
HCM Lane V/C Ratio	0.049	0.043	1.098	0.596	0.417
HCM Control Delay	11.5	10.4	89.6	17	13.8
HCM Lane LOS	B	B	F	C	B
HCM 95th-tile Q	0.1	0.1	21.3	3.7	1.9

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	160	360	330	10	10	10
Future Vol, veh/h	160	360	330	10	10	10
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	167	375	344	10	10	10

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	354	0	-	0	1058 350
Stage 1	-	-	-	-	349 -
Stage 2	-	-	-	-	709 -
Critical Hdwy	4.12	-	-	-	6.44 6.24
Critical Hdwy Stg 1	-	-	-	-	5.44 -
Critical Hdwy Stg 2	-	-	-	-	5.44 -
Follow-up Hdwy	2.218	-	-	-	3.536 3.336
Pot Cap-1 Maneuver	1205	-	-	-	247 689
Stage 1	-	-	-	-	710 -
Stage 2	-	-	-	-	484 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1205	-	-	-	204 688
Mov Cap-2 Maneuver	-	-	-	-	204 -
Stage 1	-	-	-	-	586 -
Stage 2	-	-	-	-	484 -

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1205	-	-	-	315
HCM Lane V/C Ratio	0.138	-	-	-	0.066
HCM Control Delay (s)	8.5	0	-	-	17.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	360	10	10	10	10	10	10	10	10	10	10	330
Future Vol, veh/h	360	10	10	10	10	10	10	10	10	10	10	330
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	0	0	0	1	1	1
Mvmt Flow	396	11	11	11	11	11	11	11	11	11	11	363
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	15.8	8.8	8.9	12.1
HCM LOS	C	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	95%	33%	3%
Vol Thru, %	33%	3%	33%	3%
Vol Right, %	33%	3%	33%	94%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	380	30	350
LT Vol	10	360	10	10
Through Vol	10	10	10	10
RT Vol	10	10	10	330
Lane Flow Rate	33	418	33	385
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.604	0.05	0.489
Departure Headway (Hd)	5.558	5.203	5.485	4.578
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	645	697	655	777
Service Time	3.586	3.205	3.5	2.67
HCM Lane V/C Ratio	0.051	0.6	0.05	0.495
HCM Control Delay	8.9	15.8	8.8	12.1
HCM Lane LOS	A	C	A	B
HCM 95th-tile Q	0.2	4.1	0.2	2.7

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Existing with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	50	30	40	50	30	10	50	780	70	30	410	50
Future Volume (veh/h)	50	30	40	50	30	10	50	780	70	30	410	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	54	33	18	54	33	8	54	848	53	33	446	-5
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	298	109	45	318	122	22	288	1111	69	73	738	330
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.33	0.33	0.04	0.20	0.00
Sat Flow, veh/h	660	667	275	739	750	137	1792	3417	214	1810	3610	1615
Grp Volume(v), veh/h	105	0	0	95	0	0	54	444	457	33	446	-5
Grp Sat Flow(s),veh/h/ln	1601	0	0	1625	0	0	1792	1787	1843	1810	1805	1615
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	0.7	6.4	6.4	0.5	3.2	0.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	1.3	0.0	0.0	0.7	6.4	6.4	0.5	3.2	0.0
Prop In Lane	0.51		0.17	0.57		0.08	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	452	0	0	463	0	0	288	581	599	73	738	330
V/C Ratio(X)	0.23	0.00	0.00	0.21	0.00	0.00	0.19	0.76	0.76	0.45	0.60	-0.02
Avail Cap(c_a), veh/h	1956	0	0	1967	0	0	500	1591	1641	505	3213	1437
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.6	0.0	0.0	10.6	0.0	0.0	10.4	8.7	8.7	13.4	10.3	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.8	0.8	1.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.7	0.0	0.0	0.4	3.2	3.3	0.3	1.6	0.0
LnGrp Delay(d),s/veh	10.7	0.0	0.0	10.7	0.0	0.0	10.5	9.5	9.4	15.1	10.6	0.0
LnGrp LOS	B			B			B	A	A	B	B	
Approach Vol, veh/h		105			95			955			474	
Approach Delay, s/veh		10.7			10.7			9.5			11.1	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	10.4		9.2	5.7	13.8		9.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+1), s	5.2	5.2		3.3	2.5	8.4		3.5				
Green Ext Time (p_c), s	0.0	0.5		0.1	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	23
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	100	160	880	350	90
Future Vol, veh/h	60	100	160	880	350	90
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	67	112	180	989	393	101
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	13.3	28.3	14.1
HCM LOS	B	D	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	440	440	60	100	175	175	90
LT Vol	160	0	0	60	0	0	0	0
Through Vol	0	440	440	0	0	175	175	0
RT Vol	0	0	0	0	100	0	0	90
Lane Flow Rate	180	494	494	67	112	197	197	101
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.356	0.91	0.671	0.169	0.244	0.411	0.411	0.142
Departure Headway (Hd)	7.135	6.628	4.887	9.02	7.808	7.522	7.522	5.067
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	549	747	397	460	478	478	705
Service Time	4.835	4.328	2.587	6.782	5.569	5.273	5.273	2.817
HCM Lane V/C Ratio	0.355	0.9	0.661	0.169	0.243	0.412	0.412	0.143
HCM Control Delay	13.7	45	17	13.6	13.1	15.5	15.5	8.7
HCM Lane LOS	B	E	C	B	B	C	C	A
HCM 95th-tile Q	1.6	10.9	5.2	0.6	0.9	2	2	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	230	60	90	170	60	110	1000	230	100	570	220
Future Volume (veh/h)	220	230	60	90	170	60	110	1000	230	100	570	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	227	237	15	93	175	56	113	1031	225	103	588	155
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	291	305	254	101	190	61	522	1220	265	127	671	297
Arrive On Green	0.16	0.16	0.16	0.19	0.19	0.19	0.29	0.42	0.42	0.07	0.19	0.19
Sat Flow, veh/h	1792	1881	1566	521	981	314	1792	2917	634	1774	3539	1568
Grp Volume(v), veh/h	227	237	15	324	0	0	113	630	626	103	588	155
Grp Sat Flow(s),veh/h/ln	1792	1881	1566	1816	0	0	1792	1787	1764	1774	1770	1568
Q Serve(g_s), s	15.2	15.1	1.0	21.9	0.0	0.0	6.0	39.6	40.0	7.2	20.2	11.1
Cycle Q Clear(g_c), s	15.2	15.1	1.0	21.9	0.0	0.0	6.0	39.6	40.0	7.2	20.2	11.1
Prop In Lane	1.00		1.00	0.29		0.17	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	291	305	254	351	0	0	522	748	738	127	671	297
V/C Ratio(X)	0.78	0.78	0.06	0.92	0.00	0.00	0.22	0.84	0.85	0.81	0.88	0.52
Avail Cap(c_a), veh/h	573	602	501	363	0	0	522	748	738	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	50.2	44.3	49.5	0.0	0.0	33.5	32.7	32.8	57.2	49.2	45.5
Incr Delay (d2), s/veh	3.1	2.9	0.1	28.5	0.0	0.0	0.1	11.2	11.6	4.6	15.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.1	0.4	13.8	0.0	0.0	3.0	21.8	21.8	3.7	11.3	5.4
LnGrp Delay(d),s/veh	53.3	53.1	44.4	78.0	0.0	0.0	33.6	43.9	44.4	61.8	64.2	51.9
LnGrp LOS	D	D	D	E			C	D	D	E	E	D
Approach Vol, veh/h		479			324			1369			846	
Approach Delay, s/veh		52.9			78.0			43.3			61.7	
Approach LOS		D			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.2	57.6		25.0	41.7	29.0		29.3				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	13	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+19), s	19	42.0		17.2	8.0	22.2		23.9				
Green Ext Time (p_c), s	0.1	0.0		2.1	0.1	0.6		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			53.7									
HCM 2010 LOS			D									
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗	↖		↗		↕	↗		↕	
Traffic Volume (veh/h)	10	200	120	280	0	190	0	120	290	10	10	0
Future Volume (veh/h)	10	200	120	280	0	190	0	120	290	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	11	220	14	308	0	135	0	132	40	11	11	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	138	2896	1323	0	0	0	0	163	139	57	43	0
Arrive On Green	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.00
Sat Flow, veh/h	165	3459	1580				0	1881	1599	154	496	0
Grp Volume(v), veh/h	124	107	14		0.0		0	132	40	22	0	0
Grp Sat Flow(s),veh/h/ln	1855	1770	1580				0	1881	1599	651	0	0
Q Serve(g_s), s	1.5	1.3	0.2				0.0	8.6	2.9	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.5	1.3	0.2				0.0	8.6	2.9	8.7	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1552	1481	1323				0	163	139	100	0	0
V/C Ratio(X)	0.08	0.07	0.01				0.00	0.81	0.29	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1552	1481	1323				0	271	230	125	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.8	1.8	1.7				0.0	56.0	53.5	52.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.6	0.4	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.6	0.1				0.0	4.6	1.3	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.8	1.8	1.7				0.0	59.6	53.9	53.3	0.0	0.0
LnGrp LOS	A	A	A					E	D	D		
Approach Vol, veh/h		245						172			22	
Approach Delay, s/veh		1.8						58.3			53.3	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				15.1		109.9		15.1				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.6		3.5		10.7				
Green Ext Time (p_c), s				0.3		0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Existing with Project, PM
 06/11/2019























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↑			↕	
Traffic Volume (veh/h)	0	0	0	420	10	250	140	230	0	0	500	130
Future Volume (veh/h)	0	0	0	420	10	250	140	230	0	0	500	130
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				447	11	84	149	245	0	0	532	128
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				495	12	451	185	1082	0	0	627	151
Arrive On Green				0.29	0.29	0.29	0.03	0.19	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1733	43	1581	1757	1845	0	0	1424	343
Grp Volume(v), veh/h				458	0	84	149	245	0	0	0	660
Grp Sat Flow(s),veh/h/ln				1776	0	1581	1757	1845	0	0	0	1766
Q Serve(g_s), s				21.1	0.0	3.4	7.2	9.5	0.0	0.0	0.0	28.4
Cycle Q Clear(g_c), s				21.1	0.0	3.4	7.2	9.5	0.0	0.0	0.0	28.4
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.19
Lane Grp Cap(c), veh/h				507	0	451	185	1082	0	0	0	777
V/C Ratio(X)				0.90	0.00	0.19	0.81	0.23	0.00	0.00	0.00	0.85
Avail Cap(c_a), veh/h				564	0	502	248	1082	0	0	0	777
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.2	0.0	22.9	40.2	18.0	0.0	0.0	0.0	21.3
Incr Delay (d2), s/veh				16.9	0.0	0.2	9.3	0.5	0.0	0.0	0.0	11.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.7	0.0	1.5	4.0	5.0	0.0	0.0	0.0	16.2
LnGrp Delay(d),s/veh				46.1	0.0	23.1	49.5	18.5	0.0	0.0	0.0	32.4
LnGrp LOS				D		C	D	B				C
Approach Vol, veh/h					542			394			660	
Approach Delay, s/veh					42.6			30.2			32.4	
Approach LOS					D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	2.4	43.4		29.2		55.8						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+19.2), s	19.2	30.4		23.1		11.5						
Green Ext Time (p_c), s	0.0	0.5		1.2		1.2						
Intersection Summary												
HCM 2010 Ctrl Delay				35.3								
HCM 2010 LOS				D								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↖	↑	
Traffic Volume (veh/h)	90	10	200	0	0	0	0	300	310	250	670	0
Future Volume (veh/h)	90	10	200	0	0	0	0	300	310	250	670	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	96	11	34				0	319	191	266	713	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	136	16	135				0	1056	898	297	1437	0
Arrive On Green	0.09	0.09	0.09				0.00	0.57	0.57	0.34	1.00	0.00
Sat Flow, veh/h	1599	183	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	107	0	34				0	319	191	266	713	0
Grp Sat Flow(s),veh/h/ln	1783	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	5.0	0.0	1.7				0.0	7.6	5.0	12.3	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	1.7				0.0	7.6	5.0	12.3	0.0	0.0
Prop In Lane	0.90		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	152	0	135				0	1056	898	297	1437	0
V/C Ratio(X)	0.70	0.00	0.25				0.00	0.30	0.21	0.90	0.50	0.00
Avail Cap(c_a), veh/h	524	0	466				0	1056	898	348	1437	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.31	0.31	0.00
Uniform Delay (d), s/veh	37.8	0.0	36.3				0.0	9.4	8.8	27.3	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	1.0				0.0	0.7	0.5	8.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.8				0.0	4.0	2.3	6.6	0.2	0.0
LnGrp Delay(d),s/veh	43.7	0.0	37.3				0.0	10.1	9.4	36.0	0.4	0.0
LnGrp LOS	D		D					B	A	D	A	
Approach Vol, veh/h		141						510			979	
Approach Delay, s/veh		42.1						9.9			10.1	
Approach LOS		D						A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.9			18.2	54.7		12.1				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			14.3	9.6		7.0				
Green Ext Time (p_c), s		4.9			0.2	2.1		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			12.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Cumulative, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	420	10	640	120	410	1160	0
Future Volume (veh/h)	0	0	0	450	0	420	10	640	120	410	1160	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				468	54	429	11	719	68	461	1303	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				575	58	461	24	892	397	499	1832	0
Arrive On Green				0.32	0.32	0.32	0.01	0.25	0.25	0.28	0.52	0.00
Sat Flow, veh/h				1810	183	1451	1774	3539	1577	1757	3597	0
Grp Volume(v), veh/h				468	0	483	11	719	68	461	1303	0
Grp Sat Flow(s),veh/h/ln				1810	0	1634	1774	1770	1577	1757	1752	0
Q Serve(g_s), s				21.9	0.0	26.4	0.6	17.6	3.1	23.5	26.0	0.0
Cycle Q Clear(g_c), s				21.9	0.0	26.4	0.6	17.6	3.1	23.5	26.0	0.0
Prop In Lane				1.00		0.89	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				575	0	519	24	892	397	499	1832	0
V/C Ratio(X)				0.81	0.00	0.93	0.47	0.81	0.17	0.92	0.71	0.00
Avail Cap(c_a), veh/h				589	0	532	578	1153	514	572	1832	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				28.9	0.0	30.5	45.1	32.3	26.9	32.0	16.7	0.0
Incr Delay (d2), s/veh				8.5	0.0	23.0	13.6	3.3	0.2	19.4	1.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	15.1	0.4	9.0	1.4	14.1	12.8	0.0
LnGrp Delay(d),s/veh				37.4	0.0	53.4	58.7	35.7	27.1	51.5	18.0	0.0
LnGrp LOS				D		D	E	D	C	D	B	
Approach Vol, veh/h					951			798			1764	
Approach Delay, s/veh					45.5			35.3			26.8	
Approach LOS					D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.7	53.1			29.7	28.2		34.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	28.0			25.5	19.6		28.4				
Green Ext Time (p_c), s	0.0	1.5			0.7	3.6		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
2: 2nd Avenue & Patton Parkway

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Future Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	98	65	33	98	109	76	239	109	98	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	247	164	67	177	197	121	330	151	139	407	101
Arrive On Green	0.05	0.24	0.24	0.04	0.22	0.22	0.07	0.27	0.27	0.08	0.28	0.28
Sat Flow, veh/h	1774	1046	694	1774	807	897	1774	1212	553	1774	1441	359
Grp Volume(v), veh/h	54	0	163	33	0	207	76	0	348	98	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1740	1774	0	1704	1774	0	1765	1774	0	1799
Q Serve(g_s), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Cycle Q Clear(g_c), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Prop In Lane	1.00		0.40	1.00		0.53	1.00		0.31	1.00		0.20
Lane Grp Cap(c), veh/h	97	0	411	67	0	374	121	0	481	139	0	509
V/C Ratio(X)	0.56	0.00	0.40	0.50	0.00	0.55	0.63	0.00	0.72	0.71	0.00	0.53
Avail Cap(c_a), veh/h	235	0	1364	235	0	1336	235	0	1384	235	0	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	14.6	21.4	0.0	15.7	20.5	0.0	14.9	20.4	0.0	13.7
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.6	0.0	1.3	5.3	0.0	2.1	6.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8	0.5	0.0	2.4	1.1	0.0	4.1	1.4	0.0	3.0
LnGrp Delay(d),s/veh	25.9	0.0	15.2	27.0	0.0	17.0	25.9	0.0	17.0	26.8	0.0	14.6
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		217			240			424			369	
Approach Delay, s/veh		17.8			18.4			18.6			17.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.8	5.7	15.2	7.1	17.3	6.5	14.4				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	6.0	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14.4), s	11.4	10.1	2.8	5.6	3.9	7.8	3.3	6.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.0	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1170	0	0	0	0	0	910	10	0
Future Volume (veh/h)	0	0	0	1170	0	0	0	0	0	910	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1286	0	0				1000	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				996	0	0				657	7	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1757	0	0				1739	19	0
Grp Volume(v), veh/h				1286	0	0				1011	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				996	0	0				664	0	0
V/C Ratio(X)				1.29	0.00	0.00				1.52	0.00	0.00
Avail Cap(c_a), veh/h				996	0	0				664	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.2	0.0	0.0				49.2	0.0	0.0
Incr Delay (d2), s/veh				138.8	0.0	0.0				242.7	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				81.8	0.0	0.0				73.7	0.0	0.0
LnGrp Delay(d),s/veh				173.0	0.0	0.0				291.9	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1286						1011	
Approach Delay, s/veh					173.0						291.9	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				225.3								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	920	0	0	1120	410	10	10	1060	0	0	0
Future Vol, veh/h	10	920	0	0	1120	410	10	10	1060	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	10	948	0	0	1155	423	10	10	1093	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1155	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	601	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	601	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	110.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	53	-	601	-	-
HCM Lane V/C Ratio	0.389	-	0.017	-	-
HCM Control Delay (s)	110.9	0	11.1	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.4	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1110	850	480	970	120	370	90	200	50	100	210
Future Volume (veh/h)	180	1110	850	480	970	120	370	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	1133	648	490	990	122	378	92	82	51	102	209
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	221	1220	546	559	1214	149	448	428	364	91	277	247
Arrive On Green	0.12	0.34	0.34	0.16	0.38	0.38	0.13	0.24	0.24	0.05	0.15	0.15
Sat Flow, veh/h	1774	3539	1583	3442	3173	391	3343	1810	1536	1810	1805	1612
Grp Volume(v), veh/h	184	1133	648	490	552	560	378	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1794	1672	1810	1536	1810	1805	1612
Q Serve(g_s), s	8.8	26.8	30.0	12.1	24.4	24.4	9.6	3.6	3.7	2.4	4.4	11.0
Cycle Q Clear(g_c), s	8.8	26.8	30.0	12.1	24.4	24.4	9.6	3.6	3.7	2.4	4.4	11.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	1220	546	559	677	686	448	428	364	91	277	247
V/C Ratio(X)	0.83	0.93	1.19	0.88	0.82	0.82	0.84	0.21	0.23	0.56	0.37	0.85
Avail Cap(c_a), veh/h	306	1220	546	593	677	686	768	437	371	208	436	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	27.5	28.5	35.6	24.1	24.1	36.8	26.7	26.8	40.4	33.1	35.8
Incr Delay (d2), s/veh	9.6	12.1	101.5	12.7	7.1	7.1	1.7	0.1	0.1	2.0	0.3	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.1	28.4	6.7	13.2	13.3	4.5	1.8	1.6	1.3	2.2	5.3
LnGrp Delay(d),s/veh	46.8	39.6	130.0	48.3	31.3	31.2	38.5	26.8	26.9	42.3	33.4	41.4
LnGrp LOS	D	D	F	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1965			1602			552			362	
Approach Delay, s/veh		70.1			36.5			34.8			39.2	
Approach LOS		E			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	35.3	15.2	17.9	15.3	38.6	7.9	25.2				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	14.1	32.0	11.6	13.0	10.8	26.4	4.4	5.7				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3	0.0	0.7	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			51.2									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	960	230	350	1420	30	130	10	70	10	10	40
Future Volume (veh/h)	50	960	230	350	1420	30	130	10	70	10	10	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	1000	211	365	1479	30	135	10	19	10	10	7
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	64	1124	237	382	2007	41	319	81	154	313	148	104
Arrive On Green	0.04	0.39	0.39	0.22	0.57	0.57	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	2910	613	1774	3548	72	1345	558	1060	1370	1020	714
Grp Volume(v), veh/h	52	607	604	365	737	772	135	0	29	10	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1754	1774	1770	1850	1345	0	1617	1370	0	1733
Q Serve(g_s), s	1.6	17.1	17.2	10.8	16.5	16.6	5.1	0.0	0.8	0.3	0.0	0.5
Cycle Q Clear(g_c), s	1.6	17.1	17.2	10.8	16.5	16.6	5.6	0.0	0.8	1.2	0.0	0.5
Prop In Lane	1.00		0.35	1.00		0.04	1.00		0.66	1.00		0.41
Lane Grp Cap(c), veh/h	64	683	677	382	1001	1047	319	0	235	313	0	252
V/C Ratio(X)	0.82	0.89	0.89	0.95	0.74	0.74	0.42	0.00	0.12	0.03	0.00	0.07
Avail Cap(c_a), veh/h	382	1077	1068	382	1077	1126	817	0	833	819	0	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.6	15.3	15.3	20.7	8.6	8.6	22.1	0.0	19.8	20.4	0.0	19.7
Incr Delay (d2), s/veh	9.2	3.8	4.1	34.1	2.1	2.0	0.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	9.0	9.0	8.9	8.6	8.9	1.9	0.0	0.4	0.1	0.0	0.2
LnGrp Delay(d),s/veh	34.7	19.2	19.4	54.8	10.7	10.6	22.4	0.0	19.9	20.4	0.0	19.7
LnGrp LOS	C	B	B	D	B	B	C		B	C		B
Approach Vol, veh/h		1263			1874			164			27	
Approach Delay, s/veh		19.9			19.3			22.0			20.0	
Approach LOS		B			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	26.1		12.3	5.4	35.7		12.3				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	12.8	19.2		3.2	3.6	18.6		7.6				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	1.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: 4th Avenue & Imjin Parkway

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1060	20	10	1730	10	10	10	10	10	10	10
Future Volume (veh/h)	10	1060	20	10	1730	10	10	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1267	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1104	20	10	1802	9	10	10	9	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	50	50	50	0	0	0
Cap, veh/h	14	1956	35	14	1986	10	160	19	17	168	29	29
Arrive On Green	0.01	0.55	0.55	0.01	0.55	0.55	0.06	0.05	0.05	0.06	0.05	0.05
Sat Flow, veh/h	1774	3556	64	1774	3611	18	386	386	347	570	570	570
Grp Volume(v), veh/h	10	549	575	10	882	929	29	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1770	1860	1119	0	0	1711	0	0
Q Serve(g_s), s	0.2	7.0	7.0	0.2	15.4	15.5	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	7.0	7.0	0.2	15.4	15.5	0.8	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.34		0.31	0.33		0.33
Lane Grp Cap(c), veh/h	14	973	1018	14	973	1022	213	0	0	250	0	0
V/C Ratio(X)	0.71	0.56	0.56	0.71	0.91	0.91	0.14	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	593	1670	1748	593	1670	1755	1021	0	0	1463	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.0	5.1	5.1	17.0	7.0	7.0	15.8	0.0	0.0	15.7	0.0	0.0
Incr Delay (d2), s/veh	21.4	0.2	0.2	21.4	2.3	2.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.4	3.6	0.2	7.7	8.1	0.3	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	38.5	5.3	5.2	38.5	9.2	9.2	15.9	0.0	0.0	15.8	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	B			B		
Approach Vol, veh/h		1134			1821			29			30	
Approach Delay, s/veh		5.5			9.4			15.9			15.8	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	24.4		6.2	3.8	24.4		6.2				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	12.2	9.0		2.5	2.2	17.5		2.8				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	1.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				8.0								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	970	20	10	1130	70	20	10	10	90	150	460
Future Volume (veh/h)	140	970	20	10	1130	70	20	10	10	90	150	460
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	147	1021	19	11	1189	68	21	11	10	95	158	410
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	185	1697	32	15	1286	73	178	85	56	122	136	314
Arrive On Green	0.10	0.47	0.47	0.01	0.38	0.38	0.32	0.31	0.31	0.32	0.31	0.31
Sat Flow, veh/h	1792	3588	67	1774	3404	194	303	273	180	187	437	1011
Grp Volume(v), veh/h	147	509	531	11	618	639	42	0	0	663	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1868	1774	1770	1828	756	0	0	1636	0	0
Q Serve(g_s), s	5.2	13.5	13.5	0.4	21.5	21.5	0.0	0.0	0.0	16.6	0.0	0.0
Cycle Q Clear(g_c), s	5.2	13.5	13.5	0.4	21.5	21.5	1.2	0.0	0.0	20.6	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.11	0.50		0.24	0.14		0.62
Lane Grp Cap(c), veh/h	185	845	884	15	669	691	326	0	0	587	0	0
V/C Ratio(X)	0.79	0.60	0.60	0.75	0.92	0.93	0.13	0.00	0.00	1.13	0.00	0.00
Avail Cap(c_a), veh/h	417	845	884	413	824	852	326	0	0	587	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.2	12.5	12.5	31.9	19.1	19.2	15.6	0.0	0.0	23.4	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.9	0.8	23.6	12.8	12.7	0.1	0.0	0.0	78.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.8	7.1	0.3	12.8	13.3	0.5	0.0	0.0	22.9	0.0	0.0
LnGrp Delay(d),s/veh	31.1	13.4	13.3	55.5	31.9	31.8	15.7	0.0	0.0	101.6	0.0	0.0
LnGrp LOS	C	B	B	E	C	C	B			F		
Approach Vol, veh/h		1187			1268			42			663	
Approach Delay, s/veh		15.5			32.1			15.7			101.6	
Approach LOS		B			C			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	35.8		24.6	10.2	29.6		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1), s	12.4	15.5		22.6	7.2	23.5		3.2				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			40.2									
HCM 2010 LOS			D									

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	30	30	210	610	80
Future Vol, veh/h	30	30	30	210	610	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	33	33	228	663	87












Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1001	707	750	0	-	0
Stage 1	707	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	269	435	859	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	259	435	859	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.8	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	859	-	325	-	-
HCM Lane V/C Ratio	0.038	-	0.201	-	-
HCM Control Delay (s)	9.4	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative, AM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	900	190	430	1140	60	120		
Future Volume (veh/h)	900	190	430	1140	60	120		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	947	187	453	1200	63	126		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	1057	209	505	2621	127	226		
Arrive On Green	0.36	0.36	0.29	0.75	0.07	0.07		
Sat Flow, veh/h	3041	582	1757	3597	1723	3076		
Grp Volume(v), veh/h	568	566	453	1200	63	126		
Grp Sat Flow(s),veh/h/ln	1770	1760	1757	1752	1723	1538		
Q Serve(g_s), s	15.8	15.8	12.9	6.8	1.8	2.1		
Cycle Q Clear(g_c), s	15.8	15.8	12.9	6.8	1.8	2.1		
Prop In Lane		0.33	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	635	631	505	2621	127	226		
V/C Ratio(X)	0.90	0.90	0.90	0.46	0.50	0.56		
Avail Cap(c_a), veh/h	1021	1015	675	2621	729	1301		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.8	15.8	17.8	2.5	23.2	23.3		
Incr Delay (d2), s/veh	4.1	4.2	10.1	0.0	1.1	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.3	8.3	7.6	3.2	0.9	0.9		
LnGrp Delay(d),s/veh	19.9	20.0	27.9	2.6	24.3	24.1		
LnGrp LOS	B	B	C	A	C	C		
Approach Vol, veh/h	1134			1653	189			
Approach Delay, s/veh	19.9			9.5	24.2			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	20.2	24.0				44.2		7.8
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	14.9	17.8				8.8		4.1
Green Ext Time (p_c), s	0.1	0.8				1.4		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			14.4					
HCM 2010 LOS			B					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕	↔	↕	↕	↔
Traffic Volume (veh/h)	50	810	60	80	1200	70	220	30	110	90	50	250
Future Volume (veh/h)	50	810	60	80	1200	70	220	30	110	90	50	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	54	871	53	86	1290	70	237	32	0	97	54	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	189	1915	116	147	1847	100	365	415	352	386	419	356
Arrive On Green	0.05	0.56	0.54	0.04	0.54	0.52	0.22	0.22	0.00	0.22	0.22	0.00
Sat Flow, veh/h	3476	3423	208	3442	3415	185	1330	1845	1568	1370	1863	1583
Grp Volume(v), veh/h	54	455	469	86	668	692	237	32	0	97	54	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1844	1721	1770	1830	1330	1845	1568	1370	1863	1583
Q Serve(g_s), s	1.1	11.1	11.2	1.8	20.6	20.7	12.8	1.0	0.0	4.4	1.7	0.0
Cycle Q Clear(g_c), s	1.1	11.1	11.2	1.8	20.6	20.7	14.5	1.0	0.0	5.5	1.7	0.0
Prop In Lane	1.00		0.11	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	189	1000	1031	147	957	990	365	415	352	386	419	356
V/C Ratio(X)	0.29	0.45	0.45	0.58	0.70	0.70	0.65	0.08	0.00	0.25	0.13	0.00
Avail Cap(c_a), veh/h	940	1209	1247	931	1197	1238	606	748	636	634	756	642
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.6	9.6	9.7	34.7	12.5	12.6	28.7	22.6	0.0	24.8	22.9	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.1	1.4	0.8	0.8	0.7	0.0	0.0	0.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.5	5.7	0.9	10.0	10.6	4.7	0.5	0.0	1.7	0.9	0.0
LnGrp Delay(d),s/veh	33.9	9.8	9.8	36.1	13.3	13.4	29.4	22.6	0.0	24.9	22.9	0.0
LnGrp LOS	C	A	A	D	B	B	C	C		C	C	
Approach Vol, veh/h		978			1446			269			151	
Approach Delay, s/veh		11.1			14.7			28.6			24.2	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.7	46.7		20.6	8.0	45.3		20.6				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax)	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+13)	13.8	13.2		7.5	3.1	22.7		16.5				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	1.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				15.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative, AM
 06/11/2019

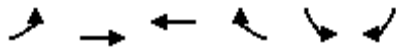


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	170	50	820	10	20	30	1180	890	20	60	590	90
Future Volume (veh/h)	170	50	820	10	20	30	1180	890	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	183	54	468	11	22	19	1269	957	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	487	264	1347	53	56	47	1178	2081	930	113	987	434
Arrive On Green	0.14	0.14	0.14	0.03	0.03	0.03	0.34	0.59	0.59	0.03	0.28	0.28
Sat Flow, veh/h	3442	1863	2777	1560	1638	1382	3442	3539	1581	3442	3539	1558
Grp Volume(v), veh/h	183	54	468	11	22	19	1269	957	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1388	1560	1638	1382	1721	1770	1581	1721	1770	1558
Q Serve(g_s), s	4.9	2.6	10.7	0.7	1.3	1.4	35.0	15.6	0.4	1.9	16.1	1.6
Cycle Q Clear(g_c), s	4.9	2.6	10.7	0.7	1.3	1.4	35.0	15.6	0.4	1.9	16.1	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	487	264	1347	53	56	47	1178	2081	930	113	987	434
V/C Ratio(X)	0.38	0.20	0.35	0.21	0.39	0.40	1.08	0.46	0.02	0.57	0.64	0.08
Avail Cap(c_a), veh/h	1178	637	1904	473	496	419	1178	2081	930	673	2076	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	38.8	16.4	48.1	48.4	48.4	33.6	11.9	8.8	48.8	32.4	27.2
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.7	1.7	2.1	49.8	0.4	0.0	1.7	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.4	4.1	0.3	0.6	0.6	24.7	7.7	0.2	0.9	8.1	0.7
LnGrp Delay(d),s/veh	40.0	39.0	16.5	48.8	50.0	50.4	83.5	12.3	8.8	50.4	34.3	27.4
LnGrp LOS	D	D	B	D	D	D	F	B	A	D	C	C
Approach Vol, veh/h		705			52			2242			733	
Approach Delay, s/veh		24.3			49.9			52.6			35.4	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	34.7		8.5	7.5	66.4		20.0				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	18.1		3.4	3.9	17.6		12.7				
Green Ext Time (p_c), s	0.0	10.4		0.1	0.0	15.2		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			43.8									
HCM 2010 LOS			D									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	1070	370	680	40	40	1410		
Future Volume (veh/h)	1070	370	680	40	40	1410		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1151	398	731	24	43	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1225	3039	806	685	103	83		
Arrive On Green	0.36	0.86	0.44	0.44	0.03	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1151	398	731	24	43	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	27.1	1.5	30.9	0.7	1.0	0.0		
Cycle Q Clear(g_c), s	27.1	1.5	30.9	0.7	1.0	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1225	3039	806	685	103	83		
V/C Ratio(X)	0.94	0.13	0.91	0.04	0.42	0.00		
Avail Cap(c_a), veh/h	1645	3039	1322	1124	1099	890		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	26.1	0.9	22.0	13.5	39.9	0.0		
Incr Delay (d2), s/veh	7.9	0.0	4.9	0.0	1.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.1	0.7	16.7	0.3	0.5	0.0		
LnGrp Delay(d),s/veh	34.0	1.0	26.8	13.5	40.9	0.0		
LnGrp LOS	C	A	C	B	D			
Approach Vol, veh/h		1549	755		43			
Approach Delay, s/veh		25.5	26.4		40.9			
Approach LOS		C	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		77.7		6.0	35.3	42.4		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		3.5		3.0	29.1	32.9		
Green Ext Time (p_c), s		1.9		0.0	0.7	3.6		
Intersection Summary								
HCM 2010 Ctrl Delay			26.1					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	190	280	510	560	310	190		
Future Volume (veh/h)	190	280	510	560	310	190		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	202	259	543	596	330	186		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	289	764	573	2334	568	314		
Arrive On Green	0.16	0.16	0.32	0.66	0.26	0.26		
Sat Flow, veh/h	1757	1568	1774	3632	2273	1204		
Grp Volume(v), veh/h	202	259	543	596	264	252		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1632		
Q Serve(g_s), s	6.7	6.3	18.5	4.3	8.1	8.4		
Cycle Q Clear(g_c), s	6.7	6.3	18.5	4.3	8.1	8.4		
Prop In Lane	1.00	1.00	1.00			0.74		
Lane Grp Cap(c), veh/h	289	764	573	2334	456	425		
V/C Ratio(X)	0.70	0.34	0.95	0.26	0.58	0.59		
Avail Cap(c_a), veh/h	766	1191	573	3431	1699	1582		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	24.4	9.7	20.4	4.3	19.9	20.0		
Incr Delay (d2), s/veh	3.1	0.3	24.8	0.1	2.2	2.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.5	2.8	12.9	2.1	4.2	4.0		
LnGrp Delay(d),s/veh	27.5	10.0	45.3	4.4	22.1	22.5		
LnGrp LOS	C	A	D	A	C	C		
Approach Vol, veh/h	461			1139	516			
Approach Delay, s/veh	17.7			23.9	22.3			
Approach LOS	B			C	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	24.7	22.5				47.2		14.7
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+20), s	20.5	10.4				6.3		8.7
Green Ext Time (p_c), s	0.0	5.8				7.4		1.5
Intersection Summary								
HCM 2010 Ctrl Delay			22.1					
HCM 2010 LOS			C					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	10	10	10	260	10	20	20	360	30	40	830	10
Future Volume (veh/h)	10	10	10	260	10	20	20	360	30	40	830	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	11	-24	277	11	20	21	383	27	43	883	4
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	325	282	450	524	15	27	46	1252	88	82	1410	6
Arrive On Green	0.30	0.28	0.00	0.30	0.28	0.28	0.03	0.37	0.37	0.05	0.39	0.39
Sat Flow, veh/h	726	1001	1599	1318	52	95	1792	3386	238	1774	3613	16
Grp Volume(v), veh/h	22	0	-24	308	0	0	21	201	209	43	432	455
Grp Sat Flow(s),veh/h/ln	1727	0	1599	1465	0	0	1792	1787	1837	1774	1770	1860
Q Serve(g_s), s	0.0	0.0	0.0	7.9	0.0	0.0	0.5	3.6	3.6	1.1	8.8	8.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	8.2	0.0	0.0	0.5	3.6	3.6	1.1	8.8	8.8
Prop In Lane	0.50		1.00	0.90		0.06	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	646	0	450	599	0	0	46	661	679	82	691	726
V/C Ratio(X)	0.03	0.00	-0.05	0.51	0.00	0.00	0.46	0.30	0.31	0.52	0.63	0.63
Avail Cap(c_a), veh/h	1267	0	1074	1167	0	0	462	1801	1852	457	1784	1875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	0.0	0.0	14.0	0.0	0.0	21.4	10.0	10.0	20.8	11.0	11.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.7	0.0	0.0	6.9	0.3	0.3	5.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.3	0.0	0.0	0.3	1.8	1.8	0.6	4.4	4.6
LnGrp Delay(d),s/veh	11.5	0.0	0.0	14.7	0.0	0.0	28.3	10.3	10.3	25.9	11.9	11.9
LnGrp LOS	B			B			C	B	B	C	B	B
Approach Vol, veh/h		-2			308			431			930	
Approach Delay, s/veh		-126.4			14.7			11.1			12.5	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.6	4.6	22.4		17.6	5.6	21.5				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		30.0	11.5	45.0		30.0	11.5	45.0				
Max Q Clear Time (g_c+I1), s		2.4	2.5	10.8		10.2	3.1	5.6				
Green Ext Time (p_c), s		0.1	0.0	6.3		1.7	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative, AM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	340	20	510	130	50	1060		
Future Volume (veh/h)	340	20	510	130	50	1060		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1583	1583	1863	1900	1881	1881		
Adj Flow Rate, veh/h	358	5	537	121	53	1116		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	20	20	2	2	1	1		
Cap, veh/h	431	385	1057	237	96	1777		
Arrive On Green	0.29	0.29	0.37	0.37	0.05	0.50		
Sat Flow, veh/h	1508	1346	2967	645	1792	3668		
Grp Volume(v), veh/h	358	5	330	328	53	1116		
Grp Sat Flow(s),veh/h/ln	1508	1346	1770	1749	1792	1787		
Q Serve(g_s), s	10.2	0.1	6.7	6.7	1.3	10.5		
Cycle Q Clear(g_c), s	10.2	0.1	6.7	6.7	1.3	10.5		
Prop In Lane	1.00	1.00		0.37	1.00			
Lane Grp Cap(c), veh/h	431	385	651	643	96	1777		
V/C Ratio(X)	0.83	0.01	0.51	0.51	0.55	0.63		
Avail Cap(c_a), veh/h	982	876	1728	1708	447	4653		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.4	11.8	11.3	11.3	21.3	8.5		
Incr Delay (d2), s/veh	4.2	0.0	0.6	0.6	4.9	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.7	0.1	3.3	3.3	0.8	5.2		
LnGrp Delay(d),s/veh	19.6	11.8	11.9	12.0	26.2	8.8		
LnGrp LOS	B	B	B	B	C	A		
Approach Vol, veh/h	363		658			1169		
Approach Delay, s/veh	19.5		11.9			9.6		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				27.9		18.2	6.0	22.0
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				12.5		12.2	3.3	8.7
Green Ext Time (p_c), s				10.4		1.1	0.0	4.4
Intersection Summary								
HCM 2010 Ctrl Delay			12.0					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 19: 2nd Avenue & Inter-Garrison Road

Cumulative, AM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	60	30	640	60	20	1390		
Future Volume (veh/h)	60	30	640	60	20	1390		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1881	1881		
Adj Flow Rate, veh/h	65	8	688	57	22	1495		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	1	1	1	1		
Cap, veh/h	239	214	1822	151	48	2318		
Arrive On Green	0.13	0.13	0.55	0.55	0.03	0.65		
Sat Flow, veh/h	1810	1615	3437	277	1792	3668		
Grp Volume(v), veh/h	65	8	368	377	22	1495		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1832	1792	1787		
Q Serve(g_s), s	1.5	0.2	5.4	5.4	0.6	11.5		
Cycle Q Clear(g_c), s	1.5	0.2	5.4	5.4	0.6	11.5		
Prop In Lane	1.00	1.00		0.15	1.00			
Lane Grp Cap(c), veh/h	239	214	974	999	48	2318		
V/C Ratio(X)	0.27	0.04	0.38	0.38	0.46	0.65		
Avail Cap(c_a), veh/h	1389	1239	1567	1607	452	4310		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	17.8	17.3	5.9	5.9	21.9	4.8		
Incr Delay (d2), s/veh	0.6	0.1	0.2	0.2	6.8	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.8	0.2	2.6	2.7	0.4	5.5		
LnGrp Delay(d),s/veh	18.4	17.3	6.2	6.2	28.6	5.1		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	73		745			1517		
Approach Delay, s/veh	18.3		6.2			5.5		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				34.6		11.0	4.7	29.9
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				13.5		3.5	2.6	7.4
Green Ext Time (p_c), s				16.0		0.2	0.0	5.0
Intersection Summary								
HCM 2010 Ctrl Delay			6.1					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh	11.3											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	30	10	120	50	20	20	140	140	20	140	10
Future Vol, veh/h	10	30	10	120	50	20	20	140	140	20	140	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	12	35	12	141	59	24	24	165	165	24	165	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	11.3	12.1	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	20%	63%	12%
Vol Thru, %	47%	60%	26%	82%
Vol Right, %	47%	20%	11%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	50	190	170
LT Vol	20	10	120	20
Through Vol	140	30	50	140
RT Vol	140	10	20	10
Lane Flow Rate	353	59	224	200
Geometry Grp	1	1	1	1
Degree of Util (X)	0.473	0.093	0.34	0.288
Departure Headway (Hd)	4.829	5.718	5.483	5.182
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	752	626	655	694
Service Time	2.829	3.76	3.517	3.213
HCM Lane V/C Ratio	0.469	0.094	0.342	0.288
HCM Control Delay	12.1	9.3	11.3	10.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2.6	0.3	1.5	1.2

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

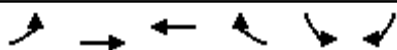
Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	130	30	140	270	30	50	100	130	110	200	10
Future Volume (veh/h)	10	130	30	140	270	30	50	100	130	110	200	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1845	1845	1845	1900	1597	1900	1900	1776	1776
Adj Flow Rate, veh/h	12	160	28	173	333	0	62	123	127	136	247	5
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	8	3	3	3	19	19	19	7	7	7
Cap, veh/h	20	238	42	187	476	404	71	142	146	157	284	381
Arrive On Green	0.01	0.16	0.16	0.11	0.26	0.00	0.26	0.24	0.24	0.27	0.25	0.25
Sat Flow, veh/h	1675	1457	255	1757	1845	1568	293	582	601	620	1125	1509
Grp Volume(v), veh/h	12	0	188	173	333	0	312	0	0	383	0	5
Grp Sat Flow(s),veh/h/ln	1675	0	1711	1757	1845	1568	1476	0	0	1745	0	1509
Q Serve(g_s), s	0.5	0.0	7.3	6.9	11.5	0.0	14.3	0.0	0.0	14.8	0.0	0.2
Cycle Q Clear(g_c), s	0.5	0.0	7.3	6.9	11.5	0.0	14.3	0.0	0.0	14.8	0.0	0.2
Prop In Lane	1.00		0.15	1.00		1.00	0.20		0.41	0.36		1.00
Lane Grp Cap(c), veh/h	20	0	280	187	476	404	359	0	0	441	0	381
V/C Ratio(X)	0.60	0.00	0.67	0.93	0.70	0.00	0.87	0.00	0.00	0.87	0.00	0.01
Avail Cap(c_a), veh/h	95	0	777	187	929	789	461	0	0	544	0	471
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	27.7	31.2	23.7	0.0	25.5	0.0	0.0	25.0	0.0	19.8
Incr Delay (d2), s/veh	25.9	0.0	2.8	45.1	1.9	0.0	13.3	0.0	0.0	12.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.7	5.7	6.1	0.0	7.1	0.0	0.0	8.6	0.0	0.1
LnGrp Delay(d),s/veh	60.6	0.0	30.5	76.4	25.6	0.0	38.8	0.0	0.0	37.1	0.0	19.8
LnGrp LOS	E		C	E	C		D			D		B
Approach Vol, veh/h		200			506			312			388	
Approach Delay, s/veh		32.3			42.9			38.8			36.8	
Approach LOS		C			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.0	16.5		21.8	4.3	23.2		21.2				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s	7.5	32.0		22.0	4.0	35.5		22.0				
Max Q Clear Time (g_c+11g), s	9.3	9.3		16.8	2.5	13.5		16.3				
Green Ext Time (p_c), s	0.0	1.0		1.0	0.0	2.0		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				38.8								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	250	300	680	10	40	430		
Future Volume (veh/h)	250	300	680	10	40	430		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	294	353	800	6	47	288		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	284	1179	844	718	711	327		
Arrive On Green	0.17	0.67	0.45	0.45	0.20	0.20		
Sat Flow, veh/h	1675	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	294	353	800	6	47	288		
Grp Sat Flow(s),veh/h/ln	1675	1759	1881	1599	1738	1599		
Q Serve(g_s), s	11.5	5.6	27.7	0.1	0.7	11.9		
Cycle Q Clear(g_c), s	11.5	5.6	27.7	0.1	0.7	11.9		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	284	1179	844	718	711	327		
V/C Ratio(X)	1.04	0.30	0.95	0.01	0.07	0.88		
Avail Cap(c_a), veh/h	284	1556	1248	1061	1614	742		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	28.2	4.6	17.9	10.3	21.7	26.2		
Incr Delay (d2), s/veh	62.8	0.1	9.3	0.0	0.0	3.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/lt	0.2	2.7	16.4	0.1	0.4	10.0		
LnGrp Delay(d),s/veh	91.0	4.7	27.3	10.3	21.8	29.2		
LnGrp LOS	F	A	C	B	C	C		
Approach Vol, veh/h		647	806		335			
Approach Delay, s/veh		43.9	27.1		28.2			
Approach LOS		D	C		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		50.5		17.4	15.0	35.5		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		7.6		13.9	13.5	29.7		
Green Ext Time (p_c), s		0.3		0.1	0.0	0.8		
Intersection Summary								
HCM 2010 Ctrl Delay			33.4					
HCM 2010 LOS			C					

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	290	550	10	60	120
Future Vol, veh/h	60	290	550	10	60	120
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	5	5	1	1	3	3
Mvmt Flow	76	367	696	13	76	152
Number of Lanes	1	1	2	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	3
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	24.9	21.2	13.2
HCM LOS	C	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	290	275	275	10	60	120
LT Vol	60	0	0	0	0	60	0
Through Vol	0	290	275	275	0	0	0
RT Vol	0	0	0	0	10	0	120
Lane Flow Rate	76	367	348	348	13	76	152
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.163	0.736	0.656	0.656	0.015	0.18	0.308
Departure Headway (Hd)	7.737	7.213	6.787	6.787	4.33	8.521	7.299
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	465	503	536	536	831	422	492
Service Time	5.461	4.952	4.489	4.489	2.032	6.265	5.042
HCM Lane V/C Ratio	0.163	0.73	0.649	0.649	0.016	0.18	0.309
HCM Control Delay	12	27.6	21.5	21.5	7.1	13.1	13.3
HCM Lane LOS	B	D	C	C	A	B	B
HCM 95th-tile Q	0.6	6.1	4.7	4.7	0	0.6	1.3

Intersection						
Intersection Delay, s/veh	39.9					
Intersection LOS	E					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	270	80	170	210	110	430
Future Vol, veh/h	270	80	170	210	110	430
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	329	98	207	256	134	524
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	27.1	42.4	46.5
HCM LOS	D	E	E

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	45%	0%	0%
Vol Right, %	0%	0%	55%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	270	80	380	110	430
LT Vol	270	0	0	110	0
Through Vol	0	80	170	0	0
RT Vol	0	0	210	0	430
Lane Flow Rate	329	98	463	134	524
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.746	0.207	0.884	0.292	0.961
Departure Headway (Hd)	8.157	7.641	6.866	7.829	6.599
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	445	469	528	460	551
Service Time	5.91	5.394	4.909	5.568	4.338
HCM Lane V/C Ratio	0.739	0.209	0.877	0.291	0.951
HCM Control Delay	31.4	12.4	42.4	13.8	54.9
HCM Lane LOS	D	B	E	B	F
HCM 95th-tile Q	6.1	0.8	9.9	1.2	12.7

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	420	120	160	850	0	200	0	270	0	0	0
Future Volume (veh/h)	0	420	120	160	850	0	200	0	270	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	472	133	180	955	0	225	0	231			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	4	947	265	229	2013	0	339	0	303			
Arrive On Green	0.00	0.35	0.35	0.13	0.57	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1740	2680	750	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	305	300	180	955	0	225	0	231			
Grp Sat Flow(s),veh/h/ln	1740	1736	1695	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	5.7	5.8	4.1	6.7	0.0	4.9	0.0	5.7			
Cycle Q Clear(g_c), s	0.0	5.7	5.8	4.1	6.7	0.0	4.9	0.0	5.7			
Prop In Lane	1.00		0.44	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	4	613	599	229	2013	0	339	0	303			
V/C Ratio(X)	0.00	0.50	0.50	0.79	0.47	0.00	0.66	0.00	0.76			
Avail Cap(c_a), veh/h	833	2494	2435	850	5086	0	1159	0	1034			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.6	10.6	17.6	5.3	0.0	15.7	0.0	16.0			
Incr Delay (d2), s/veh	0.0	1.2	1.2	2.3	0.2	0.0	0.8	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.9	2.9	2.1	3.2	0.0	2.5	0.0	2.6			
LnGrp Delay(d),s/veh	0.0	11.7	11.8	19.9	5.5	0.0	16.5	0.0	17.6			
LnGrp LOS		B	B	B	A		B		B			
Approach Vol, veh/h		605			1135			456				
Approach Delay, s/veh		11.8			7.8			17.0				
Approach LOS		B			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	9.0	20.2			0.0	29.1		12.6				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax)	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+10)	10	7.8			0.0	8.7		7.7				
Green Ext Time (p_c), s	0.0	6.9			0.0	9.1		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				10.8								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 27: Reservation Road & Watkins Gate Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	260	170	1240	800	60		
Future Volume (veh/h)	10	260	170	1240	800	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	11	55	185	1348	870	58		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	107	96	233	2389	1557	104		
Arrive On Green	0.06	0.06	0.13	0.68	0.46	0.46		
Sat Flow, veh/h	1774	1583	1774	3632	3461	225		
Grp Volume(v), veh/h	11	55	185	1348	457	471		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1823		
Q Serve(g_s), s	0.3	1.7	5.0	9.8	9.2	9.2		
Cycle Q Clear(g_c), s	0.3	1.7	5.0	9.8	9.2	9.2		
Prop In Lane	1.00	1.00	1.00			0.12		
Lane Grp Cap(c), veh/h	107	96	233	2389	818	843		
V/C Ratio(X)	0.10	0.57	0.79	0.56	0.56	0.56		
Avail Cap(c_a), veh/h	668	596	650	4934	1675	1725		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	21.8	22.5	20.7	4.2	9.6	9.6		
Incr Delay (d2), s/veh	0.2	2.0	2.3	0.3	1.0	0.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.8	2.6	4.8	4.7	4.8		
LnGrp Delay(d),s/veh	22.0	24.5	23.0	4.5	10.5	10.5		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	66			1533	928			
Approach Delay, s/veh	24.1			6.8	10.5			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.5	10.5	29.2				39.7
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		18.5	18.0	46.5				68.5
Max Q Clear Time (g_c+11), s		3.7	7.0	11.2				11.8
Green Ext Time (p_c), s		0.0	0.0	9.8				21.3
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	460	300	10	10	560	90	10	10	10	160	10	520
Future Volume (veh/h)	460	300	10	10	560	90	10	10	10	160	10	520
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	535	349	12	12	651	105	12	12	9	186	12	363
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	387	2252	77	18	684	110	17	17	13	334	22	645
Arrive On Green	0.22	0.65	0.64	0.01	0.44	0.43	0.03	0.03	0.03	0.20	0.20	0.19
Sat Flow, veh/h	1774	3491	120	1774	1566	253	648	648	486	1655	107	1568
Grp Volume(v), veh/h	535	176	185	12	0	756	33	0	0	198	0	363
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1774	0	1818	1782	0	0	1762	0	1568
Q Serve(g_s), s	29.8	5.4	5.4	0.9	0.0	54.7	2.5	0.0	0.0	13.8	0.0	24.2
Cycle Q Clear(g_c), s	29.8	5.4	5.4	0.9	0.0	54.7	2.5	0.0	0.0	13.8	0.0	24.2
Prop In Lane	1.00		0.07	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	387	1142	1188	18	0	794	47	0	0	355	0	645
V/C Ratio(X)	1.38	0.15	0.16	0.68	0.00	0.95	0.71	0.00	0.00	0.56	0.00	0.56
Avail Cap(c_a), veh/h	387	1142	1188	389	0	813	392	0	0	400	0	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	9.5	9.6	67.3	0.0	37.1	65.9	0.0	0.0	49.0	0.0	30.8
Incr Delay (d2), s/veh	186.9	0.1	0.1	15.5	0.0	20.8	7.1	0.0	0.0	0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.6	2.6	2.8	0.5	0.0	31.9	1.3	0.0	0.0	6.8	0.0	10.5
LnGrp Delay(d),s/veh	240.3	9.6	9.7	82.8	0.0	57.9	73.1	0.0	0.0	49.5	0.0	31.3
LnGrp LOS	F	A	A	F		E	E			D		C
Approach Vol, veh/h		896			768			33			561	
Approach Delay, s/veh		147.4			58.3			73.1			37.7	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	92.0		31.5	33.8	63.6		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+12), s	12.5	7.4		26.2	31.8	56.7		4.5				
Green Ext Time (p_c), s	0.0	3.2		0.3	0.0	1.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				88.8								
HCM 2010 LOS				F								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	80	10	40	40	20	20	130	610	80	20	1180	250
Future Volume (veh/h)	80	10	40	40	20	20	130	610	80	20	1180	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	88	11	44	44	22	22	143	670	88	22	1297	275
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	190	32	59	239	100	256	182	1927	253	45	1574	329
Arrive On Green	0.17	0.16	0.16	0.17	0.16	0.16	0.10	0.61	0.61	0.03	0.53	0.53
Sat Flow, veh/h	644	199	375	933	631	1612	1774	3146	413	1792	2943	616
Grp Volume(v), veh/h	143	0	0	66	0	22	143	377	381	22	781	791
Grp Sat Flow(s),veh/h/ln	1218	0	0	1564	0	1612	1774	1770	1789	1792	1787	1771
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	0.8	5.2	6.9	7.0	0.8	23.9	24.9
Cycle Q Clear(g_c), s	7.6	0.0	0.0	2.2	0.0	0.8	5.2	6.9	7.0	0.8	23.9	24.9
Prop In Lane	0.62		0.31	0.67		1.00	1.00		0.23	1.00		0.35
Lane Grp Cap(c), veh/h	299	0	0	362	0	256	182	1084	1096	45	956	947
V/C Ratio(X)	0.48	0.00	0.00	0.18	0.00	0.09	0.78	0.35	0.35	0.49	0.82	0.84
Avail Cap(c_a), veh/h	777	0	0	919	0	850	308	1084	1096	311	1078	1068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	0.0	24.1	0.0	23.8	29.0	6.3	6.3	31.9	12.7	13.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.2	0.0	0.1	7.2	0.2	0.2	8.0	4.5	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	1.1	0.0	0.4	2.9	3.4	3.4	0.5	12.9	13.5
LnGrp Delay(d),s/veh	27.7	0.0	0.0	24.3	0.0	23.9	36.3	6.5	6.5	39.9	17.3	18.3
LnGrp LOS	C			C		C	D	A	A	D	B	B
Approach Vol, veh/h		143			88			901			1594	
Approach Delay, s/veh		27.7			24.2			11.2			18.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.5	10.3	40.5		15.5	5.2	45.6				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		9.6	7.2	26.9		4.2	2.8	9.0				
Green Ext Time (p_c), s		0.8	0.1	8.6		0.4	0.0	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay				16.5								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	11.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	10	20	60	10	10	20	280	40	10	240	20
Future Vol, veh/h	10	10	20	60	10	10	20	280	40	10	240	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	11	11	22	66	11	11	22	308	44	11	264	22
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.9	9.7	12.6	11.4
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	25%	75%	100%	0%
Vol Thru, %	0%	88%	25%	12%	0%	92%
Vol Right, %	0%	12%	50%	12%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	320	40	80	10	260
LT Vol	20	0	10	60	10	0
Through Vol	0	280	10	10	0	240
RT Vol	0	40	20	10	0	20
Lane Flow Rate	22	352	44	88	11	286
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.035	0.496	0.066	0.138	0.017	0.41
Departure Headway (Hd)	5.669	5.078	5.406	5.658	5.722	5.164
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	629	707	655	629	622	694
Service Time	3.429	2.837	3.502	3.742	3.486	2.927
HCM Lane V/C Ratio	0.035	0.498	0.067	0.14	0.018	0.412
HCM Control Delay	8.6	12.8	8.9	9.7	8.6	11.5
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.1	2.8	0.2	0.5	0.1	2

HCM 2010 Signalized Intersection Summary
31: 1st Avenue & Lightfighter Drive

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1120	130	20	1030	0	160	0	20	120	30	100
Future Volume (veh/h)	0	1120	130	20	1030	0	160	0	20	120	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1333	0	24	1226	0	190	0	10	143	36	100
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2159	966	27	2456	0	0	0	0	214	225	191
Arrive On Green	0.00	0.61	0.00	0.02	0.69	0.00	0.00	0.00	0.00	0.13	0.13	0.13
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1333	0	24	1226	0		0.0		143	36	100
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	12.0	0.0	0.7	8.3	0.0				4.1	0.9	3.1
Cycle Q Clear(g_c), s	0.0	12.0	0.0	0.7	8.3	0.0				4.1	0.9	3.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2159	966	27	2456	0				214	225	191
V/C Ratio(X)	0.00	0.62	0.00	0.89	0.50	0.00				0.67	0.16	0.52
Avail Cap(c_a), veh/h	0	3128	1399	697	3128	0				838	880	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.2	0.0	25.0	3.6	0.0				21.3	19.9	20.8
Incr Delay (d2), s/veh	0.0	0.4	0.0	27.2	0.2	0.0				1.3	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	0.0	0.5	4.0	0.0				2.0	0.5	1.3
LnGrp Delay(d),s/veh	0.0	6.6	0.0	52.2	3.9	0.0				22.6	20.0	21.7
LnGrp LOS		A		D	A					C	B	C
Approach Vol, veh/h		1333			1250						279	
Approach Delay, s/veh		6.6			4.8						21.9	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.3	35.7		11.0		39.9				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.7	14.0		6.1		10.3				
Green Ext Time (p_c), s			0.0	17.1		0.4		15.2				
Intersection Summary												
HCM 2010 Ctrl Delay			7.3									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	910	10	40	600	180	20	20	50	350	10	490
Future Volume (veh/h)	340	910	10	40	600	180	20	20	50	350	10	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	378	1011	11	44	667	191	22	22	55	389	11	268
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1908	21	56	1173	336	124	131	264	489	572	486
Arrive On Green	0.12	0.53	0.53	0.03	0.44	0.44	0.31	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	3586	39	1740	2665	763	262	432	868	1330	1881	1599
Grp Volume(v), veh/h	378	499	523	44	434	424	99	0	0	389	11	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1856	1740	1736	1692	1563	0	0	1330	1881	1599
Q Serve(g_s), s	12.4	18.4	18.4	2.5	18.7	18.7	0.0	0.0	0.0	23.2	0.4	14.0
Cycle Q Clear(g_c), s	12.4	18.4	18.4	2.5	18.7	18.7	4.2	0.0	0.0	27.4	0.4	14.0
Prop In Lane	1.00		0.02	1.00		0.45	0.22		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	942	987	56	764	745	529	0	0	489	572	486
V/C Ratio(X)	1.72	0.53	0.53	0.79	0.57	0.57	0.19	0.00	0.00	0.79	0.02	0.55
Avail Cap(c_a), veh/h	220	942	987	216	764	745	680	0	0	622	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.09	0.09	0.09	1.00	0.00	0.00	0.39	0.39	0.39
Uniform Delay (d), s/veh	43.8	15.2	15.2	48.1	20.9	20.9	25.6	0.0	0.0	33.4	24.4	29.1
Incr Delay (d2), s/veh	335.0	1.3	1.3	0.9	0.3	0.3	0.1	0.0	0.0	1.7	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.5	9.2	9.6	1.2	9.0	8.8	2.0	0.0	0.0	10.6	0.2	6.2
LnGrp Delay(d),s/veh	378.8	16.6	16.5	49.0	21.2	21.2	25.7	0.0	0.0	35.1	24.4	29.2
LnGrp LOS	F	B	B	D	C	C	C			D	C	C
Approach Vol, veh/h		1400			902			99			668	
Approach Delay, s/veh		114.4			22.6			25.7			32.5	
Approach LOS		F			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	57.8		35.0	16.4	48.6		35.0				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1), s	14.5	20.4		29.4	14.4	20.7		6.2				
Green Ext Time (p_c), s	0.0	3.5		1.0	0.0	1.3		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			66.7									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	280	760	20	200	60	620	150	10	30	150	70
Future Volume (veh/h)	70	280	760	20	200	60	620	150	10	30	150	70
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	79	315	0	22	225	65	697	169	10	34	169	79
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	102	508	432	36	316	91	691	559	33	53	354	159
Arrive On Green	0.06	0.27	0.00	0.02	0.24	0.24	0.20	0.32	0.32	0.03	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1707	1336	386	3476	1759	104	1774	2376	1063
Grp Volume(v), veh/h	79	315	0	22	0	290	697	0	179	34	124	124
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1722	1738	0	1863	1774	1770	1670
Q Serve(g_s), s	2.2	7.4	0.0	0.6	0.0	7.8	10.0	0.0	3.6	1.0	3.2	3.4
Cycle Q Clear(g_c), s	2.2	7.4	0.0	0.6	0.0	7.8	10.0	0.0	3.6	1.0	3.2	3.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.06	1.00		0.64
Lane Grp Cap(c), veh/h	102	508	432	36	0	407	691	0	592	53	264	249
V/C Ratio(X)	0.77	0.62	0.00	0.61	0.00	0.71	1.01	0.00	0.30	0.64	0.47	0.50
Avail Cap(c_a), veh/h	706	1112	945	679	0	1028	691	0	1112	529	1056	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	16.0	0.0	24.4	0.0	17.6	20.1	0.0	12.9	24.1	19.6	19.7
Incr Delay (d2), s/veh	11.5	1.5	0.0	6.1	0.0	2.8	36.2	0.0	0.6	4.6	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.0	0.0	0.4	0.0	3.9	8.2	0.0	1.9	0.5	1.7	1.7
LnGrp Delay(d),s/veh	34.9	17.5	0.0	30.5	0.0	20.4	56.4	0.0	13.5	28.7	21.1	21.5
LnGrp LOS	C	B		C		C	F		B	C	C	C
Approach Vol, veh/h		394			312			876			282	
Approach Delay, s/veh		21.0			21.2			47.6			22.2	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	12.0	7.4	16.4	6.0	20.5	5.6	18.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	5.4	4.2	9.8	3.0	5.6	2.6	9.4					
Green Ext Time (p_c), s	0.0	1.6	0.1	2.1	0.0	1.8	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			33.7									
HCM 2010 LOS			C									

Intersection						
Intersection Delay, s/veh	14.6					
Intersection LOS	B					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	70	240	50	20	270	50
Future Vol, veh/h	70	240	50	20	270	50
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	91	312	65	26	351	65
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	13.9	9.4	16.5
HCM LOS	B	A	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	23%	84%
Vol Thru, %	71%	0%	16%
Vol Right, %	29%	77%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	70	310	320
LT Vol	0	70	270
Through Vol	50	0	50
RT Vol	20	240	0
Lane Flow Rate	91	403	416
Geometry Grp	1	1	1
Degree of Util (X)	0.138	0.554	0.614
Departure Headway (Hd)	5.484	4.955	5.316
Convergence, Y/N	Yes	Yes	Yes
Cap	653	733	682
Service Time	3.526	2.955	3.345
HCM Lane V/C Ratio	0.139	0.55	0.61
HCM Control Delay	9.4	13.9	16.5
HCM Lane LOS	A	B	C
HCM 95th-tile Q	0.5	3.4	4.2

Intersection						
Int Delay, s/veh	1.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	30	20	280	30	30
Future Vol, veh/h	260	30	20	280	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	333	38	26	359	38	38

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	371	0
Stage 1	-	-	-	352
Stage 2	-	-	-	411
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-
Pot Cap-1 Maneuver	-	-	1177	-
Stage 1	-	-	-	716
Stage 2	-	-	-	674
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1177	-
Mov Cap-2 Maneuver	-	-	-	365
Stage 1	-	-	-	696
Stage 2	-	-	-	674

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	479	-	-	1177	-
HCM Lane V/C Ratio	0.161	-	-	0.022	-
HCM Control Delay (s)	13.9	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	250	30	10	220	10	50	70	20	10	50	30
Future Vol, veh/h	10	250	30	10	220	10	50	70	20	10	50	30
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	13	316	38	13	278	13	63	89	25	13	63	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.6	13	12.1	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	3%	4%	11%
Vol Thru, %	50%	86%	92%	56%
Vol Right, %	14%	10%	4%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	290	240	90
LT Vol	50	10	10	10
Through Vol	70	250	220	50
RT Vol	20	30	10	30
Lane Flow Rate	177	367	304	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.308	0.544	0.458	0.188
Departure Headway (Hd)	6.247	5.336	5.432	5.942
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	574	675	662	600
Service Time	4.308	3.386	3.485	4.01
HCM Lane V/C Ratio	0.308	0.544	0.459	0.19
HCM Control Delay	12.1	14.6	13	10.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	3.3	2.4	0.7

Intersection												
Int Delay, s/veh	18.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	110	90	10	100	20	50	100	20	10	170	80
Future Vol, veh/h	80	110	90	10	100	20	50	100	20	10	170	80
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	98	134	110	12	122	24	61	122	24	12	207	98

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	609	549	256	659	586	135	305	0	0	147	0	0
Stage 1	280	280	-	257	257	-	-	-	-	-	-	-
Stage 2	329	269	-	402	329	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	393	430	759	380	425	919	1212	-	-	1387	-	-
Stage 1	705	661	-	752	699	-	-	-	-	-	-	-
Stage 2	663	669	-	629	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	278	402	759	230	397	918	1212	-	-	1386	-	-
Mov Cap-2 Maneuver	278	402	-	230	397	-	-	-	-	-	-	-
Stage 1	666	654	-	710	660	-	-	-	-	-	-	-
Stage 2	497	632	-	423	643	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	44.1		19.2		2.4		0.3	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1212	-	-	412	410	1386	-
HCM Lane V/C Ratio	0.05	-	-	0.829	0.387	0.009	-
HCM Control Delay (s)	8.1	0	-	44.1	19.2	7.6	0
HCM Lane LOS	A	A	-	E	C	A	A
HCM 95th %tile Q(veh)	0.2	-	-	7.7	1.8	0	-

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	130	10	10	230	420	130
Future Vol, veh/h	130	10	10	230	420	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	146	11	11	258	472	146
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	825	545	618	0	0
Stage 1	545	-	-	-	-
Stage 2	280	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-
Pot Cap-1 Maneuver	328	518	962	-	-
Stage 1	560	-	-	-	-
Stage 2	743	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	324	518	962	-	-
Mov Cap-2 Maneuver	324	-	-	-	-
Stage 1	553	-	-	-	-
Stage 2	743	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.1	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	962	-	333	-	-
HCM Lane V/C Ratio	0.012	-	0.472	-	-
HCM Control Delay (s)	8.8	0	25.1	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	2.4	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	420	40	260	50	460	200	230	710	50
Future Volume (veh/h)	30	100	80	420	40	260	50	460	200	230	710	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	483	46	0	57	529	0	264	816	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	60	195	96	521	1226	549	87	646	289	307	1082	484
Arrive On Green	0.03	0.09	0.09	0.29	0.35	0.00	0.05	0.18	0.00	0.17	0.31	0.00
Sat Flow, veh/h	1723	2232	1098	1774	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	87	88	483	46	0	57	529	0	264	816	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1611	1774	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.3	3.3	3.6	18.0	0.6	0.0	2.1	9.7	0.0	9.8	14.2	0.0
Cycle Q Clear(g_c), s	1.3	3.3	3.6	18.0	0.6	0.0	2.1	9.7	0.0	9.8	14.2	0.0
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	150	141	521	1226	549	87	646	289	307	1082	484
V/C Ratio(X)	0.57	0.58	0.62	0.93	0.04	0.00	0.66	0.82	0.00	0.86	0.75	0.00
Avail Cap(c_a), veh/h	266	783	734	535	2133	954	145	1314	588	404	1821	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.3	29.8	30.0	23.3	14.7	0.0	31.8	26.8	0.0	27.3	21.3	0.0
Incr Delay (d2), s/veh	3.1	1.3	1.7	21.7	0.0	0.0	3.1	1.0	0.0	11.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.6	1.7	11.9	0.3	0.0	1.1	4.9	0.0	5.7	7.0	0.0
LnGrp Delay(d),s/veh	35.4	31.1	31.6	45.0	14.7	0.0	34.9	27.8	0.0	38.3	21.7	0.0
LnGrp LOS	D	C	C	D	B		C	C		D	C	
Approach Vol, veh/h		209			529			586			1080	
Approach Delay, s/veh		32.0			42.3			28.5			25.8	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	25.3	6.9	28.1	16.3	16.8	24.5	10.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	4.1	16.2	3.3	2.6	11.8	11.7	20.0	5.6				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.1	0.0	0.6	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	20	420	30	50	610	10	20	30	30	10	60	70
Future Volume (veh/h)	20	420	30	50	610	10	20	30	30	10	60	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1900	1900	1863	1900	1900	1827	1900
Adj Flow Rate, veh/h	23	477	34	57	693	11	23	34	34	11	68	80
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	224	1029	74	264	1070	17	295	140	119	216	143	159
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	61	3042	218	143	3163	50	309	731	620	77	743	830
Grp Volume(v), veh/h	279	0	255	393	0	368	91	0	0	159	0	0
Grp Sat Flow(s),veh/h/ln	1681	0	1640	1686	0	1670	1661	0	0	1650	0	0
Q Serve(g_s), s	0.1	0.0	2.3	1.2	0.0	3.6	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	2.3	3.6	0.0	3.6	0.9	0.0	0.0	1.6	0.0	0.0
Prop In Lane	0.08		0.13	0.14		0.03	0.25		0.37	0.07		0.50
Lane Grp Cap(c), veh/h	772	0	555	786	0	565	554	0	0	518	0	0
V/C Ratio(X)	0.36	0.00	0.46	0.50	0.00	0.65	0.16	0.00	0.00	0.31	0.00	0.00
Avail Cap(c_a), veh/h	4539	0	4322	4438	0	4401	2737	0	0	2808	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.9	0.0	5.0	5.4	0.0	5.4	6.6	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.2	0.0	0.5	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.0	1.8	0.0	1.7	0.4	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	5.0	0.0	5.2	5.5	0.0	5.9	6.6	0.0	0.0	7.0	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		534			761			91			159	
Approach Delay, s/veh		5.1			5.7			6.6			7.0	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.2		11.0		8.2		11.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.9		5.6		3.6		5.6				
Green Ext Time (p_c), s		0.1		0.5		0.2		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↔↑			↔	↔		↔	
Traffic Volume (veh/h)	10	370	80	110	610	10	40	10	50	10	30	10
Future Volume (veh/h)	10	370	80	110	610	10	40	10	50	10	30	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	12	440	95	131	726	12	48	12	60	12	36	12
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	195	1105	235	350	1112	19	489	66	249	254	176	54
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	26	2764	588	297	2782	46	1081	420	1583	263	1122	346
Grp Volume(v), veh/h	292	0	255	433	0	436	60	0	60	60	0	0
Grp Sat Flow(s),veh/h/ln	1803	0	1575	1439	0	1687	1502	0	1583	1731	0	0
Q Serve(g_s), s	0.0	0.0	2.4	2.7	0.0	4.2	0.0	0.0	0.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	2.4	5.1	0.0	4.2	0.6	0.0	0.7	0.6	0.0	0.0
Prop In Lane	0.04		0.37	0.30		0.03	0.80		1.00	0.20		0.20
Lane Grp Cap(c), veh/h	905	0	630	806	0	674	555	0	249	485	0	0
V/C Ratio(X)	0.32	0.00	0.40	0.54	0.00	0.65	0.11	0.00	0.24	0.12	0.00	0.00
Avail Cap(c_a), veh/h	4944	0	4304	4030	0	4610	2126	0	1988	2353	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.3	0.0	4.4	5.0	0.0	4.9	7.5	0.0	7.5	7.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.2	0.0	0.4	0.0	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.0	2.0	0.0	2.0	0.3	0.0	0.3	0.3	0.0	0.0
LnGrp Delay(d),s/veh	4.4	0.0	4.5	5.2	0.0	5.3	7.5	0.0	7.7	7.5	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		547			869			120			60	
Approach Delay, s/veh		4.5			5.3			7.6			7.5	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.7		12.6		7.7		12.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5		55.5		25.5		55.5				
Max Q Clear Time (g_c+I1), s		2.7		4.4		2.6		7.1				
Green Ext Time (p_c), s		0.0		0.5		0.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				5.3								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

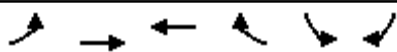
Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	90	340	10	30	610	10	10	10	10	10	10	120
Future Volume (veh/h)	90	340	10	30	610	10	10	10	10	10	10	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1429	1429	1900	1863	1900
Adj Flow Rate, veh/h	101	382	11	34	685	11	11	11	0	11	11	135
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	2	2	2	33	33	33	2	2	2
Cap, veh/h	354	846	26	237	1163	19	364	144	209	220	24	236
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	240	2430	74	82	3341	53	445	837	1214	83	140	1367
Grp Volume(v), veh/h	247	0	247	382	0	348	22	0	0	157	0	0
Grp Sat Flow(s),veh/h/ln1078	0	1666	1790	0	1686	1281	0	1214	1590	0	0	0
Q Serve(g_s), s	0.7	0.0	2.1	0.1	0.0	3.2	0.0	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	2.1	3.2	0.0	3.2	0.2	0.0	0.0	1.7	0.0	0.0
Prop In Lane	0.41		0.04	0.09		0.03	0.50		1.00	0.07		0.86
Lane Grp Cap(c), veh/h	646	0	580	832	0	587	509	0	209	479	0	0
V/C Ratio(X)	0.38	0.00	0.43	0.46	0.00	0.59	0.04	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	3326	0	4482	4877	0	4537	2163	0	1974	2778	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	0.0	4.7	5.0	0.0	5.0	6.5	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.1	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln1.1	0.0	1.0	1.6	0.0	1.5	0.1	0.0	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	4.9	0.0	4.9	5.2	0.0	5.4	6.5	0.0	0.0	7.3	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		494			730			22			157	
Approach Delay, s/veh		4.9			5.3			6.5			7.3	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.7		11.0		7.7		11.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.2		5.8		3.7		5.2				
Green Ext Time (p_c), s		0.0		0.7		0.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				5.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative, AM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	130	230	420	10	10	230		
Future Volume (veh/h)	130	230	420	10	10	230		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1759	1900		
Adj Flow Rate, veh/h	151	267	488	12	12	267		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	3	3	0	0	0	0		
Cap, veh/h	462	700	1203	30	14	318		
Arrive On Green	0.33	0.33	0.33	0.33	0.22	0.22		
Sat Flow, veh/h	493	2178	3696	88	64	1433		
Grp Volume(v), veh/h	225	193	244	256	280	0		
Grp Sat Flow(s),veh/h/ln	993	1595	1805	1884	1503	0		
Q Serve(g_s), s	2.1	1.9	2.1	2.1	3.6	0.0		
Cycle Q Clear(g_c), s	4.2	1.9	2.1	2.1	3.6	0.0		
Prop In Lane	0.67			0.05	0.04	0.95		
Lane Grp Cap(c), veh/h	629	533	603	630	334	0		
V/C Ratio(X)	0.36	0.36	0.41	0.41	0.84	0.00		
Avail Cap(c_a), veh/h	3194	4365	4941	5158	1890	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.8	5.1	5.2	5.2	7.5	0.0		
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.2	2.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.1	0.8	1.0	1.1	1.7	0.0		
LnGrp Delay(d),s/veh	5.9	5.3	5.4	5.4	9.7	0.0		
LnGrp LOS	A	A	A	A	A			
Approach Vol, veh/h		418	500		280			
Approach Delay, s/veh		5.6	5.4		9.7			
Approach LOS		A	A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				11.3		9.0		11.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				6.2		5.6		4.1
Green Ext Time (p_c), s				0.6		0.1		0.4
Intersection Summary								
HCM 2010 Ctrl Delay				6.5				
HCM 2010 LOS				A				
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	230	10	10	10	10	10	10	10	10	10	10	420
Future Volume (veh/h)	230	10	10	10	10	10	10	10	10	10	10	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	271	12	12	12	12	12	12	12	12	12	12	494
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	627	198	198	401	311	302	329	302	220	152	24	601
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1340	779	779	693	1225	1188	356	779	567	14	61	1547
Grp Volume(v), veh/h	271	0	24	21	0	15	36	0	0	518	0	0
Grp Sat Flow(s),veh/h/ln	1340	0	1558	1621	0	1485	1702	0	0	1622	0	0
Q Serve(g_s), s	4.6	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	0.3	0.2	0.0	0.2	0.3	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		0.50	0.57		0.80	0.33		0.33	0.02		0.95
Lane Grp Cap(c), veh/h	627	0	395	637	0	377	852	0	0	776	0	0
V/C Ratio(X)	0.43	0.00	0.06	0.03	0.00	0.04	0.04	0.00	0.00	0.67	0.00	0.00
Avail Cap(c_a), veh/h	2226	0	2199	2435	0	2097	2749	0	0	3072	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.9	0.0	7.1	7.1	0.0	7.1	4.8	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	3.2	0.0	0.0
LnGrp Delay(d),s/veh	9.1	0.0	7.1	7.1	0.0	7.1	4.8	0.0	0.0	7.3	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		295			36			36			518	
Approach Delay, s/veh		8.9			7.1			4.8			7.3	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.3		10.9		14.3		10.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		45.5		35.5		45.5		35.5				
Max Q Clear Time (g_c+I1), s		2.3		6.8		9.2		2.2				
Green Ext Time (p_c), s		0.0		0.3		0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.7								
HCM 2010 LOS				A								

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	
Traffic Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Future Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	11	11	11	11	11	11	11	11
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.5	7.5	7.1	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	67%	0%	67%	0%	33%
Vol Thru, %	33%	33%	33%	33%	33%	33%
Vol Right, %	33%	0%	67%	0%	67%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	15	15	15	15	30
LT Vol	10	10	0	10	0	10
Through Vol	10	5	5	5	5	10
RT Vol	10	0	10	0	10	10
Lane Flow Rate	33	16	16	16	16	33
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.036	0.023	0.019	0.023	0.019	0.036
Departure Headway (Hd)	3.931	4.998	4.197	4.998	4.197	3.931
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	903	715	851	715	851	903
Service Time	1.99	2.734	1.933	2.734	1.933	1.99
HCM Lane V/C Ratio	0.037	0.022	0.019	0.022	0.019	0.037
HCM Control Delay	7.1	7.9	7	7.9	7	7.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.1	0.1	0.1

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	90	80	150	150	70	40	200	460	110	80	810	250
Future Volume (veh/h)	90	80	150	150	70	40	200	460	110	80	810	250
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	115	103	163	192	90	47	256	590	114	103	1038	252
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	212	188	248	321	143	64	206	714	138	351	1141	505
Arrive On Green	0.38	0.37	0.37	0.38	0.37	0.37	0.12	0.24	0.24	0.20	0.32	0.32
Sat Flow, veh/h	392	509	674	647	388	173	1792	2982	575	1774	3539	1566
Grp Volume(v), veh/h	381	0	0	329	0	0	256	353	351	103	1038	252
Grp Sat Flow(s),veh/h/ln	1575	0	0	1208	0	0	1792	1787	1770	1774	1770	1566
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	8.0	13.0	13.1	3.4	19.6	9.0
Cycle Q Clear(g_c), s	13.4	0.0	0.0	17.2	0.0	0.0	8.0	13.0	13.1	3.4	19.6	9.0
Prop In Lane	0.30		0.43	0.58		0.14	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	659	0	0	536	0	0	206	428	423	351	1141	505
V/C Ratio(X)	0.58	0.00	0.00	0.61	0.00	0.00	1.24	0.83	0.83	0.29	0.91	0.50
Avail Cap(c_a), veh/h	820	0	0	673	0	0	206	655	649	351	1298	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	0.0	19.1	0.0	0.0	30.8	25.1	25.1	23.7	22.6	19.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.4	0.0	0.0	143.0	2.9	3.1	0.2	8.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	5.5	0.0	0.0	12.1	6.7	6.7	1.7	10.8	4.0
LnGrp Delay(d),s/veh	18.2	0.0	0.0	19.5	0.0	0.0	173.8	28.0	28.2	23.9	30.9	19.3
LnGrp LOS	B			B			F	C	C	C	C	B
Approach Vol, veh/h		381			329			960			1393	
Approach Delay, s/veh		18.2			19.5			66.9			28.3	
Approach LOS		B			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.5	26.9		30.1	18.3	21.1		30.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.0	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+110), s	11.0	21.6		19.2	5.4	15.1		15.4				
Green Ext Time (p_c), s	0.0	0.9		0.5	0.0	0.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				38.2								
HCM 2010 LOS				D								

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	90	430	230	390	960	80
Future Vol, veh/h	90	430	230	390	960	80
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	100	478	256	433	1067	89
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	118.8	25.8	163.6
HCM LOS	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	195	195	90	430	480	480	80
LT Vol	230	0	0	90	0	0	0	0
Through Vol	0	195	195	0	0	480	480	0
RT Vol	0	0	0	0	430	0	0	80
Lane Flow Rate	256	217	217	100	478	533	533	89
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.684	0.55	0.447	0.283	1.192	1.291	1.291	0.155
Departure Headway (Hd)	10.7	10.176	8.377	10.969	9.751	9.397	9.397	6.847
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	358	433	330	377	389	389	527
Service Time	8.4	7.876	6.077	8.669	7.451	7.097	7.097	4.547
HCM Lane V/C Ratio	0.753	0.606	0.501	0.303	1.268	1.37	1.37	0.169
HCM Control Delay	33.7	24.6	17.7	17.9	139.9	176.3	176.3	10.8
HCM Lane LOS	D	C	C	C	F	F	F	B
HCM 95th-tile Q	4.8	3.2	2.3	1.1	18	22.3	22.3	0.5

HCM 2010 Signalized Intersection Summary
 48: Fremont Boulevard/Hwy 1 SB Off-Ramp/ NB On-Ramp & Monterey Road

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	150	120	220	30	230	670	140	60	990	120
Future Volume (veh/h)	80	100	150	120	220	30	230	670	140	60	990	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	88	110	76	132	242	31	253	736	139	66	1088	65
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	202	212	172	133	244	31	425	1332	252	84	880	388
Arrive On Green	0.12	0.12	0.12	0.23	0.22	0.22	0.24	0.46	0.46	0.05	0.25	0.25
Sat Flow, veh/h	1757	1845	1494	594	1088	139	1740	2907	549	1740	3471	1529
Grp Volume(v), veh/h	88	110	76	405	0	0	253	439	436	66	1088	65
Grp Sat Flow(s),veh/h/ln	1757	1845	1494	1822	0	0	1740	1736	1721	1740	1736	1529
Q Serve(g_s), s	5.8	7.0	5.9	27.7	0.0	0.0	16.1	22.9	23.0	4.7	31.7	4.1
Cycle Q Clear(g_c), s	5.8	7.0	5.9	27.7	0.0	0.0	16.1	22.9	23.0	4.7	31.7	4.1
Prop In Lane	1.00		1.00	0.33		0.08	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	172	408	0	0	425	795	788	84	880	388
V/C Ratio(X)	0.44	0.52	0.44	0.99	0.00	0.00	0.60	0.55	0.55	0.78	1.24	0.17
Avail Cap(c_a), veh/h	436	457	371	408	0	0	425	795	788	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	52.1	51.6	48.2	0.0	0.0	41.8	24.6	24.6	58.8	46.7	36.4
Incr Delay (d2), s/veh	1.1	1.5	1.4	42.5	0.0	0.0	1.6	2.8	2.8	5.9	116.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.7	2.5	18.8	0.0	0.0	7.9	11.6	11.5	2.4	29.3	1.9
LnGrp Delay(d),s/veh	52.7	53.5	52.9	90.7	0.0	0.0	43.4	27.3	27.4	64.7	162.6	37.3
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		274			405			1128			1219	
Approach Delay, s/veh		53.1			90.7			30.9			150.7	
Approach LOS		D			F			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.2	62.6		19.1	35.8	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+10), s	15	25.0		9.0	18.1	33.7		29.7				
Green Ext Time (p_c), s	0.0	2.6		1.1	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			89.2									
HCM 2010 LOS			F									
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary

Cumulative, AM

49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗	↖		↗		↕	↗		↕	
Traffic Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Future Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	10	206	9	247	0	253	0	52	21	10	10	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	136	2942	1343	0	0	0	0	122	104	75	60	0
Arrive On Green	0.87	0.86	0.86	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	159	3430	1566				0	1845	1568	474	898	0
Grp Volume(v), veh/h	116	100	9		0.0		0	52	21	20	0	0
Grp Sat Flow(s),veh/h/ln	1837	1752	1566				0	1845	1568	1372	0	0
Q Serve(g_s), s	1.2	1.1	0.1				0.0	3.4	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.1				0.0	3.4	1.6	3.4	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1575	1503	1343				0	122	104	136	0	0
V/C Ratio(X)	0.07	0.07	0.01				0.00	0.43	0.20	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1575	1503	1343				0	148	125	158	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.3	1.3	1.3				0.0	56.1	55.2	55.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	0.9	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0				0.0	1.8	0.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.3	1.3	1.3				0.0	56.9	55.6	55.2	0.0	0.0
LnGrp LOS	A	A	A					E	E	E		
Approach Vol, veh/h		225						73			20	
Approach Delay, s/veh		1.3						56.5			55.2	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				12.5		112.5		12.5				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				5.4		3.2		5.4				
Green Ext Time (p_c), s				0.1		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									
HCM 2010 LOS			B									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	260	10	310	120	390	0	0	350	140
Future Volume (veh/h)	0	0	0	260	10	310	120	390	0	0	350	140
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				274	11	74	126	411	0	0	368	138
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				384	15	356	208	1022	0	0	456	171
Arrive On Green				0.25	0.23	0.23	0.12	0.55	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1676	67	1553	1774	1863	0	0	1268	475
Grp Volume(v), veh/h				285	0	74	126	411	0	0	0	506
Grp Sat Flow(s),veh/h/ln				1743	0	1553	1774	1863	0	0	0	1743
Q Serve(g_s), s				7.3	0.0	1.9	3.3	6.3	0.0	0.0	0.0	12.8
Cycle Q Clear(g_c), s				7.3	0.0	1.9	3.3	6.3	0.0	0.0	0.0	12.8
Prop In Lane				0.96		1.00	1.00		0.00	0.00		0.27
Lane Grp Cap(c), veh/h				400	0	356	208	1022	0	0	0	628
V/C Ratio(X)				0.71	0.00	0.21	0.61	0.40	0.00	0.00	0.00	0.81
Avail Cap(c_a), veh/h				1422	0	1267	941	1443	0	0	0	1351
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				17.0	0.0	15.3	20.6	6.4	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				2.4	0.0	0.3	1.1	0.3	0.0	0.0	0.0	2.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.7	0.0	0.8	1.7	3.3	0.0	0.0	0.0	6.5
LnGrp Delay(d),s/veh				19.4	0.0	15.6	21.6	6.7	0.0	0.0	0.0	16.7
LnGrp LOS				B		B	C	A				B
Approach Vol, veh/h					359			537			506	
Approach Delay, s/veh					18.6			10.2			16.7	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.2	23.7		16.1		32.9						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+15), s	15.3	14.8		9.3		8.3						
Green Ext Time (p_c), s	0.1	2.8		2.0		2.2						
Intersection Summary												
HCM 2010 Ctrl Delay				14.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp

Cumulative, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↖	↑	
Traffic Volume (veh/h)	120	10	110	0	0	0	0	380	660	230	370	0
Future Volume (veh/h)	120	10	110	0	0	0	0	380	660	230	370	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	130	11	19				0	413	388	250	402	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	189	16	183				0	648	551	327	1136	0
Arrive On Green	0.14	0.11	0.11				0.00	0.34	0.34	0.19	0.62	0.00
Sat Flow, veh/h	1658	140	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	141	0	19				0	413	388	250	402	0
Grp Sat Flow(s),veh/h/ln	1798	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	3.1	0.0	0.4				0.0	7.6	8.7	5.6	4.4	0.0
Cycle Q Clear(g_c), s	3.1	0.0	0.4				0.0	7.6	8.7	5.6	4.4	0.0
Prop In Lane	0.92		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	205	0	183				0	648	551	327	1136	0
V/C Ratio(X)	0.69	0.00	0.10				0.00	0.64	0.70	0.77	0.35	0.00
Avail Cap(c_a), veh/h	1741	0	1548				0	1685	1432	1011	1636	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	16.4				0.0	11.4	11.7	15.9	3.8	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.1				0.0	1.0	1.7	3.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.2				0.0	4.1	4.0	3.0	2.2	0.0
LnGrp Delay(d),s/veh	18.7	0.0	16.5				0.0	12.4	13.4	19.7	4.0	0.0
LnGrp LOS	B		B					B	B	B	A	
Approach Vol, veh/h		160						801			652	
Approach Delay, s/veh		18.4						12.9			10.0	
Approach LOS		B						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.7			11.5	20.2		9.6				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		6.4			7.6	10.7		5.1				
Green Ext Time (p_c), s		2.2			0.6	3.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			12.3									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	130	50	190	350	20	110
Future Vol, veh/h	130	50	190	350	20	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	141	54	207	380	22	120
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.4	12.9	9.7
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	110	130	50	190	350
LT Vol	20	0	0	0	190	0
Through Vol	0	0	130	0	0	350
RT Vol	0	110	0	50	0	0
Lane Flow Rate	22	120	141	54	207	380
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.041	0.186	0.217	0.073	0.322	0.541
Departure Headway (Hd)	6.806	5.595	5.539	4.833	5.618	5.115
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	636	643	734	636	700
Service Time	4.584	3.372	3.318	2.611	3.38	2.877
HCM Lane V/C Ratio	0.042	0.189	0.219	0.074	0.325	0.543
HCM Control Delay	9.9	9.7	9.9	8	11.1	13.8
HCM Lane LOS	A	A	A	A	B	B
HCM 95th-tile Q	0.1	0.7	0.8	0.2	1.4	3.3

Intersection				
Intersection Delay, s/veh	13.9			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	147	197	36	777
Demand Flow Rate, veh/h	151	207	36	785
Vehicles Circulating, veh/h	424	113	538	90
Vehicles Exiting, veh/h	451	461	37	230
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.3	5.7	6.0	17.5
Approach LOS	A	A	A	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	151	207	36	785
Cap Entry Lane, veh/h	739	1009	660	1033
Entry HV Adj Factor	0.970	0.951	1.000	0.990
Flow Entry, veh/h	147	197	36	777
Cap Entry, veh/h	718	960	660	1022
V/C Ratio	0.204	0.205	0.055	0.760
Control Delay, s/veh	7.3	5.7	6.0	17.5
LOS	A	A	A	C
95th %tile Queue, veh	1	1	0	8

Intersection			
Intersection Delay, s/veh 107.6			
Intersection LOS F			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	425	1276	437
Demand Flow Rate, veh/h	531	1289	450
Vehicles Circulating, veh/h	860	95	345
Vehicles Exiting, veh/h	524	700	1046
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	112.2	138.4	13.2
Approach LOS	F	F	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	531	1289	450
Cap Entry Lane, veh/h	478	1028	800
Entry HV Adj Factor	0.800	0.990	0.971
Flow Entry, veh/h	425	1276	437
Cap Entry, veh/h	383	1017	777
V/C Ratio	1.111	1.254	0.562
Control Delay, s/veh	112.2	138.4	13.2
LOS	F	F	B
95th %tile Queue, veh	16	43	4

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	270	30	80	130	30	110
Future Vol, veh/h	270	30	80	130	30	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	293	33	87	141	33	120
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	11.3	9.4	9.1
HCM LOS	B	A	A





















Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	110	270	30	80	130
LT Vol	30	0	0	0	80	0
Through Vol	0	0	270	0	0	130
RT Vol	0	110	0	30	0	0
Lane Flow Rate	33	120	293	33	87	141
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.058	0.171	0.421	0.04	0.139	0.206
Departure Headway (Hd)	6.371	5.162	5.169	4.465	5.745	5.242
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	560	691	696	798	622	682
Service Time	4.132	2.923	2.919	2.214	3.499	2.995
HCM Lane V/C Ratio	0.059	0.174	0.421	0.041	0.14	0.207
HCM Control Delay	9.5	9	11.7	7.4	9.4	9.4
HCM Lane LOS	A	A	B	A	A	A
HCM 95th-tile Q	0.2	0.6	2.1	0.1	0.5	0.8

Intersection				
Intersection Delay, s/veh	7.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	361	283	66	284
Demand Flow Rate, veh/h	372	285	66	289
Vehicles Circulating, veh/h	162	350	474	74
Vehicles Exiting, veh/h	201	190	60	561
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.2	8.9	6.1	6.2
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	372	285	66	289
Cap Entry Lane, veh/h	961	796	703	1049
Entry HV Adj Factor	0.970	0.992	1.000	0.981
Flow Entry, veh/h	361	283	66	284
Cap Entry, veh/h	932	790	703	1030
V/C Ratio	0.387	0.358	0.094	0.275
Control Delay, s/veh	8.2	8.9	6.1	6.2
LOS	A	A	A	A
95th %tile Queue, veh	2	2	0	1

Intersection			
Intersection Delay, s/veh 28.5			
Intersection LOS D			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	598	680	660
Demand Flow Rate, veh/h	609	694	660
Vehicles Circulating, veh/h	410	62	483
Vehicles Exiting, veh/h	346	1081	536
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	26.5	13.0	46.3
Approach LOS	D	B	E
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	609	694	660
Cap Entry Lane, veh/h	750	1062	697
Entry HV Adj Factor	0.981	0.980	1.000
Flow Entry, veh/h	598	680	660
Cap Entry, veh/h	736	1041	697
V/C Ratio	0.812	0.653	0.947
Control Delay, s/veh	26.5	13.0	46.3
LOS	D	B	E
95th %tile Queue, veh	9	5	14

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Cumulative, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	0	450	10	1320	340	400	830	0
Future Volume (veh/h)	0	0	0	190	0	450	10	1320	340	400	830	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				198	0	397	10	1375	271	417	865	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				501	0	444	22	1145	512	458	2015	0
Arrive On Green				0.28	0.00	0.28	0.01	0.32	0.32	0.26	0.56	0.00
Sat Flow, veh/h				1792	0	1585	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				198	0	397	10	1375	271	417	865	0
Grp Sat Flow(s),veh/h/ln				1792	0	1585	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.0	0.0
Cycle Q Clear(g_c), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.0	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				501	0	444	22	1145	512	458	2015	0
V/C Ratio(X)				0.39	0.00	0.89	0.46	1.20	0.53	0.91	0.43	0.00
Avail Cap(c_a), veh/h				574	0	508	574	1145	512	574	2015	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	32.4	45.9	31.8	26.0	33.8	11.8	0.0
Incr Delay (d2), s/veh				0.5	0.0	16.8	14.1	99.0	1.0	16.2	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	11.9	0.3	30.4	5.9	12.5	6.4	0.0
LnGrp Delay(d),s/veh				27.8	0.0	49.2	60.0	130.8	27.1	50.0	11.9	0.0
LnGrp LOS				C		D	E	F	C	D	B	
Approach Vol, veh/h					595			1656			1282	
Approach Delay, s/veh					42.1			113.4			24.3	
Approach LOS					D			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.6	57.8			27.5	35.0		31.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	15.0			23.1	32.0		24.5				
Green Ext Time (p_c), s	0.0	5.4			0.8	0.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				69.1								
HCM 2010 LOS				E								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
2: 2nd Avenue & Patton Parkway

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Future Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	54	65	98	87	87	76	261	98	87	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	163	196	137	201	201	119	356	134	128	405	101
Arrive On Green	0.05	0.21	0.21	0.08	0.23	0.23	0.07	0.28	0.28	0.07	0.28	0.28
Sat Flow, veh/h	1774	771	928	1774	856	856	1774	1292	485	1774	1441	359
Grp Volume(v), veh/h	54	0	119	98	0	174	76	0	359	87	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1699	1774	0	1712	1774	0	1777	1774	0	1799
Q Serve(g_s), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Cycle Q Clear(g_c), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Prop In Lane	1.00		0.55	1.00		0.50	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	96	0	359	137	0	402	119	0	490	128	0	505
V/C Ratio(X)	0.56	0.00	0.33	0.72	0.00	0.43	0.64	0.00	0.73	0.68	0.00	0.54
Avail Cap(c_a), veh/h	228	0	1290	228	0	1300	228	0	1349	228	0	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	15.6	21.1	0.0	15.2	21.3	0.0	15.4	21.2	0.0	14.2
Incr Delay (d2), s/veh	5.1	0.0	0.5	6.9	0.0	0.7	5.6	0.0	2.1	6.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.5	0.0	2.0	1.1	0.0	4.5	1.3	0.0	3.1
LnGrp Delay(d),s/veh	26.7	0.0	16.2	27.9	0.0	16.0	26.8	0.0	17.5	27.3	0.0	15.1
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		173			272			435			358	
Approach Delay, s/veh		19.5			20.3			19.1			18.1	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	17.4	7.6	14.4	7.1	17.6	6.5	15.5				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	35.5	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	10.6	10.6	4.5	4.8	4.0	8.0	3.4	6.0				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.7	0.0	1.7	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1260	0	0	0	0	0	580	10	0
Future Volume (veh/h)	0	0	0	1260	0	0	0	0	0	580	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1385	0	0				637	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1020	0	0				655	11	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1792	0	0				1745	30	0
Grp Volume(v), veh/h				1385	0	0				648	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1775	0	0
Q Serve(g_s), s				90.0	0.0	0.0				56.8	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				56.8	0.0	0.0
Prop In Lane				1.00		0.00				0.98		0.00
Lane Grp Cap(c), veh/h				1020	0	0				666	0	0
V/C Ratio(X)				1.36	0.00	0.00				0.97	0.00	0.00
Avail Cap(c_a), veh/h				1020	0	0				674	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				33.9	0.0	0.0				48.4	0.0	0.0
Incr Delay (d2), s/veh				167.6	0.0	0.0				27.8	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				91.7	0.0	0.0				33.0	0.0	0.0
LnGrp Delay(d),s/veh				201.5	0.0	0.0				76.2	0.0	0.0
LnGrp LOS				F						E		
Approach Vol, veh/h					1385						648	
Approach Delay, s/veh					201.5						76.2	
Approach LOS					F						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				63.7		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				58.8		92.0						
Green Ext Time (p_c), s				0.5		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				161.5								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↑	↗		↖	↗			
Traffic Vol, veh/h	10	570	0	0	1250	840	10	10	1570	0	0	0
Future Vol, veh/h	10	570	0	0	1250	840	10	10	1570	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	11	600	0	0	1316	884	11	11	1653	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1316	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	525	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	525	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	77.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	70	-	525	-	-
HCM Lane V/C Ratio	0.301	-	0.02	-	-
HCM Control Delay (s)	77.2	0	12	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1340	670	340	1140	140	800	110	490	90	90	150
Future Volume (veh/h)	140	1340	670	340	1140	140	800	110	490	90	90	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	1396	498	354	1188	146	833	115	276	94	94	125
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	183	1209	538	426	1148	141	792	502	423	133	202	177
Arrive On Green	0.10	0.34	0.34	0.12	0.36	0.36	0.23	0.26	0.26	0.07	0.11	0.11
Sat Flow, veh/h	1792	3574	1592	3476	3203	393	3510	1900	1602	1810	1805	1585
Grp Volume(v), veh/h	146	1396	498	354	661	673	833	115	276	94	94	125
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1809	1755	1900	1602	1810	1805	1585
Q Serve(g_s), s	7.1	30.0	26.7	8.8	31.8	31.8	20.0	4.2	13.6	4.5	4.3	6.7
Cycle Q Clear(g_c), s	7.1	30.0	26.7	8.8	31.8	31.8	20.0	4.2	13.6	4.5	4.3	6.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	1209	538	426	640	648	792	502	423	133	202	177
V/C Ratio(X)	0.80	1.15	0.92	0.83	1.03	1.04	1.05	0.23	0.65	0.71	0.47	0.70
Avail Cap(c_a), veh/h	303	1209	538	588	640	648	792	502	423	204	427	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	29.3	28.3	38.0	28.5	28.5	34.3	25.6	29.0	40.2	36.9	38.0
Incr Delay (d2), s/veh	3.0	79.4	21.6	5.2	44.2	45.6	46.6	0.1	2.8	2.6	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	27.9	15.0	4.5	23.3	23.9	14.7	2.2	6.3	2.3	2.2	3.0
LnGrp Delay(d),s/veh	41.9	108.7	49.9	43.3	72.6	74.0	81.0	25.7	31.8	42.7	37.5	39.9
LnGrp LOS	D	F	D	D	F	F	F	C	C	D	D	D
Approach Vol, veh/h		2040			1688			1224			313	
Approach Delay, s/veh		89.6			67.0			64.7			40.0	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	35.3	23.5	14.5	13.6	37.1	10.0	28.0				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	10.8	32.0	22.0	8.7	9.1	33.8	6.5	15.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			73.6									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1740	170	90	1240	20	220	10	150	10	10	50
Future Volume (veh/h)	50	1740	170	90	1240	20	220	10	150	10	10	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1776	165	92	1265	19	224	10	41	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	107	1718	157	118	1897	28	382	65	265	353	173	173
Arrive On Green	0.06	0.52	0.52	0.07	0.53	0.53	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3305	302	1792	3605	54	1412	326	1336	1373	872	872
Grp Volume(v), veh/h	51	946	995	92	627	657	224	0	51	10	0	20
Grp Sat Flow(s),veh/h/ln	1792	1787	1820	1792	1787	1872	1412	0	1662	1373	0	1745
Q Serve(g_s), s	1.7	32.5	32.5	3.2	16.0	16.0	9.6	0.0	1.6	0.4	0.0	0.6
Cycle Q Clear(g_c), s	1.7	32.5	32.5	3.2	16.0	16.0	10.1	0.0	1.6	2.0	0.0	0.6
Prop In Lane	1.00		0.17	1.00		0.03	1.00		0.80	1.00		0.50
Lane Grp Cap(c), veh/h	107	929	946	118	940	985	382	0	330	353	0	346
V/C Ratio(X)	0.48	1.02	1.05	0.78	0.67	0.67	0.59	0.00	0.15	0.03	0.00	0.06
Avail Cap(c_a), veh/h	330	929	946	330	940	985	723	0	731	684	0	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	15.0	15.0	28.7	10.8	10.8	24.4	0.0	20.7	21.5	0.0	20.3
Incr Delay (d2), s/veh	1.2	34.1	44.0	4.1	1.5	1.4	0.5	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	24.6	27.6	1.7	8.2	8.6	3.8	0.0	0.7	0.1	0.0	0.3
LnGrp Delay(d),s/veh	29.7	49.2	59.0	32.9	12.3	12.2	25.0	0.0	20.8	21.6	0.0	20.4
LnGrp LOS	C	F	F	C	B	B	C		C	C		C
Approach Vol, veh/h		1992			1376			275			30	
Approach Delay, s/veh		53.6			13.6			24.2			20.8	
Approach LOS		D			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	38.0		16.9	7.2	38.4		16.9				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	1.5	34.5		4.0	3.7	18.0		12.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				36.1								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 7: 4th Avenue & Imjin Parkway

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1900	10	10	1320	10	20	10	10	10	10	10
Future Volume (veh/h)	10	1900	10	10	1320	10	20	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1959	10	10	1361	10	21	10	8	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	14	2122	11	14	2116	16	194	23	18	157	31	31
Arrive On Green	0.01	0.58	0.58	0.01	0.58	0.58	0.07	0.05	0.05	0.07	0.05	0.05
Sat Flow, veh/h	1792	3646	19	1792	3636	27	874	416	333	566	566	566
Grp Volume(v), veh/h	10	959	1010	10	669	702	39	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1878	1792	1787	1876	1623	0	0	1698	0	0
Q Serve(g_s), s	0.2	18.4	18.5	0.2	9.5	9.5	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	18.4	18.5	0.2	9.5	9.5	0.8	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.01	0.54		0.21	0.33		0.33
Lane Grp Cap(c), veh/h	14	1040	1093	14	1040	1092	256	0	0	241	0	0
V/C Ratio(X)	0.71	0.92	0.92	0.71	0.64	0.64	0.15	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	543	1530	1608	543	1530	1606	1298	0	0	1327	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.8	7.2	7.2	18.8	5.3	5.3	17.2	0.0	0.0	17.2	0.0	0.0
Incr Delay (d2), s/veh	21.0	5.6	5.4	21.0	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	10.4	10.9	0.2	4.5	4.8	0.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	39.8	12.7	12.6	39.8	5.5	5.5	17.3	0.0	0.0	17.2	0.0	0.0
LnGrp LOS	D	B	B	D	A	A	B			B		
Approach Vol, veh/h		1979			1381			39			30	
Approach Delay, s/veh		12.8			5.8			17.3			17.2	
Approach LOS		B			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	27.6		6.6	3.8	27.6		6.6				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	12.2	20.5		2.6	2.2	11.5		2.8				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	1.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1570	10	10	1080	90	20	40	10	50	30	230
Future Volume (veh/h)	280	1570	10	10	1080	90	20	40	10	50	30	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	289	1619	10	10	1113	87	21	41	7	52	31	68
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	350	2047	13	14	1259	98	152	161	24	167	55	93
Arrive On Green	0.20	0.56	0.56	0.01	0.37	0.37	0.14	0.13	0.13	0.14	0.13	0.13
Sat Flow, veh/h	1792	3642	22	1792	3358	262	364	1238	181	454	423	718
Grp Volume(v), veh/h	289	794	835	10	592	608	69	0	0	151	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1877	1792	1787	1834	1783	0	0	1595	0	0
Q Serve(g_s), s	6.9	15.6	15.7	0.2	13.8	13.9	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	6.9	15.6	15.7	0.2	13.8	13.9	1.5	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.14	0.30		0.10	0.34		0.45
Lane Grp Cap(c), veh/h	350	1005	1055	14	670	687	361	0	0	337	0	0
V/C Ratio(X)	0.83	0.79	0.79	0.71	0.88	0.88	0.19	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	601	1200	1260	601	1200	1231	884	0	0	827	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.3	7.7	7.7	22.1	13.1	13.1	17.5	0.0	0.0	18.5	0.0	0.0
Incr Delay (d2), s/veh	1.9	2.5	2.4	21.7	1.6	1.6	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	8.2	8.6	0.2	7.0	7.2	0.8	0.0	0.0	1.8	0.0	0.0
LnGrp Delay(d),s/veh	19.2	10.2	10.1	43.8	14.6	14.6	17.6	0.0	0.0	18.8	0.0	0.0
LnGrp LOS	B	B	B	D	B	B	B			B		
Approach Vol, veh/h		1918			1210			69			151	
Approach Delay, s/veh		11.5			14.9			17.6			18.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.9	30.4		10.4	12.2	22.0		10.4				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	15.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1/2), s	12.2	17.7		5.9	8.9	15.9		3.5				
Green Ext Time (p_c), s	0.0	1.2		0.1	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				13.2								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	10	10	20	380	240	10
Future Vol, veh/h	10	10	20	380	240	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	413	261	11












Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	724	267	272	0	0
Stage 1	267	-	-	-	-
Stage 2	457	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	393	772	1291	-	-
Stage 1	778	-	-	-	-
Stage 2	638	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	386	772	1291	-	-
Mov Cap-2 Maneuver	386	-	-	-	-
Stage 1	765	-	-	-	-
Stage 2	638	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1291	-	515	-	-
HCM Lane V/C Ratio	0.017	-	0.042	-	-
HCM Control Delay (s)	7.8	-	12.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative, PM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	1540	80	170	960	180	430		
Future Volume (veh/h)	1540	80	170	960	180	430		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1621	81	179	1011	189	387		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1689	84	222	2494	270	483		
Arrive On Green	0.49	0.49	0.12	0.70	0.15	0.15		
Sat Flow, veh/h	3560	172	1792	3668	1792	3198		
Grp Volume(v), veh/h	832	870	179	1011	189	387		
Grp Sat Flow(s),veh/h/ln	1787	1851	1792	1787	1792	1599		
Q Serve(g_s), s	27.5	27.9	6.0	7.3	6.2	7.2		
Cycle Q Clear(g_c), s	27.5	27.9	6.0	7.3	6.2	7.2		
Prop In Lane		0.09	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	871	902	222	2494	270	483		
V/C Ratio(X)	0.96	0.96	0.80	0.41	0.70	0.80		
Avail Cap(c_a), veh/h	872	903	583	2494	641	1144		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.1	15.2	26.2	3.9	24.8	25.2		
Incr Delay (d2), s/veh	20.2	21.5	2.6	0.0	1.2	1.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	18.3	19.4	3.1	3.5	3.1	3.3		
LnGrp Delay(d),s/veh	35.3	36.7	28.8	4.0	26.0	26.4		
LnGrp LOS	D	D	C	A	C	C		
Approach Vol, veh/h	1702			1190	576			
Approach Delay, s/veh	36.0			7.7	26.3			
Approach LOS	D			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.9	35.3				48.2		13.3
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	8.0	29.9				9.3		9.2
Green Ext Time (p_c), s	0.0	0.0				1.1		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			24.7					
HCM 2010 LOS			C					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↗		↖ ↗	↗		↖	↗	↗	↖	↗	↗
Traffic Volume (veh/h)	130	1570	180	170	920	120	160	30	210	60	20	120
Future Volume (veh/h)	130	1570	180	170	920	120	160	30	210	60	20	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	140	1688	145	183	989	109	172	32	0	65	22	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	278	1932	164	270	1852	204	312	302	256	302	299	254
Arrive On Green	0.08	0.58	0.56	0.08	0.57	0.55	0.16	0.16	0.00	0.16	0.16	0.00
Sat Flow, veh/h	3476	3335	283	3476	3247	358	1395	1881	1599	1369	1863	1583
Grp Volume(v), veh/h	140	896	937	183	544	554	172	32	0	65	22	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1831	1738	1787	1818	1395	1881	1599	1369	1863	1583
Q Serve(g_s), s	2.7	29.6	31.0	3.6	13.2	13.3	8.4	1.0	0.0	3.0	0.7	0.0
Cycle Q Clear(g_c), s	2.7	29.6	31.0	3.6	13.2	13.3	9.1	1.0	0.0	4.0	0.7	0.0
Prop In Lane	1.00		0.15	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	278	1036	1061	270	1019	1037	312	302	256	302	299	254
V/C Ratio(X)	0.50	0.86	0.88	0.68	0.53	0.53	0.55	0.11	0.00	0.22	0.07	0.00
Avail Cap(c_a), veh/h	991	1274	1305	991	1274	1296	685	804	684	668	797	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.9	12.4	12.8	31.5	9.3	9.4	28.9	25.2	0.0	26.9	25.0	0.0
Incr Delay (d2), s/veh	0.5	4.7	5.6	1.1	0.2	0.2	0.6	0.1	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	15.8	17.0	1.8	6.4	6.7	3.2	0.5	0.0	1.1	0.4	0.0
LnGrp Delay(d),s/veh	31.5	17.1	18.4	32.6	9.5	9.6	29.5	25.2	0.0	27.0	25.1	0.0
LnGrp LOS	C	B	B	C	A	A	C	C		C	C	
Approach Vol, veh/h		1973			1281			204			87	
Approach Delay, s/veh		18.7			12.8			28.8			26.5	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	46.0		15.2	9.6	45.3		15.2				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+15), s	15.6	33.0		6.0	4.7	15.3		11.1				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	120	20	1670	10	40	30	970	640	10	20	950	200
Future Volume (veh/h)	120	20	1670	10	40	30	970	640	10	20	950	200
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	135	22	1475	11	45	12	1090	719	10	22	1067	91
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	799	433	1292	75	79	66	799	2052	918	55	1287	576
Arrive On Green	0.23	0.23	0.23	0.04	0.04	0.04	0.23	0.57	0.57	0.02	0.36	0.36
Sat Flow, veh/h	3476	1881	2802	1740	1827	1531	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	135	22	1475	11	45	12	1090	719	10	22	1067	91
Grp Sat Flow(s),veh/h/ln	1738	1881	1401	1740	1827	1531	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	4.7	1.4	35.0	0.9	3.7	1.1	35.0	16.3	0.4	1.0	41.4	5.9
Cycle Q Clear(g_c), s	4.7	1.4	35.0	0.9	3.7	1.1	35.0	16.3	0.4	1.0	41.4	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	799	433	1292	75	79	66	799	2052	918	55	1287	576
V/C Ratio(X)	0.17	0.05	1.14	0.15	0.57	0.18	1.36	0.35	0.01	0.40	0.83	0.16
Avail Cap(c_a), veh/h	799	433	1292	354	372	312	799	2052	918	457	1409	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	45.6	41.1	70.1	71.4	70.2	58.6	17.3	13.9	74.2	44.4	33.0
Incr Delay (d2), s/veh	0.0	0.0	73.6	0.3	2.4	0.5	171.6	0.3	0.0	1.7	5.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	40.3	0.5	1.9	0.5	35.8	8.1	0.2	0.5	21.4	2.7
LnGrp Delay(d),s/veh	47.0	45.7	114.7	70.4	73.8	70.7	230.2	17.6	13.9	75.9	49.5	33.4
LnGrp LOS	D	D	F	E	E	E	F	B	B	E	D	C
Approach Vol, veh/h		1632			68			1819			1180	
Approach Delay, s/veh		108.2			72.7			145.0			48.8	
Approach LOS		F			E			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	61.0		11.6	6.5	93.6		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	43.4		5.7	3.0	18.3		37.0				
Green Ext Time (p_c), s	0.0	11.4		0.2	0.0	10.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			107.0									
HCM 2010 LOS			F									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	320	220	440	1300	270		
Future Volume (veh/h)	110	320	220	440	1300	270		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	134	235	268	537	1585	320		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	260	502	296	2649	1624	318		
Arrive On Green	0.15	0.15	0.17	0.76	0.54	0.54		
Sat Flow, veh/h	1792	1599	1757	3597	3076	584		
Grp Volume(v), veh/h	134	235	268	537	930	975		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1778		
Q Serve(g_s), s	7.6	13.0	16.5	4.9	54.5	60.0		
Cycle Q Clear(g_c), s	7.6	13.0	16.5	4.9	54.5	60.0		
Prop In Lane	1.00	1.00	1.00			0.33		
Lane Grp Cap(c), veh/h	260	502	296	2649	973	969		
V/C Ratio(X)	0.51	0.47	0.91	0.20	0.96	1.01		
Avail Cap(c_a), veh/h	439	661	319	2649	973	969		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	43.5	30.4	44.9	3.9	23.8	25.1		
Incr Delay (d2), s/veh	1.6	0.7	25.7	0.1	19.2	30.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.9	5.8	10.2	2.3	31.8	37.5		
LnGrp Delay(d),s/veh	45.1	31.1	70.7	3.9	43.0	55.5		
LnGrp LOS	D	C	E	A	D	F		
Approach Vol, veh/h	369			805	1905			
Approach Delay, s/veh	36.2			26.2	49.4			
Approach LOS	D			C	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	33.2	66.4				89.6		20.5
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+11), s	11.5	62.0				6.9		15.0
Green Ext Time (p_c), s	0.1	0.0				6.5		1.0
Intersection Summary								
HCM 2010 Ctrl Delay			41.8					
HCM 2010 LOS			D					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	10	10	30	40	10	20	20	640	50	40	540	10
Future Volume (veh/h)	10	10	30	40	10	20	20	640	50	40	540	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	11	23	44	11	3	22	703	51	44	593	-1
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	4	4	4
Cap, veh/h	273	207	306	379	78	15	49	1254	91	87	1369	0
Arrive On Green	0.22	0.19	0.19	0.22	0.19	0.19	0.03	0.37	0.37	0.05	0.39	0.00
Sat Flow, veh/h	616	1074	1591	1029	404	78	1792	3371	244	1740	3563	0
Grp Volume(v), veh/h	22	0	23	58	0	0	22	372	382	44	592	0
Grp Sat Flow(s),veh/h/ln	1689	0	1591	1511	0	0	1792	1787	1828	1740	1736	0
Q Serve(g_s), s	0.0	0.0	0.4	0.3	0.0	0.0	0.4	5.8	5.8	0.9	4.4	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.4	0.9	0.0	0.0	0.4	5.8	5.8	0.9	4.4	0.0
Prop In Lane	0.50		1.00	0.76		0.05	1.00		0.13	1.00		0.00
Lane Grp Cap(c), veh/h	528	0	306	515	0	0	49	665	680	87	1369	0
V/C Ratio(X)	0.04	0.00	0.08	0.11	0.00	0.00	0.45	0.56	0.56	0.51	0.43	0.00
Avail Cap(c_a), veh/h	1838	0	1591	1709	0	0	589	2043	2090	572	3968	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.3	0.0	11.6	11.5	0.0	0.0	16.8	8.7	8.7	16.2	7.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.0	6.2	0.7	0.7	4.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.5	0.0	0.0	0.3	2.9	3.0	0.5	2.1	0.0
LnGrp Delay(d),s/veh	11.4	0.0	11.7	11.6	0.0	0.0	23.0	9.5	9.4	20.8	8.0	0.0
LnGrp LOS	B		B	B			C	A	A	C	A	
Approach Vol, veh/h		45			58			776			636	
Approach Delay, s/veh		11.5			11.6			9.8			8.8	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	4.5	18.8		11.7	5.2	18.0				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		2.4	2.4	6.4		2.9	2.9	7.8				
Green Ext Time (p_c), s		0.1	0.0	4.3		0.3	0.0	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative, PM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	130	40	580	260	30	560		
Future Volume (veh/h)	130	40	580	260	30	560		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1827	1827		
Adj Flow Rate, veh/h	138	9	617	246	32	596		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	0	0	1	1	4	4		
Cap, veh/h	202	180	1102	439	67	2042		
Arrive On Green	0.11	0.11	0.44	0.44	0.04	0.59		
Sat Flow, veh/h	1810	1615	2571	987	1740	3563		
Grp Volume(v), veh/h	138	9	445	418	32	596		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1677	1740	1736		
Q Serve(g_s), s	2.4	0.2	6.1	6.1	0.6	2.8		
Cycle Q Clear(g_c), s	2.4	0.2	6.1	6.1	0.6	2.8		
Prop In Lane	1.00	1.00		0.59	1.00			
Lane Grp Cap(c), veh/h	202	180	795	746	67	2042		
V/C Ratio(X)	0.68	0.05	0.56	0.56	0.48	0.29		
Avail Cap(c_a), veh/h	1629	1454	2414	2265	601	6251		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.2	13.2	6.8	6.8	15.7	3.4		
Incr Delay (d2), s/veh	4.0	0.1	0.6	0.7	5.2	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	0.2	3.1	2.9	0.4	1.3		
LnGrp Delay(d),s/veh	18.3	13.3	7.5	7.5	20.9	3.5		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	147		863			628		
Approach Delay, s/veh	18.0		7.5			4.4		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				24.6		8.7	4.8	19.8
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				4.8		4.4	2.6	8.1
Green Ext Time (p_c), s				4.5		0.4	0.0	6.4
Intersection Summary								
HCM 2010 Ctrl Delay			7.2					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
 19: 2nd Avenue & Inter-Garrison Road

Cumulative, PM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	60	30	820	60	30	670		
Future Volume (veh/h)	60	30	820	60	30	670		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1863	1863		
Adj Flow Rate, veh/h	62	7	845	54	31	691		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	1	1	2	2		
Cap, veh/h	254	227	1467	94	66	2013		
Arrive On Green	0.14	0.14	0.43	0.43	0.04	0.57		
Sat Flow, veh/h	1810	1615	3506	218	1774	3632		
Grp Volume(v), veh/h	62	7	443	456	31	691		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1843	1774	1770		
Q Serve(g_s), s	1.0	0.1	6.5	6.5	0.6	3.6		
Cycle Q Clear(g_c), s	1.0	0.1	6.5	6.5	0.6	3.6		
Prop In Lane	1.00	1.00		0.12	1.00			
Lane Grp Cap(c), veh/h	254	227	768	792	66	2013		
V/C Ratio(X)	0.24	0.03	0.58	0.58	0.47	0.34		
Avail Cap(c_a), veh/h	1841	1643	2078	2143	593	5659		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.2	12.8	7.4	7.4	16.2	4.0		
Incr Delay (d2), s/veh	0.5	0.1	0.7	0.7	5.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	0.1	3.2	3.3	0.4	1.8		
LnGrp Delay(d),s/veh	13.7	12.8	8.1	8.1	21.3	4.1		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	69		899			722		
Approach Delay, s/veh	13.6		8.1			4.8		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				24.6		9.8	4.8	19.8
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				5.6		3.0	2.6	8.5
Green Ext Time (p_c), s				5.4		0.2	0.0	6.3
Intersection Summary								
HCM 2010 Ctrl Delay			6.9					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh 10.5												
Intersection LOS B												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	40	30	170	30	10	20	60	170	20	70	10
Future Vol, veh/h	10	40	30	170	30	10	20	60	170	20	70	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	12	49	37	207	37	12	24	73	207	24	85	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	11.4	10.7	9.4
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	12%	81%	20%
Vol Thru, %	24%	50%	14%	70%
Vol Right, %	68%	38%	5%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	250	80	210	100
LT Vol	20	10	170	20
Through Vol	60	40	30	70
RT Vol	170	30	10	10
Lane Flow Rate	305	98	256	122
Geometry Grp	1	1	1	1
Degree of Util (X)	0.392	0.141	0.376	0.178
Departure Headway (Hd)	4.729	5.2	5.283	5.269
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	692	686	682
Service Time	2.729	3.215	3.283	3.291
HCM Lane V/C Ratio	0.399	0.142	0.373	0.179
HCM Control Delay	10.7	9.1	11.4	9.4
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.9	0.5	1.8	0.6

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

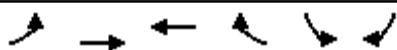
Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	260	70	130	170	30	50	180	240	80	60	10
Future Volume (veh/h)	10	260	70	130	170	30	50	180	240	80	60	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1827	1827	1827	1900	1810	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	280	69	140	183	17	54	194	186	86	65	2
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	4	4	4	5	5	5	0	0	0
Cap, veh/h	20	369	91	167	619	523	60	217	208	119	90	181
Arrive On Green	0.01	0.25	0.25	0.10	0.34	0.34	0.31	0.29	0.29	0.13	0.11	0.11
Sat Flow, veh/h	1792	1456	359	1740	1827	1544	206	740	709	1052	795	1608
Grp Volume(v), veh/h	11	0	349	140	183	17	434	0	0	151	0	2
Grp Sat Flow(s),veh/h/ln	1792	0	1815	1740	1827	1544	1655	0	0	1847	0	1608
Q Serve(g_s), s	0.4	0.0	12.0	5.3	5.0	0.5	17.0	0.0	0.0	5.3	0.0	0.1
Cycle Q Clear(g_c), s	0.4	0.0	12.0	5.3	5.0	0.5	17.0	0.0	0.0	5.3	0.0	0.1
Prop In Lane	1.00		0.20	1.00		1.00	0.12		0.43	0.57		1.00
Lane Grp Cap(c), veh/h	20	0	460	167	619	523	485	0	0	208	0	181
V/C Ratio(X)	0.56	0.00	0.76	0.84	0.30	0.03	0.89	0.00	0.00	0.73	0.00	0.01
Avail Cap(c_a), veh/h	106	0	886	167	960	811	539	0	0	602	0	524
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	23.3	30.0	16.4	14.9	22.8	0.0	0.0	28.7	0.0	26.6
Incr Delay (d2), s/veh	22.2	0.0	2.6	29.2	0.3	0.0	16.3	0.0	0.0	4.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	6.3	3.9	2.5	0.2	9.9	0.0	0.0	3.0	0.0	0.0
LnGrp Delay(d),s/veh	55.4	0.0	25.9	59.2	16.7	15.0	39.1	0.0	0.0	33.4	0.0	26.6
LnGrp LOS	E		C	E	B	B	D			C		C
Approach Vol, veh/h		360			340			434			153	
Approach Delay, s/veh		26.8			34.1			39.1			33.3	
Approach LOS		C			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	22.1		11.6	4.2	27.9		23.8				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s	0.5	33.0		22.0	4.0	35.5		22.0				
Max Q Clear Time (g_c+11), s	0.3	14.0		7.3	2.4	7.0		19.0				
Green Ext Time (p_c), s	0.0	1.9		0.6	0.0	1.1		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			33.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	520	520	260	30	20	410		
Future Volume (veh/h)	520	520	260	30	20	410		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1792	1792	1827	1827		
Adj Flow Rate, veh/h	547	547	274	6	21	209		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	6	6	4	4		
Cap, veh/h	508	1158	446	371	562	259		
Arrive On Green	0.29	0.62	0.25	0.25	0.17	0.17		
Sat Flow, veh/h	1774	1863	1792	1491	3375	1553		
Grp Volume(v), veh/h	547	547	274	6	21	209		
Grp Sat Flow(s),veh/h/ln	1774	1863	1792	1491	1688	1553		
Q Serve(g_s), s	11.5	6.3	5.4	0.1	0.2	5.2		
Cycle Q Clear(g_c), s	11.5	6.3	5.4	0.1	0.2	5.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	508	1158	446	371	562	259		
V/C Ratio(X)	1.08	0.47	0.61	0.02	0.04	0.81		
Avail Cap(c_a), veh/h	508	2780	2007	1669	2645	1217		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.3	4.1	13.4	11.4	14.0	16.1		
Incr Delay (d2), s/veh	62.5	0.1	0.5	0.0	0.0	2.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.3	3.2	2.7	0.1	0.1	4.4		
LnGrp Delay(d),s/veh	76.9	4.2	13.9	11.4	14.1	18.4		
LnGrp LOS	F	A	B	B	B	B		
Approach Vol, veh/h		1094	280		230			
Approach Delay, s/veh		40.5	13.8		18.0			
Approach LOS		D	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.0		10.2	15.0	15.0		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		8.3		7.2	13.5	7.4		
Green Ext Time (p_c), s		0.5		0.0	0.0	0.2		
Intersection Summary								
HCM 2010 Ctrl Delay			32.6					
HCM 2010 LOS			C					
Notes								

User approved changes to right turn type.

Intersection	
Intersection Delay, s/veh	19.8
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	110	460	220	50	30	40
Future Vol, veh/h	110	460	220	50	30	40
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	1	1	5	5	17	17
Mvmt Flow	128	535	256	58	35	47
Number of Lanes	1	1	2	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	3
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	25.6	10.1	10.6
HCM LOS	D	B	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	460	110	110	50	30	40
LT Vol	110	0	0	0	0	30	0
Through Vol	0	460	110	110	0	0	0
RT Vol	0	0	0	0	50	0	40
Lane Flow Rate	128	535	128	128	58	35	47
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.215	0.826	0.226	0.226	0.062	0.077	0.087
Departure Headway (Hd)	6.062	5.56	6.357	6.357	3.849	7.934	6.723
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	593	653	565	565	928	452	533
Service Time	3.786	3.283	4.09	4.09	1.582	5.68	4.468
HCM Lane V/C Ratio	0.216	0.819	0.227	0.227	0.063	0.077	0.088
HCM Control Delay	10.4	29.2	10.9	10.9	6.8	11.3	10.1
HCM Lane LOS	B	D	B	B	A	B	B
HCM 95th-tile Q	0.8	8.8	0.9	0.9	0.2	0.2	0.3

Intersection						
Intersection Delay, s/veh	17.3					
Intersection LOS	C					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	350	140	100	130	190	110
Future Vol, veh/h	350	140	100	130	190	110
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	402	161	115	149	218	126
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	21.1	13.7	13.9
HCM LOS	C	B	B

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	43%	0%	0%
Vol Right, %	0%	0%	57%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	350	140	230	190	110
LT Vol	350	0	0	190	0
Through Vol	0	140	100	0	0
RT Vol	0	0	130	0	110
Lane Flow Rate	402	161	264	218	126
Geometry Grp	7	7	4	7	7
Degree of Util (X)	0.732	0.27	0.44	0.443	0.214
Departure Headway (Hd)	6.553	6.046	5.988	7.299	6.079
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	551	594	600	494	589
Service Time	4.299	3.792	4.037	5.052	3.831
HCM Lane V/C Ratio	0.73	0.271	0.44	0.441	0.214
HCM Control Delay	25.2	11	13.7	15.8	10.5
HCM Lane LOS	D	B	B	C	B
HCM 95th-tile Q	6.1	1.1	2.2	2.2	0.8

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	1350	190	240	500	0	150	0	150	0	0	0
Future Volume (veh/h)	0	1350	190	240	500	0	150	0	150	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	0	1392	194	247	515	0	155	0	126			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	2	1814	250	282	2780	0	193	0	172			
Arrive On Green	0.00	0.58	0.58	0.16	0.78	0.00	0.11	0.00	0.11			
Sat Flow, veh/h	1774	3125	431	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	0	783	803	247	515	0	155	0	126			
Grp Sat Flow(s),veh/h/ln	1774	1770	1787	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	29.9	30.8	12.1	3.4	0.0	7.7	0.0	7.0			
Cycle Q Clear(g_c), s	0.0	29.9	30.8	12.1	3.4	0.0	7.7	0.0	7.0			
Prop In Lane	1.00		0.24	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	1027	1037	282	2780	0	193	0	172			
V/C Ratio(X)	0.00	0.76	0.77	0.88	0.19	0.00	0.80	0.00	0.73			
Avail Cap(c_a), veh/h	395	1182	1193	399	2780	0	528	0	471			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	14.2	14.4	37.0	2.6	0.0	39.0	0.0	38.7			
Incr Delay (d2), s/veh	0.0	3.2	3.5	11.3	0.0	0.0	3.0	0.0	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	15.3	16.0	6.9	1.7	0.0	3.9	0.0	3.1			
LnGrp Delay(d),s/veh	0.0	17.4	17.9	48.3	2.6	0.0	42.0	0.0	41.0			
LnGrp LOS		B	B	D	A		D		D			
Approach Vol, veh/h		1586			762			281				
Approach Delay, s/veh		17.7			17.4			41.5				
Approach LOS		B			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	7.7	57.6			0.0	75.3		14.6				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+1/4), s	14.1	32.8			0.0	5.4		9.7				
Green Ext Time (p_c), s	0.0	19.4			0.0	4.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 27: Reservation Road & Watkins Gate Road

Cumulative, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	230	220	930	1960	60		
Future Volume (veh/h)	10	230	220	930	1960	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1881	1881	1863	1900		
Adj Flow Rate, veh/h	11	43	239	1011	2130	62		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	1	1	2	2		
Cap, veh/h	65	58	247	3088	2443	71		
Arrive On Green	0.04	0.04	0.14	0.86	0.70	0.70		
Sat Flow, veh/h	1774	1583	1792	3668	3606	102		
Grp Volume(v), veh/h	11	43	239	1011	1068	1124		
Grp Sat Flow(s),veh/h/ln	1774	1583	1792	1787	1770	1845		
Q Serve(g_s), s	0.8	3.5	17.3	7.0	60.5	62.0		
Cycle Q Clear(g_c), s	0.8	3.5	17.3	7.0	60.5	62.0		
Prop In Lane	1.00	1.00	1.00			0.06		
Lane Grp Cap(c), veh/h	65	58	247	3088	1231	1283		
V/C Ratio(X)	0.17	0.75	0.97	0.33	0.87	0.88		
Avail Cap(c_a), veh/h	279	249	247	3189	1281	1335		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	61.0	62.3	56.0	1.7	15.3	15.5		
Incr Delay (d2), s/veh	0.5	6.9	47.8	0.1	6.7	7.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	1.6	11.8	3.4	31.4	33.7		
LnGrp Delay(d),s/veh	61.5	69.2	103.8	1.8	22.0	22.5		
LnGrp LOS	E	E	F	A	C	C		
Approach Vol, veh/h	54			1250	2192			
Approach Delay, s/veh	67.7			21.3	22.2			
Approach LOS	E			C	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.3	22.0	97.3				119.3
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		20.5	18.0	94.5				116.5
Max Q Clear Time (g_c+11), s		5.5	19.3	64.0				9.0
Green Ext Time (p_c), s		0.0	0.0	26.8				14.0
Intersection Summary								
HCM 2010 Ctrl Delay			22.6					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1120	500	10	10	350	110	10	10	10	130	10	480
Future Volume (veh/h)	1120	500	10	10	350	110	10	10	10	130	10	480
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1835	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	1191	532	11	11	372	117	11	11	9	138	11	376
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	511	2123	44	17	444	140	18	18	15	317	25	728
Arrive On Green	0.29	0.60	0.60	0.01	0.33	0.32	0.03	0.03	0.03	0.20	0.19	0.18
Sat Flow, veh/h	1774	3546	73	1740	1340	421	631	631	516	1665	133	1599
Grp Volume(v), veh/h	1191	265	278	11	0	489	31	0	0	149	0	376
Grp Sat Flow(s),veh/h/ln	1774	1770	1850	1740	0	1761	1777	0	0	1798	0	1599
Q Serve(g_s), s	30.0	7.4	7.4	0.7	0.0	26.8	1.8	0.0	0.0	7.6	0.0	17.4
Cycle Q Clear(g_c), s	30.0	7.4	7.4	0.7	0.0	26.8	1.8	0.0	0.0	7.6	0.0	17.4
Prop In Lane	1.00		0.04	1.00		0.24	0.35		0.29	0.93		1.00
Lane Grp Cap(c), veh/h	511	1060	1108	17	0	584	51	0	0	342	0	728
V/C Ratio(X)	2.33	0.25	0.25	0.66	0.00	0.84	0.61	0.00	0.00	0.44	0.00	0.52
Avail Cap(c_a), veh/h	511	1060	1108	500	0	1032	512	0	0	518	0	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.1	9.9	9.9	51.4	0.0	32.3	50.0	0.0	0.0	36.8	0.0	20.2
Incr Delay (d2), s/veh	604.8	0.2	0.2	15.6	0.0	5.1	4.4	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	100.5	3.6	3.8	0.4	0.0	13.7	0.9	0.0	0.0	3.8	0.0	7.7
LnGrp Delay(d),s/veh	641.9	10.1	10.0	67.1	0.0	37.4	54.4	0.0	0.0	37.1	0.0	20.4
LnGrp LOS	F	B	B	E		D	D			D		C
Approach Vol, veh/h		1734			500			31			525	
Approach Delay, s/veh		444.0			38.0			54.4			25.1	
Approach LOS		F			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	67.4		24.8	33.8	38.5		7.0				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1/2), s	12.5	9.4		19.4	32.0	28.8		3.8				
Green Ext Time (p_c), s	0.0	5.1		0.4	0.0	4.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				288.1								
HCM 2010 LOS				F								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	200	10	80	80	10	20	40	670	60	20	620	100
Future Volume (veh/h)	200	10	80	80	10	20	40	670	60	20	620	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1881	1881	1900
Adj Flow Rate, veh/h	213	11	85	85	11	21	43	713	64	21	660	106
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	405	37	117	531	59	501	84	1214	109	46	1054	169
Arrive On Green	0.33	0.31	0.31	0.33	0.31	0.31	0.05	0.36	0.36	0.03	0.34	0.34
Sat Flow, veh/h	867	119	374	1219	190	1607	1810	3350	300	1792	3083	495
Grp Volume(v), veh/h	309	0	0	96	0	21	43	384	393	21	382	384
Grp Sat Flow(s),veh/h/ln	1361	0	0	1409	0	1607	1810	1805	1845	1792	1787	1790
Q Serve(g_s), s	7.3	0.0	0.0	0.0	0.0	0.4	1.0	7.7	7.8	0.5	8.0	8.1
Cycle Q Clear(g_c), s	9.4	0.0	0.0	2.1	0.0	0.4	1.0	7.7	7.8	0.5	8.0	8.1
Prop In Lane	0.69		0.28	0.89		1.00	1.00		0.16	1.00		0.28
Lane Grp Cap(c), veh/h	590	0	0	621	0	501	84	654	669	46	611	612
V/C Ratio(X)	0.52	0.00	0.00	0.15	0.00	0.04	0.51	0.59	0.59	0.46	0.63	0.63
Avail Cap(c_a), veh/h	1272	0	0	1259	0	1252	463	1606	1642	458	1392	1394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	11.0	0.0	10.8	20.9	11.6	11.6	21.6	12.4	12.4
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.0	4.8	0.8	0.8	6.9	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.8	0.0	0.2	0.6	4.0	4.1	0.3	4.1	4.1
LnGrp Delay(d),s/veh	14.6	0.0	0.0	11.1	0.0	10.8	25.8	12.4	12.4	28.5	13.4	13.5
LnGrp LOS	B			B		B	C	B	B	C	B	B
Approach Vol, veh/h		309			117			820			787	
Approach Delay, s/veh		14.6			11.1			13.1			13.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.0	5.6	20.4		19.0	4.7	21.3				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	35.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		11.4	3.0	10.1		4.1	2.5	9.8				
Green Ext Time (p_c), s		1.8	0.0	5.0		0.6	0.0	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay				13.5								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	11.9											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	20	10	30	40	10	10	20	240	70	10	240	20
Future Vol, veh/h	20	10	30	40	10	10	20	240	70	10	240	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	24	12	35	47	12	12	24	282	82	12	282	24
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.2	9.6	12.7	12
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	67%	100%	0%
Vol Thru, %	0%	77%	17%	17%	0%	92%
Vol Right, %	0%	23%	50%	17%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	310	60	60	10	260
LT Vol	20	0	20	40	10	0
Through Vol	0	240	10	10	0	240
RT Vol	0	70	30	10	0	20
Lane Flow Rate	24	365	71	71	12	306
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.037	0.509	0.109	0.114	0.019	0.442
Departure Headway (Hd)	5.683	5.02	5.562	5.839	5.758	5.199
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	625	711	648	617	617	685
Service Time	3.46	2.797	3.562	3.842	3.54	2.981
HCM Lane V/C Ratio	0.038	0.513	0.11	0.115	0.019	0.447
HCM Control Delay	8.7	13	9.2	9.6	8.7	12.1
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.1	2.9	0.4	0.4	0.1	2.3

HCM 2010 Signalized Intersection Summary
31: 1st Avenue & Lightfighter Drive

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	730	110	20	1340	0	200	0	30	60	50	80
Future Volume (veh/h)	0	730	110	20	1340	0	200	0	30	60	50	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	768	0	21	1411	0	211	0	14	63	53	64
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2129	952	23	2478	0	0	0	0	144	152	129
Arrive On Green	0.00	0.60	0.00	0.01	0.69	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	768	0	21	1411	0		0.0		63	53	64
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	4.6	0.0	0.5	8.3	0.0				1.4	1.1	1.6
Cycle Q Clear(g_c), s	0.0	4.6	0.0	0.5	8.3	0.0				1.4	1.1	1.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2129	952	23	2478	0				144	152	129
V/C Ratio(X)	0.00	0.36	0.00	0.91	0.57	0.00				0.44	0.35	0.50
Avail Cap(c_a), veh/h	0	3897	1744	868	3897	0				1044	1096	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.3	0.0	20.3	3.2	0.0				18.0	17.8	18.1
Incr Delay (d2), s/veh	0.0	0.1	0.0	33.7	0.3	0.0				0.8	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.5	4.0	0.0				0.7	0.6	0.7
LnGrp Delay(d),s/veh	0.0	4.4	0.0	54.0	3.5	0.0				18.7	18.4	19.2
LnGrp LOS		A		D	A					B	B	B
Approach Vol, veh/h		768			1432						180	
Approach Delay, s/veh		4.4			4.2						18.8	
Approach LOS		A			A						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.0	29.2		8.1		33.2				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.5	6.6		3.6		10.3				
Green Ext Time (p_c), s			0.0	9.1		0.3		18.4				
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	530	10	80	1070	220	20	20	50	230	30	330
Future Volume (veh/h)	290	530	10	80	1070	220	20	20	50	230	30	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	305	558	11	84	1126	227	21	21	47	242	32	244
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2170	43	108	1606	322	96	99	168	349	374	316
Arrive On Green	0.12	0.61	0.61	0.06	0.54	0.54	0.21	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3585	71	1792	2967	595	252	490	830	1308	1845	1559
Grp Volume(v), veh/h	305	278	291	84	676	677	89	0	0	242	32	244
Grp Sat Flow(s),veh/h/ln	1792	1787	1869	1792	1787	1775	1571	0	0	1308	1845	1559
Q Serve(g_s), s	12.4	7.3	7.3	4.6	27.9	28.3	0.0	0.0	0.0	12.7	1.4	14.8
Cycle Q Clear(g_c), s	12.4	7.3	7.3	4.6	27.9	28.3	4.3	0.0	0.0	17.0	1.4	14.8
Prop In Lane	1.00		0.04	1.00		0.34	0.24		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	222	1082	1131	108	967	961	372	0	0	349	374	316
V/C Ratio(X)	1.37	0.26	0.26	0.78	0.70	0.70	0.24	0.00	0.00	0.69	0.09	0.77
Avail Cap(c_a), veh/h	222	1082	1131	222	967	961	675	0	0	612	745	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.20	0.20	0.20	1.00	0.00	0.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	43.8	9.2	9.2	46.4	16.9	17.0	33.4	0.0	0.0	38.3	32.3	37.7
Incr Delay (d2), s/veh	191.6	0.5	0.5	1.0	0.9	0.9	0.1	0.0	0.0	0.7	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	3.7	3.9	2.3	13.9	14.0	2.1	0.0	0.0	6.5	0.7	6.5
LnGrp Delay(d),s/veh	235.4	9.8	9.7	47.3	17.8	17.9	33.6	0.0	0.0	39.0	32.4	38.9
LnGrp LOS	F	A	A	D	B	B	C			D	C	D
Approach Vol, veh/h		874			1437			89			518	
Approach Delay, s/veh		88.5			19.6			33.6			38.5	
Approach LOS		F			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.0	65.1		24.9	16.4	58.7		24.9				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	40.0	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+10), s	10.0	9.3		19.0	14.4	30.3		6.3				
Green Ext Time (p_c), s	0.0	2.0		0.9	0.0	0.0		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				44.0								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	270	600	40	270	50	600	170	20	60	180	40
Future Volume (veh/h)	80	270	600	40	270	50	600	170	20	60	180	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	83	281	0	42	281	51	625	177	19	62	188	-70
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	108	522	444	64	396	72	702	462	50	84	438	0
Arrive On Green	0.06	0.28	0.00	0.04	0.25	0.25	0.20	0.28	0.28	0.05	0.12	0.00
Sat Flow, veh/h	1792	1881	1599	1810	1566	284	3476	1670	179	1810	3705	0
Grp Volume(v), veh/h	83	281	0	42	0	332	625	0	196	62	118	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1850	1738	0	1850	1810	1805	0
Q Serve(g_s), s	2.3	6.3	0.0	1.1	0.0	8.1	8.7	0.0	4.2	1.7	1.5	0.0
Cycle Q Clear(g_c), s	2.3	6.3	0.0	1.1	0.0	8.1	8.7	0.0	4.2	1.7	1.5	0.0
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.10	1.00		0.00
Lane Grp Cap(c), veh/h	108	522	444	64	0	467	702	0	512	84	438	0
V/C Ratio(X)	0.77	0.54	0.00	0.65	0.00	0.71	0.89	0.00	0.38	0.74	0.27	0.00
Avail Cap(c_a), veh/h	724	1140	969	731	0	1121	702	0	1121	548	2188	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.9	15.2	0.0	23.6	0.0	16.8	19.2	0.0	14.5	23.3	19.8	0.0
Incr Delay (d2), s/veh	10.6	1.0	0.0	4.1	0.0	2.4	13.3	0.0	1.0	4.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.4	0.0	0.6	0.0	4.4	5.5	0.0	2.3	0.9	0.8	0.0
LnGrp Delay(d),s/veh	33.5	16.2	0.0	27.7	0.0	19.3	32.6	0.0	15.5	28.0	20.2	0.0
LnGrp LOS	C	B		C		B	C		B	C	C	
Approach Vol, veh/h		364			374			821			180	
Approach Delay, s/veh		20.2			20.2			28.5			22.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	7.5	17.0	6.8	18.2	6.3	18.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+110), s	3.5	4.3	10.1	3.7	6.2	3.1	8.3					
Green Ext Time (p_c), s	0.0	0.8	0.1	2.4	0.0	2.0	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	290	60	50	300	50
Future Vol, veh/h	30	290	60	50	300	50
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	34	330	68	57	341	57
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	12	9.3	15
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	9%	86%
Vol Thru, %	55%	0%	14%
Vol Right, %	45%	91%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	110	320	350
LT Vol	0	30	300
Through Vol	60	0	50
RT Vol	50	290	0
Lane Flow Rate	125	364	398
Geometry Grp	1	1	1
Degree of Util (X)	0.18	0.472	0.575
Departure Headway (Hd)	5.172	4.773	5.208
Convergence, Y/N	Yes	Yes	Yes
Cap	696	760	696
Service Time	3.183	2.773	3.208
HCM Lane V/C Ratio	0.18	0.479	0.572
HCM Control Delay	9.3	12	15
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.7	2.6	3.7

Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	300	50	30	280	40	30
Future Vol, veh/h	300	50	30	280	40	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	353	59	35	329	47	35

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	412	0	782
Stage 1	-	-	-	-	383
Stage 2	-	-	-	-	399
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1158	-	366
Stage 1	-	-	-	-	694
Stage 2	-	-	-	-	682
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1158	-	352
Mov Cap-2 Maneuver	-	-	-	-	352
Stage 1	-	-	-	-	668
Stage 2	-	-	-	-	682

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	442	-	-	1158	-
HCM Lane V/C Ratio	0.186	-	-	0.03	-
HCM Control Delay (s)	15	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	270	60	30	240	10	50	60	20	10	80	20
Future Vol, veh/h	10	270	60	30	240	10	50	60	20	10	80	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	12	329	73	37	293	12	61	73	24	12	98	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16.1	14.3	11.6	11.1
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	3%	11%	9%
Vol Thru, %	46%	79%	86%	73%
Vol Right, %	15%	18%	4%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	340	280	110
LT Vol	50	10	30	10
Through Vol	60	270	240	80
RT Vol	20	60	10	20
Lane Flow Rate	159	415	341	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.273	0.605	0.517	0.229
Departure Headway (Hd)	6.195	5.255	5.451	6.151
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	575	684	659	580
Service Time	4.274	3.314	3.513	4.233
HCM Lane V/C Ratio	0.277	0.607	0.517	0.231
HCM Control Delay	11.6	16.1	14.3	11.1
HCM Lane LOS	B	C	B	B
HCM 95th-tile Q	1.1	4.1	3	0.9

Intersection												
Int Delay, s/veh	97.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	90	150	50	30	130	10	90	160	20	10	100	50
Future Vol, veh/h	90	150	50	30	130	10	90	160	20	10	100	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	122	203	68	41	176	14	122	216	27	14	135	68

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	766	684	169	807	705	230	203	0	0	243	0	0
Stage 1	197	197	-	474	474	-	-	-	-	-	-	-
Stage 2	569	487	-	333	231	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	318	370	872	300	361	809	1363	-	-	1289	-	-
Stage 1	803	736	-	571	558	-	-	-	-	-	-	-
Stage 2	505	549	-	681	713	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	162	327	872	129	319	809	1363	-	-	1289	-	-
Mov Cap-2 Maneuver	162	327	-	129	319	-	-	-	-	-	-	-
Stage 1	719	727	-	512	500	-	-	-	-	-	-	-
Stage 2	289	492	-	448	704	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	255.5		70.5		2.6		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1363	-	-	271	261	1289	-
HCM Lane V/C Ratio	0.089	-	-	1.446	0.88	0.01	-
HCM Control Delay (s)	7.9	0	-	255.5	70.5	7.8	0
HCM Lane LOS	A	A	-	F	F	A	A
HCM 95th %tile Q(veh)	0.3	-	-	21.8	7.5	0	-

Intersection						
Int Delay, s/veh	5.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	170	10	10	370	220	160
Future Vol, veh/h	170	10	10	370	220	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	193	11	11	420	250	182
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	783	341	432	0	0
Stage 1	341	-	-	-	-
Stage 2	442	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	365	706	1128	-	-
Stage 1	725	-	-	-	-
Stage 2	652	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	360	706	1128	-	-
Mov Cap-2 Maneuver	360	-	-	-	-
Stage 1	716	-	-	-	-
Stage 2	652	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.1	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1128	-	370	-	-
HCM Lane V/C Ratio	0.01	-	0.553	-	-
HCM Control Delay (s)	8.2	0	26.1	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	3.2	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	170	50	320	60	430	320	310	430	50
Future Volume (veh/h)	20	20	30	170	50	320	60	430	320	310	430	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	191	56	0	67	483	0	348	483	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	265	35	241	702	314	109	670	300	384	1220	546
Arrive On Green	0.03	0.09	0.09	0.13	0.20	0.00	0.06	0.19	0.00	0.22	0.34	0.00
Sat Flow, veh/h	1691	2991	399	1792	3574	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	12	13	191	56	0	67	483	0	348	483	0
Grp Sat Flow(s),veh/h/ln	1691	1687	1703	1792	1787	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.3	0.3	5.0	0.6	0.0	1.8	6.2	0.0	9.3	5.0	0.0
Cycle Q Clear(g_c), s	0.6	0.3	0.3	5.0	0.6	0.0	1.8	6.2	0.0	9.3	5.0	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	150	151	241	702	314	109	670	300	384	1220	546
V/C Ratio(X)	0.49	0.08	0.08	0.79	0.08	0.00	0.62	0.72	0.00	0.91	0.40	0.00
Avail Cap(c_a), veh/h	715	1061	1071	757	2248	1006	384	1861	833	384	1861	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.3	20.3	20.3	20.3	15.9	0.0	22.2	18.5	0.0	18.5	12.1	0.0
Incr Delay (d2), s/veh	3.1	0.1	0.1	2.3	0.0	0.0	2.1	0.6	0.0	23.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	2.6	0.3	0.0	0.9	3.1	0.0	7.1	2.4	0.0
LnGrp Delay(d),s/veh	26.4	20.4	20.4	22.6	15.9	0.0	24.3	19.0	0.0	42.4	12.1	0.0
LnGrp LOS	C	C	C	C	B		C	B		D	B	
Approach Vol, veh/h		47			247			550			831	
Approach Delay, s/veh		23.2			21.1			19.6			24.8	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	21.2	5.8	14.0	15.0	13.7	11.0	8.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.8	7.0	2.6	2.6	11.3	8.2	7.0	2.3				
Green Ext Time (p_c), s	0.0	0.6	0.0	0.1	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			22.5									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	50	600	10	30	490	10	30	60	50	10	40	20
Future Volume (veh/h)	50	600	10	30	490	10	30	60	50	10	40	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1810	1900
Adj Flow Rate, veh/h	55	659	11	33	538	11	33	66	55	11	44	22
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	5	5	5
Cap, veh/h	267	1058	18	241	1069	22	287	147	112	250	192	89
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	141	3160	53	85	3192	66	291	791	601	166	1029	478
Grp Volume(v), veh/h	374	0	351	300	0	282	154	0	0	77	0	0
Grp Sat Flow(s),veh/h/ln	1669	0	1686	1644	0	1700	1683	0	0	1673	0	0
Q Serve(g_s), s	0.9	0.0	3.3	0.1	0.0	2.5	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.4	0.0	3.3	3.4	0.0	2.5	1.5	0.0	0.0	0.7	0.0	0.0
Prop In Lane	0.15		0.03	0.11		0.04	0.21		0.36	0.14		0.29
Lane Grp Cap(c), veh/h	779	0	565	763	0	569	546	0	0	531	0	0
V/C Ratio(X)	0.48	0.00	0.62	0.39	0.00	0.49	0.28	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	4510	0	4527	4582	0	4566	2921	0	0	2855	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	5.3	5.0	0.0	5.0	6.8	0.0	0.0	6.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.5	1.2	0.0	1.1	0.7	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	5.4	0.0	5.7	5.1	0.0	5.2	6.9	0.0	0.0	6.6	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		725			582			154			77	
Approach Delay, s/veh		5.5			5.2			6.9			6.6	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.0		10.8		8.0		10.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.5		5.4		2.7		5.4				
Green Ext Time (p_c), s		0.2		0.7		0.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				5.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	10	620	30	50	440	20	90	20	100	20	20	10
Future Volume (veh/h)	10	620	30	50	440	20	90	20	100	20	20	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	697	34	56	494	22	101	22	112	22	22	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	0	0	0
Cap, veh/h	194	1110	54	261	941	44	566	85	341	343	188	69
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	21	3323	161	130	2818	131	1112	400	1611	420	888	327
Grp Volume(v), veh/h	391	0	351	289	0	283	123	0	112	55	0	0
Grp Sat Flow(s),veh/h/ln	1839	0	1666	1392	0	1688	1512	0	1611	1634	0	0
Q Serve(g_s), s	0.0	0.0	3.5	0.3	0.0	2.7	0.8	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	3.5	3.8	0.0	2.7	1.3	0.0	1.2	0.5	0.0	0.0
Prop In Lane	0.03		0.10	0.19		0.08	0.82		1.00	0.40		0.20
Lane Grp Cap(c), veh/h	801	0	556	682	0	564	651	0	341	600	0	0
V/C Ratio(X)	0.49	0.00	0.63	0.42	0.00	0.50	0.19	0.00	0.33	0.09	0.00	0.00
Avail Cap(c_a), veh/h	4804	0	4248	3874	0	4305	2596	0	2482	2648	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	5.6	5.2	0.0	5.3	6.6	0.0	6.6	6.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.2	0.0	0.3	0.1	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.6	1.2	0.0	1.2	0.6	0.0	0.5	0.2	0.0	0.0
LnGrp Delay(d),s/veh	5.7	0.0	6.0	5.4	0.0	5.5	6.7	0.0	6.8	6.4	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		742			572			235			55	
Approach Delay, s/veh		5.9			5.5			6.7			6.4	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.7		11.1		8.7		11.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.3		5.5		2.5		5.8				
Green Ext Time (p_c), s		0.1		0.7		0.0		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				5.9								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

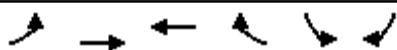
Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	140	590	10	10	370	10	10	10	20	10	10	140
Future Volume (veh/h)	140	590	10	10	370	10	10	10	20	10	10	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	621	11	11	389	11	11	11	0	11	11	147
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	402	1008	18	205	1251	35	374	193	275	208	23	240
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	407	2714	49	34	3366	94	582	1134	1615	77	134	1412
Grp Volume(v), veh/h	396	0	383	216	0	195	22	0	0	169	0	0
Grp Sat Flow(s),veh/h/ln	1467	0	1703	1816	0	1678	1715	0	1615	1623	0	0
Q Serve(g_s), s	2.8	0.0	3.6	0.0	0.0	1.6	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	3.6	1.6	0.0	1.6	0.2	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.37		0.03	0.05		0.06	0.50		1.00	0.07		0.87
Lane Grp Cap(c), veh/h	796	0	633	868	0	624	567	0	275	471	0	0
V/C Ratio(X)	0.50	0.00	0.60	0.25	0.00	0.31	0.04	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	3900	0	4381	4702	0	4317	2649	0	2509	2705	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	5.0	4.4	0.0	4.4	6.8	0.0	0.0	7.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.7	0.8	0.0	0.7	0.1	0.0	0.0	0.9	0.0	0.0
LnGrp Delay(d),s/veh	5.3	0.0	5.3	4.4	0.0	4.5	6.9	0.0	0.0	7.7	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		779			411			22			169	
Approach Delay, s/veh		5.3			4.5			6.9			7.7	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.8		11.8		7.8		11.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.2		6.4		3.9		3.6				
Green Ext Time (p_c), s		0.0		0.9		0.2		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				5.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative, PM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	250	370	230	10	10	160		
Future Volume (veh/h)	250	370	230	10	10	160		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1863	1881	1900	1827	1900		
Adj Flow Rate, veh/h	260	385	240	10	10	167		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	1	1	0	0		
Cap, veh/h	633	781	1359	56	14	234		
Arrive On Green	0.39	0.39	0.39	0.39	0.16	0.16		
Sat Flow, veh/h	820	2095	3592	145	88	1465		
Grp Volume(v), veh/h	351	294	122	128	178	0		
Grp Sat Flow(s),veh/h/ln	1220	1610	1787	1856	1562	0		
Q Serve(g_s), s	4.1	2.7	0.9	0.9	2.2	0.0		
Cycle Q Clear(g_c), s	5.0	2.7	0.9	0.9	2.2	0.0		
Prop In Lane	0.74			0.08	0.06	0.94		
Lane Grp Cap(c), veh/h	788	626	694	721	250	0		
V/C Ratio(X)	0.45	0.47	0.18	0.18	0.71	0.00		
Avail Cap(c_a), veh/h	3794	4485	4977	5168	1999	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.3	4.6	4.0	4.0	7.9	0.0		
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.0	1.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.2	0.4	0.5	1.0	0.0		
LnGrp Delay(d),s/veh	5.5	4.8	4.0	4.0	9.4	0.0		
LnGrp LOS	A	A	A	A	A			
Approach Vol, veh/h		645	250		178			
Approach Delay, s/veh		5.1	4.0		9.4			
Approach LOS		A	A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				12.2		7.7		12.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				7.0		4.2		2.9
Green Ext Time (p_c), s				0.8		0.0		0.2
Intersection Summary								
HCM 2010 Ctrl Delay			5.6					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	370	10	10	10	10	10	10	10	10	10	10	220
Future Volume (veh/h)	370	10	10	10	10	10	10	10	10	10	10	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	407	11	11	11	11	11	11	11	11	11	11	242
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	831	287	287	536	437	428	289	182	125	180	21	321
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1356	777	777	743	1184	1159	315	834	574	38	96	1474
Grp Volume(v), veh/h	407	0	22	19	0	14	33	0	0	264	0	0
Grp Sat Flow(s),veh/h/ln	1356	0	1554	1602	0	1485	1723	0	0	1608	0	0
Q Serve(g_s), s	5.8	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.2	0.1	0.0	0.1	0.3	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		0.50	0.58		0.78	0.33		0.33	0.04		0.92
Lane Grp Cap(c), veh/h	831	0	573	852	0	548	596	0	0	523	0	0
V/C Ratio(X)	0.49	0.00	0.04	0.02	0.00	0.03	0.06	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	3203	0	3247	3513	0	3102	2694	0	0	2781	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.3	0.0	4.4	4.4	0.0	4.4	6.8	0.0	0.0	8.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	1.5	0.0	0.0
LnGrp Delay(d),s/veh	6.4	0.0	4.4	4.4	0.0	4.4	6.8	0.0	0.0	8.2	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		429			33			33			264	
Approach Delay, s/veh		6.3			4.4			6.8			8.2	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.2		12.5		9.2		12.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		35.5		45.5		35.5		45.5				
Max Q Clear Time (g_c+I1), s		2.3		7.9		5.3		2.1				
Green Ext Time (p_c), s		0.0		0.4		0.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				6.9								
HCM 2010 LOS				A								

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Future Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	11	11	11	11	11	11	11	11
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.5	7.5	7.1	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	67%	0%	67%	0%	33%
Vol Thru, %	33%	33%	33%	33%	33%	33%
Vol Right, %	33%	0%	67%	0%	67%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	15	15	15	15	30
LT Vol	10	10	0	10	0	10
Through Vol	10	5	5	5	5	10
RT Vol	10	0	10	0	10	10
Lane Flow Rate	33	16	16	16	16	33
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.036	0.023	0.019	0.023	0.019	0.036
Departure Headway (Hd)	3.931	4.998	4.197	4.998	4.197	3.931
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	903	715	851	715	851	903
Service Time	1.99	2.734	1.933	2.734	1.933	1.99
HCM Lane V/C Ratio	0.037	0.022	0.019	0.022	0.019	0.037
HCM Control Delay	7.1	7.9	7	7.9	7	7.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.1	0.1	0.1

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	150	30	100	50	30	10	90	830	70	30	530	80
Future Volume (veh/h)	150	30	100	50	30	10	90	830	70	30	530	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	33	84	54	33	8	98	902	53	33	576	28
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	358	57	105	347	179	33	247	1126	66	71	829	370
Arrive On Green	0.25	0.23	0.23	0.25	0.23	0.23	0.14	0.33	0.33	0.04	0.23	0.23
Sat Flow, veh/h	818	245	456	777	777	143	1792	3431	202	1810	3610	1611
Grp Volume(v), veh/h	280	0	0	95	0	0	98	470	485	33	576	28
Grp Sat Flow(s),veh/h/ln	1519	0	0	1697	0	0	1792	1787	1845	1810	1805	1611
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.0	0.0	1.7	8.1	8.1	0.6	4.9	0.5
Cycle Q Clear(g_c), s	5.6	0.0	0.0	1.4	0.0	0.0	1.7	8.1	8.1	0.6	4.9	0.5
Prop In Lane	0.58		0.30	0.57		0.08	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	543	0	0	585	0	0	247	587	606	71	829	370
V/C Ratio(X)	0.52	0.00	0.00	0.16	0.00	0.00	0.40	0.80	0.80	0.46	0.69	0.08
Avail Cap(c_a), veh/h	1642	0	0	1686	0	0	426	1355	1399	430	2737	1222
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	0.0	10.4	0.0	0.0	13.2	10.3	10.3	15.8	11.9	10.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.0	0.0	0.4	1.0	0.9	1.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.7	0.0	0.0	0.8	4.1	4.2	0.3	2.4	0.2
LnGrp Delay(d),s/veh	12.2	0.0	0.0	10.4	0.0	0.0	13.6	11.3	11.2	17.5	12.3	10.2
LnGrp LOS	B			B			B	B	B	B	B	B
Approach Vol, veh/h		280			95			1053			637	
Approach Delay, s/veh		12.2			10.4			11.5			12.4	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	12.2		12.3	5.8	15.5		12.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+1), s	6.9	6.9		3.4	2.6	10.1		7.6				
Green Ext Time (p_c), s	0.0	0.7		0.1	0.0	0.9		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				11.8								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	30.4
Intersection LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	100	150	950	410	50
Future Vol, veh/h	60	100	150	950	410	50
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	67	112	169	1067	461	56
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	13.8	38.6	16.6
HCM LOS	B	E	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	475	475	60	100	205	205	50
LT Vol	150	0	0	60	0	0	0	0
Through Vol	0	475	475	0	0	205	205	0
RT Vol	0	0	0	0	100	0	0	50
Lane Flow Rate	169	534	534	67	112	230	230	56
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.339	0.999	0.741	0.174	0.253	0.491	0.491	0.081
Departure Headway (Hd)	7.246	6.739	4.997	9.307	8.092	7.674	7.674	5.217
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	497	539	726	385	443	470	470	685
Service Time	4.982	4.475	2.732	7.069	5.854	5.423	5.423	2.965
HCM Lane V/C Ratio	0.34	0.991	0.736	0.174	0.253	0.489	0.489	0.082
HCM Control Delay	13.7	64.4	20.7	14	13.6	17.6	17.6	8.4
HCM Lane LOS	B	F	C	B	B	C	C	A
HCM 95th-tile Q	1.5	14.1	6.7	0.6	1	2.7	2.7	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	170	80	90	100	70	110	1180	230	100	680	220
Future Volume (veh/h)	220	170	80	90	100	70	110	1180	230	100	680	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	201	211	35	93	103	66	113	1216	225	103	701	155
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	265	279	232	105	117	75	596	1385	254	127	671	297
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.33	0.46	0.46	0.07	0.19	0.19
Sat Flow, veh/h	1792	1881	1565	634	702	450	1792	3013	553	1774	3539	1568
Grp Volume(v), veh/h	201	211	35	262	0	0	113	718	723	103	701	155
Grp Sat Flow(s),veh/h/ln	1792	1881	1565	1785	0	0	1792	1787	1779	1774	1770	1568
Q Serve(g_s), s	13.5	13.5	2.4	17.9	0.0	0.0	5.6	45.3	46.3	7.2	23.7	11.1
Cycle Q Clear(g_c), s	13.5	13.5	2.4	17.9	0.0	0.0	5.6	45.3	46.3	7.2	23.7	11.1
Prop In Lane	1.00		1.00	0.35		0.25	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	265	279	232	297	0	0	596	821	818	127	671	297
V/C Ratio(X)	0.76	0.76	0.15	0.88	0.00	0.00	0.19	0.87	0.88	0.81	1.04	0.52
Avail Cap(c_a), veh/h	573	602	501	357	0	0	596	821	818	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	51.1	46.4	50.7	0.0	0.0	29.7	30.5	30.8	57.2	50.7	45.5
Incr Delay (d2), s/veh	3.1	2.9	0.2	20.8	0.0	0.0	0.1	12.4	13.4	4.6	47.0	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	7.2	1.1	10.6	0.0	0.0	2.8	25.2	25.8	3.7	15.9	5.4
LnGrp Delay(d),s/veh	54.1	54.0	46.6	71.5	0.0	0.0	29.7	42.9	44.2	61.8	97.6	51.9
LnGrp LOS	D	D	D	E			C	D	D	E	F	D
Approach Vol, veh/h		447			262			1554			959	
Approach Delay, s/veh		53.5			71.5			42.5			86.4	
Approach LOS		D			E			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.2	62.8		23.2	46.9	29.0		25.9				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	13	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+119), s	13	48.3		15.5	7.6	25.7		19.9				
Green Ext Time (p_c), s	0.1	0.0		1.9	0.1	0.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				59.5								
HCM 2010 LOS				E								
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary

Cumulative, PM

49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↗	↖		↗		↕	↗		↖	
Traffic Volume (veh/h)	10	160	120	280	0	130	0	120	300	10	10	0
Future Volume (veh/h)	10	160	120	280	0	130	0	120	300	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	11	176	14	308	0	69	0	132	51	11	11	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	170	2861	1323	0	0	0	0	164	139	58	44	0
Arrive On Green	0.85	0.84	0.84	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.00
Sat Flow, veh/h	203	3419	1580		0		0	1881	1599	166	501	0
Grp Volume(v), veh/h	100	87	14		0.0		0	132	51	22	0	0
Grp Sat Flow(s),veh/h/ln	1853	1770	1580				0	1881	1599	667	0	0
Q Serve(g_s), s	1.2	1.1	0.2				0.0	8.6	3.8	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.2				0.0	8.6	3.8	8.7	0.0	0.0
Prop In Lane	0.11		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1551	1481	1323				0	164	139	102	0	0
V/C Ratio(X)	0.06	0.06	0.01				0.00	0.81	0.37	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1551	1481	1323				0	271	230	127	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.7	1.7	1.7				0.0	56.0	53.8	52.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.5	0.6	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1				0.0	4.6	1.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.8	1.8	1.7				0.0	59.5	54.4	53.2	0.0	0.0
LnGrp LOS	A	A	A					E	D	D		
Approach Vol, veh/h		201						183			22	
Approach Delay, s/veh		1.7						58.1			53.2	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				15.1		109.9		15.1				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.6		3.2		10.7				
Green Ext Time (p_c), s				0.3		0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				29.9								
HCM 2010 LOS				C								
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↑			↕	
Traffic Volume (veh/h)	0	0	0	410	10	250	140	250	0	0	510	180
Future Volume (veh/h)	0	0	0	410	10	250	140	250	0	0	510	180
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				436	11	84	149	266	0	0	543	181
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				485	12	442	185	1092	0	0	585	195
Arrive On Green				0.29	0.28	0.28	0.03	0.20	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1732	44	1581	1757	1845	0	0	1312	437
Grp Volume(v), veh/h				447	0	84	149	266	0	0	0	724
Grp Sat Flow(s),veh/h/ln				1776	0	1581	1757	1845	0	0	0	1750
Q Serve(g_s), s				20.5	0.0	3.4	7.2	10.4	0.0	0.0	0.0	33.3
Cycle Q Clear(g_c), s				20.5	0.0	3.4	7.2	10.4	0.0	0.0	0.0	33.3
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.25
Lane Grp Cap(c), veh/h				497	0	442	185	1092	0	0	0	780
V/C Ratio(X)				0.90	0.00	0.19	0.81	0.24	0.00	0.00	0.00	0.93
Avail Cap(c_a), veh/h				564	0	502	248	1092	0	0	0	780
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.0	0.0	23.3	40.2	18.1	0.0	0.0	0.0	22.3
Incr Delay (d2), s/veh				16.1	0.0	0.2	9.3	0.5	0.0	0.0	0.0	18.9
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	1.5	4.0	5.5	0.0	0.0	0.0	20.0
LnGrp Delay(d),s/veh				45.1	0.0	23.5	49.5	18.6	0.0	0.0	0.0	41.2
LnGrp LOS				D		C	D	B				D
Approach Vol, veh/h					531			415			724	
Approach Delay, s/veh					41.7			29.7			41.2	
Approach LOS					D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	2.4	43.9		28.7		56.3						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+19), s	19.2	35.3		22.5		12.4						
Green Ext Time (p_c), s	0.0	0.0		1.3		1.3						
Intersection Summary												
HCM 2010 Ctrl Delay				38.5								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp

Cumulative, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	110	10	190	0	0	0	0	300	320	250	670	0
Future Volume (veh/h)	110	10	190	0	0	0	0	300	320	250	670	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	117	11	23				0	319	201	266	713	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	159	15	154				0	1033	878	297	1415	0
Arrive On Green	0.11	0.10	0.10				0.00	0.56	0.56	0.34	1.00	0.00
Sat Flow, veh/h	1628	153	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	128	0	23				0	319	201	266	713	0
Grp Sat Flow(s),veh/h/ln	1781	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	5.9	0.0	1.1				0.0	7.8	5.5	12.3	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	1.1				0.0	7.8	5.5	12.3	0.0	0.0
Prop In Lane	0.91		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	174	0	154				0	1033	878	297	1415	0
V/C Ratio(X)	0.74	0.00	0.15				0.00	0.31	0.23	0.90	0.50	0.00
Avail Cap(c_a), veh/h	524	0	466				0	1033	878	348	1415	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.13	0.13	0.00
Uniform Delay (d), s/veh	36.9	0.0	35.1				0.0	9.9	9.4	27.3	0.0	0.0
Incr Delay (d2), s/veh	6.0	0.0	0.4				0.0	0.8	0.6	4.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.5				0.0	4.2	2.5	6.2	0.1	0.0
LnGrp Delay(d),s/veh	42.9	0.0	35.6				0.0	10.7	10.0	31.4	0.2	0.0
LnGrp LOS	D		D					B	B	C	A	
Approach Vol, veh/h		151						520			979	
Approach Delay, s/veh		41.7						10.5			8.6	
Approach LOS		D						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		71.8			18.2	53.6		13.2				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			14.3	9.8		7.9				
Green Ext Time (p_c), s		4.9			0.2	2.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	160	80	270	390	40	180
Future Vol, veh/h	160	80	270	390	40	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	174	87	293	424	43	196
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10.8	17.4	11.8
HCM LOS	B	C	B





















Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	180	160	80	270	390
LT Vol	40	0	0	0	270	0
Through Vol	0	0	160	0	0	390
RT Vol	0	180	0	80	0	0
Lane Flow Rate	43	196	174	87	293	424
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.089	0.334	0.302	0.134	0.502	0.666
Departure Headway (Hd)	7.363	6.147	6.244	5.533	6.162	5.656
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	487	585	576	647	587	640
Service Time	5.107	3.89	3.987	3.276	3.892	3.387
HCM Lane V/C Ratio	0.088	0.335	0.302	0.134	0.499	0.662
HCM Control Delay	10.8	12	11.7	9.1	15	19
HCM Lane LOS	B	B	B	A	B	C
HCM 95th-tile Q	0.3	1.5	1.3	0.5	2.8	5

Intersection				
Intersection Delay, s/veh	25.7			
Intersection LOS	D			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	197	333	49	901
Demand Flow Rate, veh/h	203	350	49	910
Vehicles Circulating, veh/h	549	126	715	154
Vehicles Exiting, veh/h	515	638	37	322
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.8	7.6	7.6	36.9
Approach LOS	A	A	A	E
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	203	350	49	910
Cap Entry Lane, veh/h	653	996	553	969
Entry HV Adj Factor	0.971	0.951	1.000	0.990
Flow Entry, veh/h	197	333	49	901
Cap Entry, veh/h	633	947	553	959
V/C Ratio	0.311	0.351	0.089	0.939
Control Delay, s/veh	9.8	7.6	7.6	36.9
LOS	A	A	A	E
95th %tile Queue, veh	1	2	0	15

Intersection			
Intersection Delay, s/veh	320.6		
Intersection LOS	F		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	667	1517	655
Demand Flow Rate, veh/h	834	1533	675
Vehicles Circulating, veh/h	1277	106	230
Vehicles Exiting, veh/h	362	799	1881
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	782.6	247.5	19.3
Approach LOS	F	F	C
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	834	1533	675
Cap Entry Lane, veh/h	315	1016	898
Entry HV Adj Factor	0.800	0.990	0.970
Flow Entry, veh/h	667	1517	655
Cap Entry, veh/h	252	1006	871
V/C Ratio	2.647	1.508	0.752
Control Delay, s/veh	782.6	247.5	19.3
LOS	F	F	C
95th %tile Queue, veh	56	72	7

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Cumulative with Project, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	420	10	650	120	410	1170	0
Future Volume (veh/h)	0	0	0	450	0	420	10	650	120	410	1170	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				468	54	429	11	730	68	461	1315	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				573	58	459	24	900	401	498	1839	0
Arrive On Green				0.32	0.32	0.32	0.01	0.25	0.25	0.28	0.52	0.00
Sat Flow, veh/h				1810	183	1451	1774	3539	1577	1757	3597	0
Grp Volume(v), veh/h				468	0	483	11	730	68	461	1315	0
Grp Sat Flow(s),veh/h/ln				1810	0	1634	1774	1770	1577	1757	1752	0
Q Serve(g_s), s				22.1	0.0	26.6	0.6	18.0	3.1	23.6	26.5	0.0
Cycle Q Clear(g_c), s				22.1	0.0	26.6	0.6	18.0	3.1	23.6	26.5	0.0
Prop In Lane				1.00		0.89	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				573	0	517	24	900	401	498	1839	0
V/C Ratio(X)				0.82	0.00	0.93	0.47	0.81	0.17	0.92	0.72	0.00
Avail Cap(c_a), veh/h				585	0	529	574	1145	510	568	1839	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				29.2	0.0	30.8	45.4	32.5	27.0	32.3	16.8	0.0
Incr Delay (d2), s/veh				8.7	0.0	23.7	13.6	3.6	0.2	19.8	1.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.4	0.0	15.3	0.4	9.2	1.4	14.1	12.9	0.0
LnGrp Delay(d),s/veh				37.9	0.0	54.4	59.0	36.1	27.2	52.0	18.1	0.0
LnGrp LOS				D		D	E	D	C	D	B	
Approach Vol, veh/h					951			809			1776	
Approach Delay, s/veh					46.3			35.6			26.9	
Approach LOS					D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.7	53.7			29.8	28.6		34.4				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	28.5			25.6	20.0		28.6				
Green Ext Time (p_c), s	0.0	1.2			0.7	3.6		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				34.1								
HCM 2010 LOS				C								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
2: 2nd Avenue & Patton Parkway

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Future Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	98	65	33	98	109	76	239	109	98	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	247	164	67	177	197	121	330	151	139	407	101
Arrive On Green	0.05	0.24	0.24	0.04	0.22	0.22	0.07	0.27	0.27	0.08	0.28	0.28
Sat Flow, veh/h	1774	1046	694	1774	807	897	1774	1212	553	1774	1441	359
Grp Volume(v), veh/h	54	0	163	33	0	207	76	0	348	98	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1740	1774	0	1704	1774	0	1765	1774	0	1799
Q Serve(g_s), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Cycle Q Clear(g_c), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Prop In Lane	1.00		0.40	1.00		0.53	1.00		0.31	1.00		0.20
Lane Grp Cap(c), veh/h	97	0	411	67	0	374	121	0	481	139	0	509
V/C Ratio(X)	0.56	0.00	0.40	0.50	0.00	0.55	0.63	0.00	0.72	0.71	0.00	0.53
Avail Cap(c_a), veh/h	235	0	1364	235	0	1336	235	0	1384	235	0	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	14.6	21.4	0.0	15.7	20.5	0.0	14.9	20.4	0.0	13.7
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.6	0.0	1.3	5.3	0.0	2.1	6.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8	0.5	0.0	2.4	1.1	0.0	4.1	1.4	0.0	3.0
LnGrp Delay(d),s/veh	25.9	0.0	15.2	27.0	0.0	17.0	25.9	0.0	17.0	26.8	0.0	14.6
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		217			240			424			369	
Approach Delay, s/veh		17.8			18.4			18.6			17.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.8	5.7	15.2	7.1	17.3	6.5	14.4				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	6.0	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14.4), s	11.4	10.1	2.8	5.6	3.9	7.8	3.3	6.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.0	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				18.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1180	0	0	0	0	0	980	10	0
Future Volume (veh/h)	0	0	0	1180	0	0	0	0	0	980	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1297	0	0				1077	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				996	0	0				657	7	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1757	0	0				1740	18	0
Grp Volume(v), veh/h				1297	0	0				1088	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				996	0	0				664	0	0
V/C Ratio(X)				1.30	0.00	0.00				1.64	0.00	0.00
Avail Cap(c_a), veh/h				996	0	0				664	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				143.6	0.0	0.0				294.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				83.1	0.0	0.0				83.2	0.0	0.0
LnGrp Delay(d),s/veh				178.0	0.0	0.0				343.4	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1297						1088	
Approach Delay, s/veh					178.0						343.4	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				253.4								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	990	0	0	1140	440	10	10	1060	0	0	0
Future Vol, veh/h	10	990	0	0	1140	440	10	10	1060	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	10	1021	0	0	1175	454	10	10	1093	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1175	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	591	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	591	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	135.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	46	-	591	-	-
HCM Lane V/C Ratio	0.448	-	0.017	-	-
HCM Control Delay (s)	135.7	0	11.2	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.6	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative with Project, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1160	880	520	1010	120	370	90	200	50	100	210
Future Volume (veh/h)	180	1160	880	520	1010	120	370	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	1184	679	531	1031	122	378	92	82	51	102	209
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	220	1204	539	585	1231	146	447	428	363	91	276	247
Arrive On Green	0.12	0.34	0.34	0.17	0.39	0.39	0.13	0.24	0.24	0.05	0.15	0.15
Sat Flow, veh/h	1774	3539	1583	3442	3189	377	3343	1810	1536	1810	1805	1612
Grp Volume(v), veh/h	184	1184	679	531	572	581	378	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1796	1672	1810	1536	1810	1805	1612
Q Serve(g_s), s	8.9	29.2	30.0	13.3	25.8	25.9	9.7	3.6	3.8	2.4	4.5	11.1
Cycle Q Clear(g_c), s	8.9	29.2	30.0	13.3	25.8	25.9	9.7	3.6	3.8	2.4	4.5	11.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1204	539	585	683	694	447	428	363	91	276	247
V/C Ratio(X)	0.83	0.98	1.26	0.91	0.84	0.84	0.85	0.22	0.23	0.56	0.37	0.85
Avail Cap(c_a), veh/h	302	1204	539	585	683	694	758	431	366	205	430	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	28.8	29.1	35.9	24.5	24.6	37.3	27.1	27.2	40.9	33.5	36.3
Incr Delay (d2), s/veh	10.2	21.8	131.6	17.5	8.5	8.4	1.7	0.1	0.1	2.0	0.3	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	17.8	32.7	7.8	14.2	14.4	4.6	1.8	1.6	1.3	2.3	5.3
LnGrp Delay(d),s/veh	47.9	50.7	160.7	53.4	33.0	33.0	39.0	27.2	27.3	42.9	33.8	42.4
LnGrp LOS	D	D	F	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		2047			1684			552			362	
Approach Delay, s/veh		86.9			39.4			35.3			40.1	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.5	35.3	15.3	18.1	15.5	39.3	7.9	25.4				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	15.3	32.0	11.7	13.1	10.9	27.9	4.4	5.8				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3	0.0	0.5	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			59.9									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	1010	220	350	1510	30	130	10	70	10	10	30
Future Volume (veh/h)	50	1010	220	350	1510	30	130	10	70	10	10	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	1052	200	365	1573	30	135	10	19	10	10	-4
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	64	1178	223	380	2042	39	318	77	146	302	257	0
Arrive On Green	0.04	0.40	0.40	0.21	0.57	0.57	0.14	0.14	0.14	0.14	0.14	0.00
Sat Flow, veh/h	1774	2969	563	1774	3553	68	1358	558	1059	1370	1863	0
Grp Volume(v), veh/h	52	626	626	365	782	821	135	0	29	10	6	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1763	1774	1770	1851	1358	0	1617	1370	1863	0
Q Serve(g_s), s	1.6	17.7	17.9	10.9	18.1	18.2	5.1	0.0	0.8	0.3	0.1	0.0
Cycle Q Clear(g_c), s	1.6	17.7	17.9	10.9	18.1	18.2	5.3	0.0	0.8	1.2	0.1	0.0
Prop In Lane	1.00		0.32	1.00		0.04	1.00		0.66	1.00		0.00
Lane Grp Cap(c), veh/h	64	702	699	380	1017	1064	318	0	223	302	257	0
V/C Ratio(X)	0.82	0.89	0.90	0.96	0.77	0.77	0.42	0.00	0.13	0.03	0.02	0.00
Avail Cap(c_a), veh/h	380	1070	1066	380	1070	1120	825	0	828	814	953	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.7	15.1	15.2	20.9	8.7	8.7	22.3	0.0	20.3	20.8	20.0	0.0
Incr Delay (d2), s/veh	9.1	4.6	4.8	35.8	2.9	2.8	0.3	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	9.4	9.5	9.0	9.5	10.0	1.9	0.0	0.4	0.1	0.1	0.0
LnGrp Delay(d),s/veh	34.9	19.7	20.0	56.7	11.6	11.6	22.6	0.0	20.4	20.9	20.0	0.0
LnGrp LOS	C	B	B	E	B	B	C		C	C	C	
Approach Vol, veh/h		1304			1968			164			16	
Approach Delay, s/veh		20.4			19.9			22.2			20.6	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	26.8		11.9	5.4	36.4		11.9				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	1.5	19.9		3.2	3.6	20.2		7.3				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	1.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				20.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
7: 4th Avenue & Imjin Parkway

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1110	20	10	1820	10	10	10	10	10	10	10
Future Volume (veh/h)	10	1110	20	10	1820	10	10	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1267	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1156	20	10	1896	9	10	10	9	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	50	50	50	0	0	0
Cap, veh/h	14	2036	35	14	2066	10	152	19	17	160	29	29
Arrive On Green	0.01	0.57	0.57	0.01	0.57	0.57	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1774	3560	62	1774	3612	17	390	390	351	580	580	580
Grp Volume(v), veh/h	10	575	601	10	928	977	29	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1852	1774	1770	1860	1132	0	0	1740	0	0
Q Serve(g_s), s	0.2	7.5	7.5	0.2	17.2	17.2	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	7.5	7.5	0.2	17.2	17.2	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.01	0.34		0.31	0.33		0.33
Lane Grp Cap(c), veh/h	14	1012	1059	14	1012	1064	189	0	0	218	0	0
V/C Ratio(X)	0.71	0.57	0.57	0.71	0.92	0.92	0.15	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	560	1580	1653	560	1580	1660	951	0	0	1361	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.0	4.9	4.9	18.0	7.0	7.0	16.8	0.0	0.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	21.6	0.2	0.2	21.6	4.3	4.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	3.7	0.2	9.2	9.6	0.3	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	39.6	5.1	5.1	39.6	11.3	11.2	17.0	0.0	0.0	16.8	0.0	0.0
LnGrp LOS	D	A	A	D	B	B	B			B		
Approach Vol, veh/h		1186			1915			29			30	
Approach Delay, s/veh		5.4			11.4			17.0			16.8	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	26.3		6.3	3.8	26.3		6.3				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	12.2	9.5		2.6	2.2	19.2		2.9				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	1.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				9.2								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1020	20	10	1200	80	20	20	10	100	130	490
Future Volume (veh/h)	140	1020	20	10	1200	80	20	20	10	100	130	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	147	1074	19	11	1263	78	21	21	10	105	137	442
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	185	1773	31	15	1350	83	157	137	52	123	110	312
Arrive On Green	0.10	0.49	0.49	0.01	0.40	0.40	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1792	3592	64	1774	3387	209	275	461	175	205	368	1047
Grp Volume(v), veh/h	147	534	559	11	659	682	52	0	0	684	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1868	1774	1770	1826	911	0	0	1620	0	0
Q Serve(g_s), s	5.4	14.5	14.5	0.4	23.9	24.0	0.0	0.0	0.0	16.6	0.0	0.0
Cycle Q Clear(g_c), s	5.4	14.5	14.5	0.4	23.9	24.0	1.6	0.0	0.0	20.0	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.11	0.40		0.19	0.15		0.65
Lane Grp Cap(c), veh/h	185	882	922	15	706	728	347	0	0	545	0	0
V/C Ratio(X)	0.80	0.61	0.61	0.75	0.93	0.94	0.15	0.00	0.00	1.25	0.00	0.00
Avail Cap(c_a), veh/h	401	882	922	397	792	817	347	0	0	545	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.4	12.3	12.3	33.2	19.3	19.3	17.1	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.9	0.8	24.0	16.2	16.2	0.1	0.0	0.0	129.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	7.3	7.7	0.3	14.7	15.2	0.7	0.0	0.0	29.5	0.0	0.0
LnGrp Delay(d),s/veh	32.3	13.1	13.1	57.2	35.5	35.6	17.2	0.0	0.0	153.6	0.0	0.0
LnGrp LOS	C	B	B	E	D	D	B			F		
Approach Vol, veh/h		1240			1352			52			684	
Approach Delay, s/veh		15.4			35.7			17.2			153.6	
Approach LOS		B			D			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.1	38.4		24.6	10.4	32.0		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	5.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1), s	12.4	16.5		22.0	7.4	26.0		3.6				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.7		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				52.1								
HCM 2010 LOS				D								

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	30	30	220	620	80
Future Vol, veh/h	30	30	30	220	620	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	33	33	239	674	87

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1023	718	761	0	0
Stage 1	718	-	-	-	-
Stage 2	305	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	261	429	851	-	-
Stage 1	483	-	-	-	-
Stage 2	748	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	251	429	851	-	-
Mov Cap-2 Maneuver	251	-	-	-	-
Stage 1	464	-	-	-	-
Stage 2	748	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.3	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	851	-	317	-	-
HCM Lane V/C Ratio	0.038	-	0.206	-	-
HCM Control Delay (s)	9.4	-	19.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative with Project, AM
 06/11/2019

Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	900	250	550	1170	100	160		
Future Volume (veh/h)	900	250	550	1170	100	160		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	947	250	579	1232	91	183		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	1030	271	548	2685	153	273		
Arrive On Green	0.37	0.37	0.31	0.77	0.09	0.09		
Sat Flow, veh/h	2866	730	1757	3597	1723	3076		
Grp Volume(v), veh/h	604	593	579	1232	91	183		
Grp Sat Flow(s),veh/h/ln	1770	1734	1757	1752	1723	1538		
Q Serve(g_s), s	20.9	21.0	20.0	8.1	3.3	3.7		
Cycle Q Clear(g_c), s	20.9	21.0	20.0	8.1	3.3	3.7		
Prop In Lane		0.42	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	657	644	548	2685	153	273		
V/C Ratio(X)	0.92	0.92	1.06	0.46	0.59	0.67		
Avail Cap(c_a), veh/h	828	812	548	2685	592	1056		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.2	19.3	22.0	2.7	28.1	28.3		
Incr Delay (d2), s/veh	11.7	12.4	54.1	0.0	1.4	1.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	12.2	12.1	17.8	3.8	1.6	1.6		
LnGrp Delay(d),s/veh	30.9	31.6	76.1	2.8	29.5	29.3		
LnGrp LOS	C	C	F	A	C	C		
Approach Vol, veh/h	1197			1811	274			
Approach Delay, s/veh	31.3			26.2	29.4			
Approach LOS	C			C	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	25.3	29.1				54.4		9.7
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	22.0	23.0				10.1		5.7
Green Ext Time (p_c), s	0.0	0.8				1.5		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			28.3					
HCM 2010 LOS			C					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	50	840	80	90	1250	70	320	30	90	90	50	250
Future Volume (veh/h)	50	840	80	90	1250	70	320	30	90	90	50	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	54	903	74	97	1344	70	344	32	0	97	54	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	180	1670	137	160	1670	87	457	550	468	479	555	472
Arrive On Green	0.05	0.50	0.50	0.05	0.49	0.49	0.30	0.30	0.00	0.30	0.30	0.00
Sat Flow, veh/h	3476	3346	274	3442	3423	178	1330	1845	1568	1370	1863	1583
Grp Volume(v), veh/h	54	482	495	97	694	720	344	32	0	97	54	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1833	1721	1770	1831	1330	1845	1568	1370	1863	1583
Q Serve(g_s), s	1.2	15.2	15.2	2.3	27.1	27.2	20.7	1.0	0.0	4.5	1.7	0.0
Cycle Q Clear(g_c), s	1.2	15.2	15.2	2.3	27.1	27.2	22.4	1.0	0.0	5.5	1.7	0.0
Prop In Lane	1.00		0.15	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	892	915	160	863	893	457	550	468	479	555	472
V/C Ratio(X)	0.30	0.54	0.54	0.61	0.80	0.81	0.75	0.06	0.00	0.20	0.10	0.00
Avail Cap(c_a), veh/h	848	1090	1117	839	1079	1117	547	675	574	572	682	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.4	14.1	14.1	38.4	17.7	17.7	28.9	20.5	0.0	22.5	20.8	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.2	1.4	2.8	2.8	3.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.4	7.6	1.1	13.8	14.3	8.0	0.5	0.0	1.7	0.9	0.0
LnGrp Delay(d),s/veh	37.8	14.3	14.3	39.7	20.5	20.5	32.6	20.6	0.0	22.6	20.8	0.0
LnGrp LOS	D	B	B	D	C	C	C	C		C	C	
Approach Vol, veh/h		1031			1511			376			151	
Approach Delay, s/veh		15.5			21.8			31.6			22.0	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	46.2		28.5	8.2	45.3		28.5				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+14), s	14.3	17.2		7.5	3.2	29.2		24.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	1.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative with Project, AM
 06/11/2019

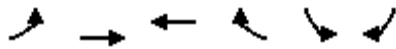


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	180	50	810	10	20	30	1220	890	20	60	590	90
Future Volume (veh/h)	180	50	810	10	20	30	1220	890	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	194	54	457	11	22	19	1312	957	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	479	259	1343	53	56	47	1182	2087	932	114	988	435
Arrive On Green	0.14	0.14	0.14	0.03	0.03	0.03	0.34	0.59	0.59	0.03	0.28	0.28
Sat Flow, veh/h	3442	1863	2777	1560	1638	1382	3442	3539	1581	3442	3539	1558
Grp Volume(v), veh/h	194	54	457	11	22	19	1312	957	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1388	1560	1638	1382	1721	1770	1581	1721	1770	1558
Q Serve(g_s), s	5.2	2.6	10.4	0.7	1.3	1.4	35.0	15.5	0.4	1.9	16.0	1.6
Cycle Q Clear(g_c), s	5.2	2.6	10.4	0.7	1.3	1.4	35.0	15.5	0.4	1.9	16.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	479	259	1343	53	56	47	1182	2087	932	114	988	435
V/C Ratio(X)	0.41	0.21	0.34	0.21	0.39	0.40	1.11	0.46	0.02	0.57	0.64	0.08
Avail Cap(c_a), veh/h	1182	640	1911	475	498	420	1182	2087	932	675	2084	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	38.9	16.3	47.9	48.2	48.2	33.5	11.8	8.7	48.6	32.2	27.1
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.7	1.7	2.0	61.8	0.4	0.0	1.7	1.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.4	4.0	0.3	0.6	0.6	26.7	7.7	0.2	0.9	8.1	0.7
LnGrp Delay(d),s/veh	40.2	39.0	16.4	48.6	49.8	50.2	95.2	12.2	8.7	50.2	34.2	27.3
LnGrp LOS	D	D	B	D	D	D	F	B	A	D	C	C
Approach Vol, veh/h		705			52			2285			733	
Approach Delay, s/veh		24.7			49.7			59.9			35.3	
Approach LOS		C			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	34.7		8.5	7.5	66.3		19.7				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	18.0		3.4	3.9	17.5		12.4				
Green Ext Time (p_c), s	0.0	10.4		0.1	0.0	15.3		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			48.4									
HCM 2010 LOS			D									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	1060	380	720	40	40	1410		
Future Volume (veh/h)	1060	380	720	40	40	1410		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1140	409	774	24	43	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1208	3074	843	716	99	80		
Arrive On Green	0.35	0.87	0.46	0.46	0.03	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1140	409	774	24	43	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	29.2	1.6	35.7	0.8	1.1	0.0		
Cycle Q Clear(g_c), s	29.2	1.6	35.7	0.8	1.1	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1208	3074	843	716	99	80		
V/C Ratio(X)	0.94	0.13	0.92	0.03	0.43	0.00		
Avail Cap(c_a), veh/h	1516	3074	1219	1036	1013	821		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	28.6	0.9	23.1	13.6	43.3	0.0		
Incr Delay (d2), s/veh	9.8	0.0	7.7	0.0	1.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/lt	5.4	0.7	19.9	0.3	0.5	0.0		
LnGrp Delay(d),s/veh	38.4	0.9	30.8	13.6	44.4	0.0		
LnGrp LOS	D	A	C	B	D			
Approach Vol, veh/h		1549	798		43			
Approach Delay, s/veh		28.5	30.3		44.4			
Approach LOS		C	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		84.6		6.1	37.4	47.3		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		3.6		3.1	31.2	37.7		
Green Ext Time (p_c), s		1.9		0.0	0.7	3.8		
Intersection Summary								
HCM 2010 Ctrl Delay			29.4					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	190	370	600	600	310	190		
Future Volume (veh/h)	190	370	600	600	310	190		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	202	355	638	638	330	186		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	354	795	542	2236	555	307		
Arrive On Green	0.20	0.20	0.31	0.63	0.25	0.25		
Sat Flow, veh/h	1757	1568	1774	3632	2273	1204		
Grp Volume(v), veh/h	202	355	638	638	264	252		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1632		
Q Serve(g_s), s	6.8	9.4	20.0	5.3	8.7	8.9		
Cycle Q Clear(g_c), s	6.8	9.4	20.0	5.3	8.7	8.9		
Prop In Lane	1.00	1.00	1.00			0.74		
Lane Grp Cap(c), veh/h	354	795	542	2236	446	416		
V/C Ratio(X)	0.57	0.45	1.18	0.29	0.59	0.61		
Avail Cap(c_a), veh/h	724	1126	542	3243	1606	1496		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	23.6	10.3	22.7	5.4	21.4	21.5		
Incr Delay (d2), s/veh	1.4	0.4	97.8	0.1	2.3	2.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.4	4.2	24.4	2.6	4.5	4.3		
LnGrp Delay(d),s/veh	25.0	10.7	120.5	5.5	23.7	24.2		
LnGrp LOS	C	B	F	A	C	C		
Approach Vol, veh/h	557			1276	516			
Approach Delay, s/veh	15.9			63.0	23.9			
Approach LOS	B			E	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	24.7	23.1				47.8		17.7
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Yc), s	22.6	10.9				7.3		11.4
Green Ext Time (p_c), s	0.0	5.8				8.0		1.8
Intersection Summary								
HCM 2010 Ctrl Delay			43.3					
HCM 2010 LOS			D					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	10	10	10	260	10	20	20	390	30	40	920	10
Future Volume (veh/h)	10	10	10	260	10	20	20	390	30	40	920	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	11	-24	277	11	20	21	415	27	43	979	4
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	318	283	450	513	15	27	46	1337	87	81	1491	6
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.03	0.39	0.39	0.05	0.41	0.41
Sat Flow, veh/h	731	1006	1599	1318	52	95	1792	3406	221	1774	3615	15
Grp Volume(v), veh/h	22	0	-24	308	0	0	21	217	225	43	479	504
Grp Sat Flow(s),veh/h/ln1737	0	1599	1466	0	0	1792	1787	1840	1774	1770	1860	
Q Serve(g_s), s	0.0	0.0	0.0	8.7	0.0	0.0	0.6	4.0	4.1	1.1	10.5	10.5
Cycle Q Clear(g_c), s	0.4	0.0	0.0	9.2	0.0	0.0	0.6	4.0	4.1	1.1	10.5	10.5
Prop In Lane	0.50		1.00	0.90		0.06	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	601	0	450	555	0	0	46	701	722	81	730	767
V/C Ratio(X)	0.04	0.00	-0.05	0.56	0.00	0.00	0.46	0.31	0.31	0.53	0.66	0.66
Avail Cap(c_a), veh/h	1146	0	998	1053	0	0	429	1673	1723	424	1657	1741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	0.0	15.7	0.0	0.0	23.1	10.1	10.1	22.4	11.4	11.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.9	0.0	0.0	7.1	0.2	0.2	5.4	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.2	0.0	0.0	3.8	0.0	0.0	0.4	2.0	2.1	0.7	5.3	5.5	
LnGrp Delay(d),s/veh	12.6	0.0	0.0	16.5	0.0	0.0	30.2	10.3	10.4	27.8	12.4	12.3
LnGrp LOS	B			B			C	B	B	C	B	B
Approach Vol, veh/h		-2			308			463			1026	
Approach Delay, s/veh		-138.5			16.5			11.2			13.0	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.5	4.7	24.8		18.5	5.7	23.9				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		30.0	11.5	45.0		30.0	11.5	45.0				
Max Q Clear Time (g_c+I1), s		2.4	2.6	12.5		11.2	3.1	6.1				
Green Ext Time (p_c), s		0.1	0.0	7.1		1.6	0.0	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay				13.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative with Project, AM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	380	40	510	160	80	1070		
Future Volume (veh/h)	380	40	510	160	80	1070		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1583	1583	1863	1900	1881	1881		
Adj Flow Rate, veh/h	400	26	537	152	84	1126		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	20	20	2	2	1	1		
Cap, veh/h	471	420	948	267	124	1740		
Arrive On Green	0.31	0.31	0.35	0.35	0.07	0.49		
Sat Flow, veh/h	1508	1346	2821	769	1792	3668		
Grp Volume(v), veh/h	400	26	348	341	84	1126		
Grp Sat Flow(s),veh/h/ln	1508	1346	1770	1727	1792	1787		
Q Serve(g_s), s	12.4	0.7	7.9	8.0	2.3	11.8		
Cycle Q Clear(g_c), s	12.4	0.7	7.9	8.0	2.3	11.8		
Prop In Lane	1.00	1.00		0.45	1.00			
Lane Grp Cap(c), veh/h	471	420	615	600	124	1740		
V/C Ratio(X)	0.85	0.06	0.57	0.57	0.68	0.65		
Avail Cap(c_a), veh/h	908	811	1599	1560	414	4306		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	16.0	12.0	13.2	13.2	22.6	9.6		
Incr Delay (d2), s/veh	4.4	0.1	0.8	0.8	6.4	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.7	0.6	4.0	3.9	1.3	5.7		
LnGrp Delay(d),s/veh	20.4	12.1	14.0	14.1	29.0	10.0		
LnGrp LOS	C	B	B	B	C	A		
Approach Vol, veh/h	426		689			1210		
Approach Delay, s/veh	19.9		14.0			11.3		
Approach LOS	B		B			B		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				29.2		20.6	6.9	22.3
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				13.8		14.4	4.3	10.0
Green Ext Time (p_c), s				10.5		1.2	0.1	4.7
Intersection Summary								
HCM 2010 Ctrl Delay			13.7					
HCM 2010 LOS			B					



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	40	30	680	60	30	1440		
Future Volume (veh/h)	40	30	680	60	30	1440		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1881	1881		
Adj Flow Rate, veh/h	43	8	731	57	32	1548		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	1	1	1	1		
Cap, veh/h	190	169	1876	146	66	2405		
Arrive On Green	0.10	0.10	0.56	0.56	0.04	0.67		
Sat Flow, veh/h	1810	1615	3454	262	1792	3668		
Grp Volume(v), veh/h	43	8	389	399	32	1548		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1835	1792	1787		
Q Serve(g_s), s	1.0	0.2	5.5	5.5	0.8	11.2		
Cycle Q Clear(g_c), s	1.0	0.2	5.5	5.5	0.8	11.2		
Prop In Lane	1.00	1.00		0.14	1.00			
Lane Grp Cap(c), veh/h	190	169	998	1025	66	2405		
V/C Ratio(X)	0.23	0.05	0.39	0.39	0.49	0.64		
Avail Cap(c_a), veh/h	1408	1257	1590	1632	458	4371		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.5	18.1	5.6	5.6	21.2	4.2		
Incr Delay (d2), s/veh	0.6	0.1	0.2	0.2	5.5	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	0.2	2.8	2.8	0.5	5.5		
LnGrp Delay(d),s/veh	19.1	18.2	5.9	5.8	26.8	4.5		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	51		788			1580		
Approach Delay, s/veh	18.9		5.8			5.0		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				35.3		9.7	5.1	30.1
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				13.2		3.0	2.8	7.5
Green Ext Time (p_c), s				17.0		0.1	0.0	5.4
Intersection Summary								
HCM 2010 Ctrl Delay			5.6					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh	10.5											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	20	10	70	20	30	20	180	100	30	160	10
Future Vol, veh/h	10	20	10	70	20	30	20	180	100	30	160	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	12	24	12	82	24	35	24	212	118	35	188	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.8	11.3	10.1
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	25%	58%	15%
Vol Thru, %	60%	50%	17%	80%
Vol Right, %	33%	25%	25%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	40	120	200
LT Vol	20	10	70	30
Through Vol	180	20	20	160
RT Vol	100	10	30	10
Lane Flow Rate	353	47	141	235
Geometry Grp	1	1	1	1
Degree of Util (X)	0.447	0.073	0.208	0.314
Departure Headway (Hd)	4.562	5.567	5.302	4.802
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	784	648	671	741
Service Time	2.625	3.567	3.39	2.874
HCM Lane V/C Ratio	0.45	0.073	0.21	0.317
HCM Control Delay	11.3	9	9.8	10.1
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	2.3	0.2	0.8	1.3

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

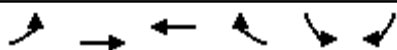
Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	110	0	0	250	50	50	160	70	400	0	10
Future Volume (veh/h)	10	110	0	0	250	50	50	160	70	400	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	0	0	1845	1845	1900	1597	1900	1900	1776	1776
Adj Flow Rate, veh/h	12	136	0	0	309	0	62	198	53	494	0	5
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	0	0	3	3	19	19	19	7	7	7
Cap, veh/h	20	490	0	0	406	345	71	228	61	530	0	473
Arrive On Green	0.01	0.28	0.00	0.00	0.22	0.00	0.24	0.24	0.24	0.31	0.00	0.31
Sat Flow, veh/h	1675	1759	0	0	1845	1568	304	971	260	1691	0	1509
Grp Volume(v), veh/h	12	136	0	0	309	0	313	0	0	494	0	5
Grp Sat Flow(s),veh/h/ln	1675	1759	0	0	1845	1568	1536	0	0	1691	0	1509
Q Serve(g_s), s	0.5	4.5	0.0	0.0	11.8	0.0	14.7	0.0	0.0	21.3	0.0	0.2
Cycle Q Clear(g_c), s	0.5	4.5	0.0	0.0	11.8	0.0	14.7	0.0	0.0	21.3	0.0	0.2
Prop In Lane	1.00		0.00	0.00		1.00	0.20		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	20	490	0	0	406	345	361	0	0	530	0	473
V/C Ratio(X)	0.61	0.28	0.00	0.00	0.76	0.00	0.87	0.00	0.00	0.93	0.00	0.01
Avail Cap(c_a), veh/h	89	938	0	0	799	679	471	0	0	541	0	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	21.2	0.0	0.0	27.4	0.0	27.6	0.0	0.0	25.0	0.0	17.7
Incr Delay (d2), s/veh	26.4	0.3	0.0	0.0	3.0	0.0	12.7	0.0	0.0	23.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.2	0.0	0.0	6.3	0.0	7.5	0.0	0.0	13.3	0.0	0.1
LnGrp Delay(d),s/veh	63.3	21.5	0.0	0.0	30.4	0.0	40.3	0.0	0.0	48.0	0.0	17.8
LnGrp LOS	E	C			C		D			D		B
Approach Vol, veh/h		148			309			313			499	
Approach Delay, s/veh		24.9			30.4			40.3			47.7	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		25.9		27.5	4.4	21.5		21.6				
Change Period (Y+Rc), s		5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s		40.0		24.0	4.0	32.5		23.0				
Max Q Clear Time (g_c+I1), s		6.5		23.3	2.5	13.8		16.7				
Green Ext Time (p_c), s		0.7		0.2	0.0	1.7		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay					39.0							
HCM 2010 LOS					D							

HCM 2010 Signalized Intersection Summary
23: Inter-Garrison Road & Abrams Drive

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	260	390	820	10	40	500		
Future Volume (veh/h)	260	390	820	10	40	500		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	306	459	965	6	47	370		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	211	1157	928	789	865	398		
Arrive On Green	0.13	0.66	0.49	0.49	0.25	0.25		
Sat Flow, veh/h	1675	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	306	459	965	6	47	370		
Grp Sat Flow(s),veh/h/ln	1675	1759	1881	1599	1738	1599		
Q Serve(g_s), s	11.5	11.0	45.0	0.2	0.9	20.6		
Cycle Q Clear(g_c), s	11.5	11.0	45.0	0.2	0.9	20.6		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	211	1157	928	789	865	398		
V/C Ratio(X)	1.45	0.40	1.04	0.01	0.05	0.93		
Avail Cap(c_a), veh/h	211	1157	928	789	1201	552		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.8	7.2	23.1	11.7	26.1	33.5		
Incr Delay (d2), s/veh	226.3	0.1	40.3	0.0	0.0	15.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/lt	8.6	5.3	33.6	0.1	0.5	18.1		
LnGrp Delay(d),s/veh	266.1	7.3	63.4	11.7	26.1	49.2		
LnGrp LOS	F	A	F	B	C	D		
Approach Vol, veh/h		765	971		417			
Approach Delay, s/veh		110.8	63.1		46.6			
Approach LOS		F	E		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		65.0		26.2	15.0	50.0		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		13.0		22.6	13.5	47.0		
Green Ext Time (p_c), s		0.4		0.1	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			76.9					
HCM 2010 LOS			E					

Intersection	
Intersection Delay, s/veh	49.4
Intersection LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	70	380	660	10	70	160
Future Vol, veh/h	70	380	660	10	70	160
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	5	5	1	1	3	3
Mvmt Flow	89	481	835	13	89	203
Number of Lanes	1	1	2	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	3
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	77.7	41.6	16.7
HCM LOS	F	E	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	380	330	330	10	70	160
LT Vol	70	0	0	0	0	70	0
Through Vol	0	380	330	330	0	0	0
RT Vol	0	0	0	0	10	0	160
Lane Flow Rate	89	481	418	418	13	89	203
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.209	1.067	0.863	0.863	0.017	0.228	0.451
Departure Headway (Hd)	8.5	7.987	7.638	7.638	5.162	9.48	8.245
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	457	476	476	698	381	439
Service Time	6.2	5.687	5.338	5.338	2.862	7.18	5.945
HCM Lane V/C Ratio	0.21	1.053	0.878	0.878	0.019	0.234	0.462
HCM Control Delay	13.4	89.5	42.1	42.1	8	15	17.5
HCM Lane LOS	B	F	E	E	A	B	C
HCM 95th-tile Q	0.8	15.4	9	9	0.1	0.9	2.3

Intersection						
Intersection Delay, s/veh	80.7					
Intersection LOS	F					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	370	80	170	210	110	510
Future Vol, veh/h	370	80	170	210	110	510
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	451	98	207	256	134	622
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	67.3	49.6	109.5
HCM LOS	F	E	F

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	45%	0%	0%
Vol Right, %	0%	0%	55%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	370	80	380	110	510
LT Vol	370	0	0	110	0
Through Vol	0	80	170	0	0
RT Vol	0	0	210	0	510
Lane Flow Rate	451	98	463	134	622
Geometry Grp	7	7	4	7	7
Degree of Util (X)	1.019	0.207	0.91	0.3	1.198
Departure Headway (Hd)	8.701	8.183	7.589	8.216	6.932
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	420	441	482	440	522
Service Time	6.401	5.883	5.589	5.916	4.68
HCM Lane V/C Ratio	1.074	0.222	0.961	0.305	1.192
HCM Control Delay	79	13	49.6	14.4	130
HCM Lane LOS	F	B	E	B	F
HCM 95th-tile Q	13.1	0.8	10.3	1.2	22.9

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	520	120	160	970	0	200	0	270	0	0	0
Future Volume (veh/h)	0	520	120	160	970	0	200	0	270	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	584	133	180	1090	0	225	0	231			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	4	1096	249	228	2111	0	332	0	296			
Arrive On Green	0.00	0.39	0.39	0.13	0.60	0.00	0.19	0.00	0.19			
Sat Flow, veh/h	1740	2811	639	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	360	357	180	1090	0	225	0	231			
Grp Sat Flow(s),veh/h/ln	1740	1736	1714	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	7.4	7.4	4.5	8.3	0.0	5.4	0.0	6.4			
Cycle Q Clear(g_c), s	0.0	7.4	7.4	4.5	8.3	0.0	5.4	0.0	6.4			
Prop In Lane	1.00		0.37	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	4	677	668	228	2111	0	332	0	296			
V/C Ratio(X)	0.00	0.53	0.53	0.79	0.52	0.00	0.68	0.00	0.78			
Avail Cap(c_a), veh/h	753	2252	2225	767	4593	0	1046	0	934			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.9	10.9	19.5	5.4	0.0	17.6	0.0	17.9			
Incr Delay (d2), s/veh	0.0	1.2	1.2	2.3	0.2	0.0	0.9	0.0	1.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.7	3.7	2.3	4.0	0.0	2.7	0.0	2.9			
LnGrp Delay(d),s/veh	0.0	12.1	12.1	21.8	5.7	0.0	18.5	0.0	19.6			
LnGrp LOS		B	B	C	A		B		B			
Approach Vol, veh/h		717			1270			456				
Approach Delay, s/veh		12.1			8.0			19.1				
Approach LOS		B			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	9.5	23.4			0.0	33.0		13.3				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax)	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+10)	5	9.4			0.0	10.3		8.4				
Green Ext Time (p_c), s	0.0	8.6			0.0	11.1		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
27: Reservation Road & Watkins Gate Road

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	260	170	1370	890	60		
Future Volume (veh/h)	10	260	170	1370	890	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	11	55	185	1489	967	58		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	103	92	231	2495	1702	102		
Arrive On Green	0.06	0.06	0.13	0.70	0.50	0.50		
Sat Flow, veh/h	1774	1583	1774	3632	3486	204		
Grp Volume(v), veh/h	11	55	185	1489	504	521		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1827		
Q Serve(g_s), s	0.3	1.9	5.5	11.7	10.9	10.9		
Cycle Q Clear(g_c), s	0.3	1.9	5.5	11.7	10.9	10.9		
Prop In Lane	1.00	1.00	1.00			0.11		
Lane Grp Cap(c), veh/h	103	92	231	2495	888	916		
V/C Ratio(X)	0.11	0.60	0.80	0.60	0.57	0.57		
Avail Cap(c_a), veh/h	599	535	583	4425	1502	1550		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	24.5	25.2	23.1	4.1	9.5	9.5		
Incr Delay (d2), s/veh	0.2	2.3	2.4	0.4	0.9	0.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.9	2.9	5.7	5.4	5.6		
LnGrp Delay(d),s/veh	24.6	27.5	25.6	4.5	10.4	10.4		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	66			1674	1025			
Approach Delay, s/veh	27.0			6.8	10.4			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.7	11.1	34.0				45.1
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		18.5	18.0	46.5				68.5
Max Q Clear Time (g_c+I1), s		3.9	7.5	12.9				13.7
Green Ext Time (p_c), s		0.0	0.0	11.0				24.9
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
 28: Davis Road & Reservation Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	550	310	10	10	560	90	10	10	10	150	10	640
Future Volume (veh/h)	550	310	10	10	560	90	10	10	10	150	10	640
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	640	360	12	12	651	105	12	12	9	174	12	502
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	376	2185	73	19	664	107	17	17	12	350	24	665
Arrive On Green	0.21	0.62	0.62	0.01	0.42	0.42	0.03	0.03	0.03	0.21	0.21	0.21
Sat Flow, veh/h	1774	3496	116	1774	1566	253	648	648	486	1649	114	1568
Grp Volume(v), veh/h	640	182	190	12	0	756	33	0	0	186	0	502
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1774	0	1818	1782	0	0	1762	0	1568
Q Serve(g_s), s	30.0	6.1	6.1	1.0	0.0	58.0	2.6	0.0	0.0	13.1	0.0	30.0
Cycle Q Clear(g_c), s	30.0	6.1	6.1	1.0	0.0	58.0	2.6	0.0	0.0	13.1	0.0	30.0
Prop In Lane	1.00		0.06	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	376	1106	1151	19	0	771	46	0	0	374	0	665
V/C Ratio(X)	1.70	0.16	0.17	0.64	0.00	0.98	0.72	0.00	0.00	0.50	0.00	0.75
Avail Cap(c_a), veh/h	376	1106	1151	376	0	771	378	0	0	374	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	11.1	11.1	69.7	0.0	40.1	68.4	0.0	0.0	49.1	0.0	34.5
Incr Delay (d2), s/veh	326.5	0.1	0.1	12.4	0.0	27.5	7.7	0.0	0.0	0.4	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/#	8.8	3.0	3.1	0.5	0.0	34.9	1.4	0.0	0.0	6.4	0.0	17.3
LnGrp Delay(d),s/veh	382.2	11.2	11.2	82.1	0.0	67.7	76.1	0.0	0.0	49.5	0.0	38.9
LnGrp LOS	F	B	B	F		E	E			D		D
Approach Vol, veh/h		1012			768			33			688	
Approach Delay, s/veh		245.8			67.9			76.1			41.7	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	93.4		35.0	33.8	65.0		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+13), s	3.0	8.1		32.0	32.0	60.0		4.6				
Green Ext Time (p_c), s	0.0	3.3		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	132.8											
HCM 2010 LOS	F											
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	80	10	40	70	20	20	130	640	130	20	1200	250
Future Volume (veh/h)	80	10	40	70	20	20	130	640	130	20	1200	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	88	11	44	77	22	22	143	703	143	22	1319	275
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	182	32	59	282	70	300	181	1756	357	44	1542	317
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.10	0.60	0.60	0.02	0.52	0.52
Sat Flow, veh/h	540	171	316	1033	377	1612	1774	2930	596	1792	2953	607
Grp Volume(v), veh/h	143	0	0	99	0	22	143	424	422	22	791	803
Grp Sat Flow(s),veh/h/ln1026	0	0	1410	0	1612	1774	1770	1756	1792	1787	1773	
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.8	5.6	9.0	9.0	0.9	27.0	28.2
Cycle Q Clear(g_c), s	10.3	0.0	0.0	4.3	0.0	0.8	5.6	9.0	9.0	0.9	27.0	28.2
Prop In Lane	0.62		0.31	0.78		1.00	1.00		0.34	1.00		0.34
Lane Grp Cap(c), veh/h	273	0	0	352	0	300	181	1061	1053	44	933	926
V/C Ratio(X)	0.52	0.00	0.00	0.28	0.00	0.07	0.79	0.40	0.40	0.50	0.85	0.87
Avail Cap(c_a), veh/h	670	0	0	799	0	794	287	1061	1053	290	1005	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	0.0	25.2	0.0	23.9	31.2	7.5	7.5	34.2	14.6	14.8
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.4	0.0	0.1	7.5	0.2	0.2	8.3	6.5	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln2.8	0.0	0.0	1.7	0.0	0.4	3.1	4.4	4.4	0.5	14.9	15.6	
LnGrp Delay(d),s/veh	30.1	0.0	0.0	25.6	0.0	24.0	38.7	7.8	7.8	42.5	21.1	22.7
LnGrp LOS	C			C		C	D	A	A	D	C	C
Approach Vol, veh/h		143			121			989			1616	
Approach Delay, s/veh		30.1			25.3			12.2			22.2	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.2	10.8	42.1		18.2	5.3	47.6				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		12.3	7.6	30.2		6.3	2.9	11.0				
Green Ext Time (p_c), s		0.7	0.1	7.0		0.6	0.0	5.8				
Intersection Summary												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Vol, veh/h	10	10	20	10	10	20	30	260	10	20	200	20
Future Vol, veh/h	10	10	20	10	10	20	30	260	10	20	200	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	11	11	22	11	11	22	33	286	11	22	220	22
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.5	8.5	10.8	10.1
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	25%	25%	100%	0%
Vol Thru, %	0%	96%	25%	25%	0%	91%
Vol Right, %	0%	4%	50%	50%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	270	40	40	20	220
LT Vol	30	0	10	10	20	0
Through Vol	0	260	10	10	0	200
RT Vol	0	10	20	20	0	20
Lane Flow Rate	33	297	44	44	22	242
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.05	0.408	0.062	0.063	0.034	0.333
Departure Headway (Hd)	5.481	4.953	5.103	5.121	5.524	4.958
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	653	727	699	697	648	725
Service Time	3.214	2.685	3.153	3.169	3.258	2.691
HCM Lane V/C Ratio	0.051	0.409	0.063	0.063	0.034	0.334
HCM Control Delay	8.5	11.1	8.5	8.5	8.5	10.2
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.2	2	0.2	0.2	0.1	1.5

HCM 2010 Signalized Intersection Summary
31: 1st Avenue & Lightfighter Drive

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1250	130	20	1150	0	160	0	20	120	30	100
Future Volume (veh/h)	0	1250	130	20	1150	0	160	0	20	120	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1488	0	24	1369	0	190	0	10	143	36	100
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2238	1001	27	2517	0	0	0	0	209	220	187
Arrive On Green	0.00	0.63	0.00	0.02	0.71	0.00	0.00	0.00	0.00	0.12	0.12	0.12
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1488	0	24	1369	0		0.0		143	36	100
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	14.7	0.0	0.7	10.1	0.0				4.4	1.0	3.4
Cycle Q Clear(g_c), s	0.0	14.7	0.0	0.7	10.1	0.0				4.4	1.0	3.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2238	1001	27	2517	0				209	220	187
V/C Ratio(X)	0.00	0.66	0.00	0.88	0.54	0.00				0.68	0.16	0.54
Avail Cap(c_a), veh/h	0	2880	1288	642	2880	0				772	810	689
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.4	0.0	27.2	3.8	0.0				23.2	21.7	22.8
Incr Delay (d2), s/veh	0.0	0.5	0.0	26.1	0.3	0.0				1.5	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr	0.0	7.2	0.0	0.6	4.8	0.0				2.2	0.5	1.5
LnGrp Delay(d),s/veh	0.0	7.0	0.0	53.3	4.0	0.0				24.7	21.9	23.7
LnGrp LOS		A		D	A					C	C	C
Approach Vol, veh/h		1488			1393						279	
Approach Delay, s/veh		7.0			4.9						24.0	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.4	39.6		11.4		43.9				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.7	16.7		6.4		12.1				
Green Ext Time (p_c), s			0.0	18.2		0.4		17.2				
Intersection Summary												
HCM 2010 Ctrl Delay			7.5									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1040	10	40	710	180	20	20	50	370	10	490
Future Volume (veh/h)	340	1040	10	40	710	180	20	20	50	370	10	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	378	1156	11	44	789	191	22	22	55	411	11	268
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1856	18	56	1178	285	128	137	277	511	601	511
Arrive On Green	0.12	0.52	0.52	0.03	0.42	0.42	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1774	3592	34	1740	2773	671	264	430	868	1330	1881	1599
Grp Volume(v), veh/h	378	569	598	44	494	486	99	0	0	411	11	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1740	1736	1708	1562	0	0	1330	1881	1599
Q Serve(g_s), s	12.4	22.9	22.9	2.5	22.9	22.9	0.0	0.0	0.0	24.8	0.4	13.7
Cycle Q Clear(g_c), s	12.4	22.9	22.9	2.5	22.9	22.9	4.1	0.0	0.0	28.9	0.4	13.7
Prop In Lane	1.00		0.02	1.00		0.39	0.22		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	915	960	56	737	726	543	0	0	511	601	511
V/C Ratio(X)	1.72	0.62	0.62	0.79	0.67	0.67	0.18	0.00	0.00	0.80	0.02	0.52
Avail Cap(c_a), veh/h	220	915	960	216	737	726	671	0	0	623	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.09	0.09	0.09	1.00	0.00	0.00	0.36	0.36	0.36
Uniform Delay (d), s/veh	43.8	17.2	17.2	48.1	23.1	23.1	24.6	0.0	0.0	32.6	23.3	27.8
Incr Delay (d2), s/veh	332.8	1.6	1.5	0.9	0.4	0.5	0.1	0.0	0.0	1.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.4	11.5	12.0	1.2	11.1	10.9	2.0	0.0	0.0	11.2	0.2	6.1
LnGrp Delay(d),s/veh	376.6	18.8	18.7	49.0	23.6	23.6	24.6	0.0	0.0	34.5	23.3	27.9
LnGrp LOS	F	B	B	D	C	C	C			C	C	C
Approach Vol, veh/h		1545			1024			99			690	
Approach Delay, s/veh		106.3			24.7			24.6			31.8	
Approach LOS		F			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	56.3		36.5	16.4	47.1		36.5				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1), s	14.5	24.9		30.9	14.4	24.9		6.1				
Green Ext Time (p_c), s	0.0	3.3		1.0	0.0	0.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			63.7									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	280	880	20	170	70	810	70	10	40	50	20
Future Volume (veh/h)	50	280	880	20	170	70	810	70	10	40	50	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	56	315	0	22	191	77	910	79	10	45	56	22
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	78	467	397	36	277	111	735	507	64	67	343	127
Arrive On Green	0.04	0.25	0.00	0.02	0.23	0.23	0.21	0.31	0.31	0.04	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	1707	1214	489	3476	1637	207	1774	2524	938
Grp Volume(v), veh/h	56	315	0	22	0	268	910	0	89	45	38	40
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1704	1738	0	1844	1774	1770	1692
Q Serve(g_s), s	1.5	7.2	0.0	0.6	0.0	6.8	10.0	0.0	1.7	1.2	0.9	1.0
Cycle Q Clear(g_c), s	1.5	7.2	0.0	0.6	0.0	6.8	10.0	0.0	1.7	1.2	0.9	1.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.11	1.00		0.55
Lane Grp Cap(c), veh/h	78	467	397	36	0	388	735	0	571	67	240	230
V/C Ratio(X)	0.72	0.67	0.00	0.61	0.00	0.69	1.24	0.00	0.16	0.67	0.16	0.17
Avail Cap(c_a), veh/h	751	1182	1005	722	0	1081	735	0	1170	563	1123	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	16.0	0.0	22.9	0.0	16.7	18.6	0.0	11.8	22.5	18.0	18.1
Incr Delay (d2), s/veh	11.5	2.1	0.0	5.9	0.0	2.7	118.5	0.0	0.3	4.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.9	0.0	0.3	0.0	3.5	16.8	0.0	0.9	0.7	0.5	0.5
LnGrp Delay(d),s/veh	33.8	18.0	0.0	28.9	0.0	19.4	137.1	0.0	12.1	26.7	18.4	18.5
LnGrp LOS	C	B		C		B	F		B	C	B	B
Approach Vol, veh/h		371			290			999			123	
Approach Delay, s/veh		20.4			20.1			126.0			21.5	
Approach LOS		C			C			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.9	6.6	15.3	6.3	19.1	5.5	16.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	3.0	3.5	8.8	3.2	3.7	2.6	9.2					
Green Ext Time (p_c), s	0.0	0.4	0.1	2.0	0.0	0.8	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				79.6								
HCM 2010 LOS				E								

Intersection

Intersection Delay, s/veh 13.1
 Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	200	60	10	270	70
Future Vol, veh/h	30	200	60	10	270	70
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	39	260	78	13	351	91
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11	9.1	15.4
HCM LOS	B	A	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	13%	79%
Vol Thru, %	86%	0%	21%
Vol Right, %	14%	87%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	70	230	340
LT Vol	0	30	270
Through Vol	60	0	70
RT Vol	10	200	0
Lane Flow Rate	91	299	442
Geometry Grp	1	1	1
Degree of Util (X)	0.133	0.397	0.605
Departure Headway (Hd)	5.254	4.78	4.929
Convergence, Y/N	Yes	Yes	Yes
Cap	686	747	724
Service Time	3.254	2.854	3.011
HCM Lane V/C Ratio	0.133	0.4	0.61
HCM Control Delay	9.1	11	15.4
HCM Lane LOS	A	B	C
HCM 95th-tile Q	0.5	1.9	4.1

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	30	20	200	30	30
Future Vol, veh/h	250	30	20	200	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	321	38	26	256	38	38

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	359	0	648
Stage 1	-	-	-	-	340
Stage 2	-	-	-	-	308
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	1189	-	438
Stage 1	-	-	-	-	725
Stage 2	-	-	-	-	750
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1189	-	427
Mov Cap-2 Maneuver	-	-	-	-	427
Stage 1	-	-	-	-	707
Stage 2	-	-	-	-	750

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	532	-	-	1189	-
HCM Lane V/C Ratio	0.145	-	-	0.022	-
HCM Control Delay (s)	12.9	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	230	30	10	140	10	50	170	20	10	140	40
Future Vol, veh/h	10	230	30	10	140	10	50	170	20	10	140	40
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	13	291	38	13	177	13	63	215	25	13	177	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	17.7	13.3	17.3	13.8
HCM LOS	C	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	4%	6%	5%
Vol Thru, %	71%	85%	88%	74%
Vol Right, %	8%	11%	6%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	270	160	190
LT Vol	50	10	10	10
Through Vol	170	230	140	140
RT Vol	20	30	10	40
Lane Flow Rate	304	342	203	241
Geometry Grp	1	1	1	1
Degree of Util (X)	0.55	0.586	0.365	0.419
Departure Headway (Hd)	6.514	6.174	6.492	6.275
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	584	553	572
Service Time	4.564	4.223	4.549	4.332
HCM Lane V/C Ratio	0.55	0.586	0.367	0.421
HCM Control Delay	17.3	17.7	13.3	13.8
HCM Lane LOS	C	C	B	B
HCM 95th-tile Q	3.3	3.8	1.7	2.1

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	80	90	10	90	20	50	140	20	0	0	0
Future Vol, veh/h	80	80	90	10	90	20	50	140	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	98	98	110	12	110	24	61	171	24	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	373	319	1	411	307	184	1	0	0	196	0	0
Stage 1	1	1	-	306	306	-	-	-	-	-	-	-
Stage 2	372	318	-	105	1	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	566	582	1055	555	610	864	1571	-	-	1330	-	-
Stage 1	997	875	-	708	665	-	-	-	-	-	-	-
Stage 2	629	636	-	906	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	455	556	1055	416	583	863	1571	-	-	1329	-	-
Mov Cap-2 Maneuver	455	556	-	416	583	-	-	-	-	-	-	-
Stage 1	953	875	-	676	635	-	-	-	-	-	-	-
Stage 2	483	607	-	721	899	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.4		13		1.8		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	617	595	1329	-	-
HCM Lane V/C Ratio	0.039	-	-	0.494	0.246	-	-	-
HCM Control Delay (s)	7.4	0	-	16.4	13	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.7	1	0	-	-

Intersection						
Int Delay, s/veh	6.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	110	10	10	260	780	120
Future Vol, veh/h	110	10	10	260	780	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	124	11	11	292	876	135
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1258	944	1011	0	0
Stage 1	944	-	-	-	-
Stage 2	314	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-
Pot Cap-1 Maneuver	179	303	686	-	-
Stage 1	361	-	-	-	-
Stage 2	716	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	176	303	686	-	-
Mov Cap-2 Maneuver	176	-	-	-	-
Stage 1	354	-	-	-	-
Stage 2	716	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	66.4	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	686	-	182	-	-
HCM Lane V/C Ratio	0.016	-	0.741	-	-
HCM Control Delay (s)	10.3	0	66.4	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	4.8	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative with Project, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	510	40	410	50	410	280	310	650	50
Future Volume (veh/h)	30	100	80	510	40	410	50	410	280	310	650	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	586	46	0	57	471	0	356	747	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	59	192	94	506	1193	534	85	581	260	383	1171	524
Arrive On Green	0.03	0.09	0.09	0.29	0.34	0.00	0.05	0.16	0.00	0.22	0.33	0.00
Sat Flow, veh/h	1723	2232	1098	1774	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	87	88	586	46	0	57	471	0	356	747	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1611	1774	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.4	3.5	3.8	20.5	0.6	0.0	2.2	9.1	0.0	14.2	12.9	0.0
Cycle Q Clear(g_c), s	1.4	3.5	3.8	20.5	0.6	0.0	2.2	9.1	0.0	14.2	12.9	0.0
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	59	148	139	506	1193	534	85	581	260	383	1171	524
V/C Ratio(X)	0.58	0.59	0.64	1.16	0.04	0.00	0.67	0.81	0.00	0.93	0.64	0.00
Avail Cap(c_a), veh/h	252	742	695	506	2019	903	137	1243	556	383	1724	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.2	31.6	31.8	25.7	16.0	0.0	33.7	29.0	0.0	27.7	20.4	0.0
Incr Delay (d2), s/veh	3.2	1.4	1.8	91.4	0.0	0.0	3.4	1.0	0.0	28.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	1.8	22.7	0.3	0.0	1.2	4.6	0.0	10.0	6.3	0.0
LnGrp Delay(d),s/veh	37.4	33.0	33.5	117.1	16.0	0.0	37.1	30.1	0.0	56.3	20.6	0.0
LnGrp LOS	D	C	C	F	B		D	C		E	C	
Approach Vol, veh/h		209			632			528			1103	
Approach Delay, s/veh		33.9			109.7			30.8			32.1	
Approach LOS		C			F			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	28.3	7.0	28.7	20.0	16.2	25.0	10.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	4.2	14.9	3.4	2.6	16.2	11.1	22.5	5.8				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	0.5	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			51.8									
HCM 2010 LOS			D									
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	10	590	30	50	900	20	20	30	30	20	60	30
Future Volume (veh/h)	10	590	30	50	900	20	20	30	30	20	60	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1900	1900	1863	1900	1900	1827	1900
Adj Flow Rate, veh/h	11	670	34	57	1023	23	23	34	34	23	68	34
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	176	1385	70	218	1362	30	258	121	103	233	163	75
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	17	3271	165	89	3215	71	317	723	620	231	979	452
Grp Volume(v), veh/h	375	0	340	566	0	537	91	0	0	125	0	0
Grp Sat Flow(s),veh/h/ln	1803	0	1649	1709	0	1666	1661	0	0	1662	0	0
Q Serve(g_s), s	0.0	0.0	3.3	1.8	0.0	6.0	0.0	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	3.3	5.9	0.0	6.0	1.0	0.0	0.0	1.4	0.0	0.0
Prop In Lane	0.03		0.10	0.10		0.04	0.25		0.37	0.18		0.27
Lane Grp Cap(c), veh/h	932	0	699	904	0	706	482	0	0	471	0	0
V/C Ratio(X)	0.40	0.00	0.49	0.63	0.00	0.76	0.19	0.00	0.00	0.27	0.00	0.00
Avail Cap(c_a), veh/h	4158	0	3792	3905	0	3830	2413	0	0	2460	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	0.0	4.6	5.3	0.0	5.4	8.0	0.0	0.0	8.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.6	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.5	2.9	0.0	2.8	0.5	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	4.7	0.0	4.8	5.6	0.0	6.0	8.1	0.0	0.0	8.3	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		715			1103			91			125	
Approach Delay, s/veh		4.7			5.8			8.1			8.3	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.2		13.8		8.2		13.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.0		5.3		3.4		8.0				
Green Ext Time (p_c), s		0.1		0.7		0.1		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕		↕↕	
Traffic Volume (veh/h)	10	560	80	110	910	10	40	10	50	10	30	10
Future Volume (veh/h)	10	560	80	110	910	10	40	10	50	10	30	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	12	667	95	131	1083	12	48	12	60	12	36	12
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	159	1449	204	281	1417	16	417	67	229	213	165	50
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	15	2975	419	208	2909	32	1049	461	1583	248	1142	347
Grp Volume(v), veh/h	410	0	364	596	0	630	60	0	60	60	0	0
Grp Sat Flow(s),veh/h/ln	1805	0	1605	1460	0	1689	1510	0	1583	1737	0	0
Q Serve(g_s), s	0.0	0.0	3.7	4.6	0.0	7.4	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	3.7	8.2	0.0	7.4	0.7	0.0	0.8	0.7	0.0	0.0
Prop In Lane	0.03		0.26	0.22		0.02	0.80		1.00	0.20		0.20
Lane Grp Cap(c), veh/h	1031	0	782	891	0	823	483	0	229	428	0	0
V/C Ratio(X)	0.40	0.00	0.47	0.67	0.00	0.77	0.12	0.00	0.26	0.14	0.00	0.00
Avail Cap(c_a), veh/h	4088	0	3646	3329	0	3839	1770	0	1653	1958	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.1	0.0	4.2	5.1	0.0	5.1	9.2	0.0	9.3	9.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.6	0.0	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.5	3.2	0.0	3.5	0.4	0.0	0.4	0.4	0.0	0.0
LnGrp Delay(d),s/veh	4.2	0.0	4.3	5.4	0.0	5.7	9.3	0.0	9.5	9.3	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		774			1226			120			60	
Approach Delay, s/veh		4.3			5.5			9.4			9.3	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.0		16.4		8.0		16.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5		55.5		25.5		55.5				
Max Q Clear Time (g_c+I1), s		2.8		5.7		2.7		10.2				
Green Ext Time (p_c), s		0.0		0.8		0.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				5.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

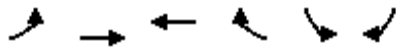
Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	200	420	10	30	820	10	10	10	10	10	10	210
Future Volume (veh/h)	200	420	10	30	820	10	10	10	10	10	10	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1429	1429	1900	1863	1900
Adj Flow Rate, veh/h	225	472	11	34	921	11	11	11	0	11	11	236
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	2	2	2	33	33	33	2	2	2
Cap, veh/h	403	992	23	119	1997	23	220	159	252	92	22	302
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.21	0.21	0.00	0.21	0.21	0.21
Sat Flow, veh/h	420	1690	40	53	3401	40	465	766	1214	29	106	1455
Grp Volume(v), veh/h	248	0	460	501	0	465	22	0	0	258	0	0
Grp Sat Flow(s),veh/h/ln	478	0	1672	1807	0	1688	1231	0	1214	1591	0	0
Q Serve(g_s), s	15.2	0.0	6.9	0.0	0.0	6.9	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	6.9	6.7	0.0	6.9	0.5	0.0	0.0	6.7	0.0	0.0
Prop In Lane	0.91		0.02	0.07		0.02	0.50		1.00	0.04		0.91
Lane Grp Cap(c), veh/h	437	0	981	1148	0	991	379	0	252	416	0	0
V/C Ratio(X)	0.57	0.00	0.47	0.44	0.00	0.47	0.06	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	794	0	1924	2129	0	1943	904	0	844	1186	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	0.0	5.2	5.1	0.0	5.2	14.0	0.0	0.0	16.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	3.1	3.4	0.0	3.1	0.2	0.0	0.0	3.0	0.0	0.0
LnGrp Delay(d),s/veh	11.4	0.0	5.3	5.2	0.0	5.3	14.0	0.0	0.0	17.0	0.0	0.0
LnGrp LOS	B		A	A		A	B			B		
Approach Vol, veh/h		708			966			22			258	
Approach Delay, s/veh		7.4			5.2			14.0			17.0	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		13.6		30.3		13.6		30.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.5		24.0		8.7		8.9				
Green Ext Time (p_c), s		0.0		1.7		0.4		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	180	260	780	10	10	70		
Future Volume (veh/h)	180	260	780	10	10	70		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1759	1900		
Adj Flow Rate, veh/h	209	302	907	12	12	81		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	3	3	0	0	0	0		
Cap, veh/h	522	918	2086	28	18	123		
Arrive On Green	0.57	0.57	0.57	0.57	0.09	0.09		
Sat Flow, veh/h	449	1690	3743	48	194	1309		
Grp Volume(v), veh/h	212	299	449	470	94	0		
Grp Sat Flow(s),veh/h/ln	460	1595	1805	1891	1519	0		
Q Serve(g_s), s	8.1	2.7	3.8	3.8	1.6	0.0		
Cycle Q Clear(g_c), s	11.9	2.7	3.8	3.8	1.6	0.0		
Prop In Lane	0.98			0.03	0.13	0.86		
Lane Grp Cap(c), veh/h	528	912	1032	1081	142	0		
V/C Ratio(X)	0.40	0.33	0.43	0.43	0.66	0.00		
Avail Cap(c_a), veh/h	1432	3289	3723	3901	1439	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	6.6	3.0	3.3	3.3	11.8	0.0		
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.1	1.9	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	1.2	1.9	2.0	0.7	0.0		
LnGrp Delay(d),s/veh	6.8	3.1	3.4	3.4	13.7	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h		511	919		94			
Approach Delay, s/veh		4.6	3.4		13.7			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.9		7.0		19.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				13.9		3.6		5.8
Green Ext Time (p_c), s				1.5		0.0		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			4.4					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative with Project, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↔↑			↔↑			↔↑	
Traffic Volume (veh/h)	260	10	10	10	10	10	10	10	10	10	10	780
Future Volume (veh/h)	260	10	10	10	10	10	10	10	10	10	10	780
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	306	12	12	12	12	12	12	12	12	12	12	918
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	456	200	200	311	281	285	183	183	146	61	21	952
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1338	779	779	860	1093	1109	180	303	241	7	34	1578
Grp Volume(v), veh/h	306	0	24	20	0	16	36	0	0	942	0	0
Grp Sat Flow(s),veh/h/ln	1338	0	1558	1563	0	1499	724	0	0	1619	0	0
Q Serve(g_s), s	13.8	0.0	0.7	0.0	0.0	0.5	0.0	0.0	0.0	9.5	0.0	0.0
Cycle Q Clear(g_c), s	14.3	0.0	0.7	0.5	0.0	0.5	0.5	0.0	0.0	35.6	0.0	0.0
Prop In Lane	1.00		0.50	0.61		0.74	0.33		0.33	0.01		0.97
Lane Grp Cap(c), veh/h	456	0	400	491	0	385	511	0	0	1034	0	0
V/C Ratio(X)	0.67	0.00	0.06	0.04	0.00	0.04	0.07	0.00	0.00	0.91	0.00	0.00
Avail Cap(c_a), veh/h	861	0	857	943	0	825	621	0	0	1198	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.4	0.0	18.1	18.0	0.0	18.0	5.2	0.0	0.0	12.1	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	0.3	0.3	0.0	0.2	0.3	0.0	0.0	18.0	0.0	0.0
LnGrp Delay(d),s/veh	24.0	0.0	18.1	18.0	0.0	18.0	5.2	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	C		B	B		B	A			C		
Approach Vol, veh/h		330			36			36			942	
Approach Delay, s/veh		23.6			18.0			5.2			21.0	
Approach LOS		C			B			A			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.4		21.1		43.4		21.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		45.5		35.5		45.5		35.5				
Max Q Clear Time (g_c+I1), s		2.5		16.3		37.6		2.5				
Green Ext Time (p_c), s		0.1		0.3		1.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				21.1								
HCM 2010 LOS				C								

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	
Traffic Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Future Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	11	11	11	11	11	11	11	11
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.5	7.5	7.1	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	67%	0%	67%	0%	33%
Vol Thru, %	33%	33%	33%	33%	33%	33%
Vol Right, %	33%	0%	67%	0%	67%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	15	15	15	15	30
LT Vol	10	10	0	10	0	10
Through Vol	10	5	5	5	5	10
RT Vol	10	0	10	0	10	10
Lane Flow Rate	33	16	16	16	16	33
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.036	0.023	0.019	0.023	0.019	0.036
Departure Headway (Hd)	3.931	4.998	4.197	4.998	4.197	3.931
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	903	715	851	715	851	903
Service Time	1.99	2.734	1.933	2.734	1.933	1.99
HCM Lane V/C Ratio	0.037	0.022	0.019	0.022	0.019	0.037
HCM Control Delay	7.1	7.9	7	7.9	7	7.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.1	0.1	0.1

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	90	80	150	150	70	40	200	490	110	80	840	250
Future Volume (veh/h)	90	80	150	150	70	40	200	490	110	80	840	250
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	115	103	163	192	90	47	256	628	114	103	1077	252
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	210	187	248	315	141	63	201	745	135	348	1170	518
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.11	0.25	0.25	0.20	0.33	0.33
Sat Flow, veh/h	391	509	673	640	384	171	1792	3016	546	1774	3539	1567
Grp Volume(v), veh/h	381	0	0	329	0	0	256	372	370	103	1077	252
Grp Sat Flow(s),veh/h/ln	1573	0	0	1195	0	0	1792	1787	1776	1774	1770	1567
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	8.0	14.1	14.1	3.5	20.9	9.1
Cycle Q Clear(g_c), s	13.9	0.0	0.0	18.1	0.0	0.0	8.0	14.1	14.1	3.5	20.9	9.1
Prop In Lane	0.30		0.43	0.58		0.14	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	644	0	0	520	0	0	201	441	438	348	1170	518
V/C Ratio(X)	0.59	0.00	0.00	0.63	0.00	0.00	1.27	0.84	0.84	0.30	0.92	0.49
Avail Cap(c_a), veh/h	789	0	0	643	0	0	201	639	635	348	1266	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	0.0	19.9	0.0	0.0	31.6	25.5	25.5	24.5	23.0	19.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.6	0.0	0.0	155.7	4.7	4.9	0.2	10.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	0.0	5.8	0.0	0.0	12.6	7.5	7.5	1.7	11.8	4.0
LnGrp Delay(d),s/veh	18.8	0.0	0.0	20.5	0.0	0.0	187.4	30.2	30.4	24.6	33.0	19.3
LnGrp LOS	B			C			F	C	C	C	C	B
Approach Vol, veh/h		381			329			998			1432	
Approach Delay, s/veh		18.8			20.5			70.6			30.0	
Approach LOS		B			C			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.1			30.7	18.5	22.1		30.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5			33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+110), s	22.9			20.1	5.5	16.1		15.9				
Green Ext Time (p_c), s	0.0	0.7		0.5	0.0	0.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			40.6									
HCM 2010 LOS			D									

Intersection	
Intersection Delay, s/veh	22.3
Intersection LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	90	430	230	420	980	80
Future Vol, veh/h	90	430	230	420	980	80
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	1	1	1	1	2	2
Mvmt Flow	100	478	256	467	1089	89
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	125.2	26.7	179.4
HCM LOS	F	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	230	210	210	90	430	490	490	80
LT Vol	230	0	0	90	0	0	0	0
Through Vol	0	210	210	0	0	490	490	0
RT Vol	0	0	0	0	430	0	0	80
Lane Flow Rate	256	233	233	100	478	544	544	89
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.684	0.592	0.481	0.286	1.21	1.332	1.332	0.158
Departure Headway (Hd)	10.797	10.273	8.473	11.218	10	9.52	9.52	6.968
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	337	355	429	322	368	387	387	518
Service Time	8.497	7.973	6.173	8.918	7.7	7.22	7.22	4.668
HCM Lane V/C Ratio	0.76	0.656	0.543	0.311	1.299	1.406	1.406	0.172
HCM Control Delay	33.9	26.8	18.8	18.4	147.6	193.2	193.2	11
HCM Lane LOS	D	D	C	C	F	F	F	B
HCM 95th-tile Q	4.8	3.6	2.5	1.2	18.4	23.7	23.7	0.6






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	140	120	210	30	230	680	140	60	1010	120
Future Volume (veh/h)	80	100	140	120	210	30	230	680	140	60	1010	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	88	110	65	132	231	31	253	747	139	66	1110	65
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	202	212	172	137	239	32	425	1337	249	84	880	388
Arrive On Green	0.11	0.11	0.11	0.22	0.22	0.22	0.24	0.46	0.46	0.05	0.25	0.25
Sat Flow, veh/h	1757	1845	1494	610	1067	143	1740	2915	542	1740	3471	1529
Grp Volume(v), veh/h	88	110	65	394	0	0	253	445	441	66	1110	65
Grp Sat Flow(s),veh/h/ln	1757	1845	1494	1820	0	0	1740	1736	1722	1740	1736	1529
Q Serve(g_s), s	5.8	7.0	5.0	26.8	0.0	0.0	16.1	23.3	23.3	4.7	31.7	4.1
Cycle Q Clear(g_c), s	5.8	7.0	5.0	26.8	0.0	0.0	16.1	23.3	23.3	4.7	31.7	4.1
Prop In Lane	1.00		1.00	0.34		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	172	408	0	0	425	796	789	84	880	388
V/C Ratio(X)	0.44	0.52	0.38	0.97	0.00	0.00	0.59	0.56	0.56	0.78	1.26	0.17
Avail Cap(c_a), veh/h	436	457	371	408	0	0	425	796	789	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	52.1	51.2	48.0	0.0	0.0	41.8	24.6	24.6	58.8	46.7	36.4
Incr Delay (d2), s/veh	1.1	1.5	1.1	35.9	0.0	0.0	1.6	2.8	2.8	5.9	126.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.7	2.1	17.5	0.0	0.0	7.9	11.7	11.7	2.4	30.6	1.9
LnGrp Delay(d),s/veh	52.7	53.6	52.3	83.9	0.0	0.0	43.3	27.5	27.5	64.7	173.2	37.3
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		263			394			1139			1241	
Approach Delay, s/veh		53.0			83.9			31.0			160.4	
Approach LOS		D			F			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.2	62.6		19.0	35.9	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+10), s	15	25.3		9.0	18.1	33.7		28.8				
Green Ext Time (p_c), s	0.0	2.5		1.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				92.6								
HCM 2010 LOS				F								
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Future Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	10	206	9	247	0	253	0	52	21	10	10	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	136	2942	1343	0	0	0	0	122	104	74	60	0
Arrive On Green	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	159	3430	1566				0	1845	1568	466	899	0
Grp Volume(v), veh/h	116	100	9		0.0		0	52	21	20	0	0
Grp Sat Flow(s),veh/h/ln	1837	1752	1566				0	1845	1568	1365	0	0
Q Serve(g_s), s	1.2	1.1	0.1				0.0	3.4	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.1				0.0	3.4	1.6	3.4	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1575	1503	1343				0	122	104	134	0	0
V/C Ratio(X)	0.07	0.07	0.01				0.00	0.43	0.20	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1575	1503	1343				0	148	125	155	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.4	1.3	1.3				0.0	56.1	55.2	55.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	0.9	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0				0.0	1.8	0.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.4	1.3	1.3				0.0	56.9	55.6	55.3	0.0	0.0
LnGrp LOS	A	A	A					E	E	E		
Approach Vol, veh/h		225						73			20	
Approach Delay, s/veh		1.4						56.5			55.3	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				12.5		112.5		12.5				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				5.4		3.2		5.4				
Green Ext Time (p_c), s				0.1		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									
HCM 2010 LOS			B									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Cumulative with Project, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	260	10	310	120	400	0	0	350	130
Future Volume (veh/h)	0	0	0	260	10	310	120	400	0	0	350	130
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				274	11	74	126	421	0	0	368	128
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				387	16	359	209	1014	0	0	459	160
Arrive On Green				0.23	0.23	0.23	0.12	0.54	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1676	67	1553	1774	1863	0	0	1296	451
Grp Volume(v), veh/h				285	0	74	126	421	0	0	0	496
Grp Sat Flow(s),veh/h/ln				1743	0	1553	1774	1863	0	0	0	1747
Q Serve(g_s), s				7.3	0.0	1.9	3.3	6.5	0.0	0.0	0.0	12.4
Cycle Q Clear(g_c), s				7.3	0.0	1.9	3.3	6.5	0.0	0.0	0.0	12.4
Prop In Lane				0.96		1.00	1.00		0.00	0.00		0.26
Lane Grp Cap(c), veh/h				403	0	359	209	1014	0	0	0	619
V/C Ratio(X)				0.71	0.00	0.21	0.60	0.42	0.00	0.00	0.00	0.80
Avail Cap(c_a), veh/h				1438	0	1281	952	1460	0	0	0	1370
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				17.1	0.0	15.1	20.3	6.5	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				2.3	0.0	0.3	1.0	0.3	0.0	0.0	0.0	2.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.7	0.0	0.8	1.6	3.4	0.0	0.0	0.0	6.3
LnGrp Delay(d),s/veh				19.4	0.0	15.3	21.3	6.8	0.0	0.0	0.0	16.6
LnGrp LOS				B		B	C	A				B
Approach Vol, veh/h					359			547			496	
Approach Delay, s/veh					18.6			10.1			16.6	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.2	23.2		16.1		32.4						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+15), s	15.3	14.4		9.3		8.5						
Green Ext Time (p_c), s	0.1	2.8		2.0		2.2						
Intersection Summary												
HCM 2010 Ctrl Delay				14.6								
HCM 2010 LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	130	10	110	0	0	0	0	390	660	230	370	0
Future Volume (veh/h)	130	10	110	0	0	0	0	390	660	230	370	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	141	11	19				0	424	388	250	402	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	205	16	196				0	647	550	326	1130	0
Arrive On Green	0.12	0.12	0.12				0.00	0.34	0.34	0.19	0.62	0.00
Sat Flow, veh/h	1668	130	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	152	0	19				0	424	388	250	402	0
Grp Sat Flow(s),veh/h/ln	1798	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	3.4	0.0	0.4				0.0	8.1	8.9	5.8	4.5	0.0
Cycle Q Clear(g_c), s	3.4	0.0	0.4				0.0	8.1	8.9	5.8	4.5	0.0
Prop In Lane	0.93		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	221	0	196				0	647	550	326	1130	0
V/C Ratio(X)	0.69	0.00	0.10				0.00	0.66	0.71	0.77	0.36	0.00
Avail Cap(c_a), veh/h	1705	0	1517				0	1650	1403	990	1603	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	16.4				0.0	11.7	12.0	16.3	3.9	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.1				0.0	1.1	1.7	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.2				0.0	4.3	4.1	3.1	2.3	0.0
LnGrp Delay(d),s/veh	19.2	0.0	16.5				0.0	12.9	13.7	20.1	4.1	0.0
LnGrp LOS	B		B					B	B	C	A	
Approach Vol, veh/h		171						812			652	
Approach Delay, s/veh		18.9						13.2			10.2	
Approach LOS		B						B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.1			11.6	20.5		10.1				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		6.5			7.8	10.9		5.4				
Green Ext Time (p_c), s		2.2			0.6	3.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			12.6									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	270	70	180	130	80	220
Future Vol, veh/h	270	70	180	130	80	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	293	76	196	141	87	239
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.2	11.9	11.7
HCM LOS	B	B	B





















Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	220	270	70	180	130
LT Vol	80	0	0	0	180	0
Through Vol	0	0	270	0	0	130
RT Vol	0	220	0	70	0	0
Lane Flow Rate	87	239	293	76	196	141
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.167	0.379	0.489	0.112	0.354	0.236
Departure Headway (Hd)	6.917	5.703	5.998	5.288	6.517	6.01
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	518	631	602	677	552	598
Service Time	4.658	3.443	3.736	3.025	4.255	3.748
HCM Lane V/C Ratio	0.168	0.379	0.487	0.112	0.355	0.236
HCM Control Delay	11	11.9	14.4	8.7	12.8	10.6
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.6	1.8	2.7	0.4	1.6	0.9

Intersection				
Intersection Delay, s/veh	10.4			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	418	429	66	374
Demand Flow Rate, veh/h	431	433	66	381
Vehicles Circulating, veh/h	257	361	621	111
Vehicles Exiting, veh/h	235	326	67	683
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.8	12.8	7.2	7.7
Approach LOS	B	B	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	431	433	66	381
Cap Entry Lane, veh/h	874	788	607	1011
Entry HV Adj Factor	0.971	0.992	1.000	0.980
Flow Entry, veh/h	418	429	66	374
Cap Entry, veh/h	848	781	607	992
V/C Ratio	0.493	0.550	0.109	0.377
Control Delay, s/veh	10.8	12.8	7.2	7.7
LOS	B	B	A	A
95th %tile Queue, veh	3	3	0	2

Intersection			
Intersection Delay, s/veh	139.6		
Intersection LOS	F		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	680	855	1062
Demand Flow Rate, veh/h	694	872	1062
Vehicles Circulating, veh/h	694	72	442
Vehicles Exiting, veh/h	250	1432	946
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	142.3	22.0	232.6
Approach LOS	F	C	F
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	694	872	1062
Cap Entry Lane, veh/h	564	1051	726
Entry HV Adj Factor	0.980	0.980	1.000
Flow Entry, veh/h	680	855	1062
Cap Entry, veh/h	553	1030	726
V/C Ratio	1.229	0.829	1.462
Control Delay, s/veh	142.3	22.0	232.6
LOS	F	C	F
95th %tile Queue, veh	26	10	50

HCM 2010 Signalized Intersection Summary
 1: Del Monte Boulevard & Reindollar Avenue

Cumulative with Project, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	0	450	10	1330	340	400	850	0
Future Volume (veh/h)	0	0	0	190	0	450	10	1330	340	400	850	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				198	0	397	10	1385	271	417	885	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				501	0	444	22	1145	512	458	2015	0
Arrive On Green				0.28	0.00	0.28	0.01	0.32	0.32	0.26	0.56	0.00
Sat Flow, veh/h				1792	0	1585	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				198	0	397	10	1385	271	417	885	0
Grp Sat Flow(s),veh/h/ln				1792	0	1585	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.4	0.0
Cycle Q Clear(g_c), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.4	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				501	0	444	22	1145	512	458	2015	0
V/C Ratio(X)				0.39	0.00	0.89	0.46	1.21	0.53	0.91	0.44	0.00
Avail Cap(c_a), veh/h				574	0	508	574	1145	512	574	2015	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	32.4	45.9	31.8	26.0	33.8	11.8	0.0
Incr Delay (d2), s/veh				0.5	0.0	16.8	14.1	102.7	1.0	16.2	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	11.9	0.3	31.0	5.9	12.5	6.7	0.0
LnGrp Delay(d),s/veh				27.8	0.0	49.2	60.0	134.5	27.1	50.0	12.0	0.0
LnGrp LOS				C		D	E	F	C	D	B	
Approach Vol, veh/h					595			1666			1302	
Approach Delay, s/veh					42.1			116.6			24.2	
Approach LOS					D			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.6	57.8			27.5	35.0		31.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	15.4			23.1	32.0		24.5				
Green Ext Time (p_c), s	0.0	5.4			0.8	0.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				70.4								
HCM 2010 LOS				E								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
 2: 2nd Avenue & Patton Parkway

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Future Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	54	65	98	87	87	76	261	98	87	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	163	196	137	201	201	119	356	134	128	405	101
Arrive On Green	0.05	0.21	0.21	0.08	0.23	0.23	0.07	0.28	0.28	0.07	0.28	0.28
Sat Flow, veh/h	1774	771	928	1774	856	856	1774	1292	485	1774	1441	359
Grp Volume(v), veh/h	54	0	119	98	0	174	76	0	359	87	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1699	1774	0	1712	1774	0	1777	1774	0	1799
Q Serve(g_s), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Cycle Q Clear(g_c), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Prop In Lane	1.00		0.55	1.00		0.50	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	96	0	359	137	0	402	119	0	490	128	0	505
V/C Ratio(X)	0.56	0.00	0.33	0.72	0.00	0.43	0.64	0.00	0.73	0.68	0.00	0.54
Avail Cap(c_a), veh/h	228	0	1290	228	0	1300	228	0	1349	228	0	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	15.6	21.1	0.0	15.2	21.3	0.0	15.4	21.2	0.0	14.2
Incr Delay (d2), s/veh	5.1	0.0	0.5	6.9	0.0	0.7	5.6	0.0	2.1	6.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.5	0.0	2.0	1.1	0.0	4.5	1.3	0.0	3.1
LnGrp Delay(d),s/veh	26.7	0.0	16.2	27.9	0.0	16.0	26.8	0.0	17.5	27.3	0.0	15.1
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		173			272			435			358	
Approach Delay, s/veh		19.5			20.3			19.1			18.1	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	17.4	7.6	14.4	7.1	17.6	6.5	15.5				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	35.5	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	10.6	10.6	4.5	4.8	4.0	8.0	3.4	6.0				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.7	0.0	1.7	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1240	0	0	0	0	0	660	10	0
Future Volume (veh/h)	0	0	0	1240	0	0	0	0	0	660	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1363	0	0				725	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1015	0	0				661	10	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1792	0	0				1749	27	0
Grp Volume(v), veh/h				1363	0	0				736	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1775	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				1015	0	0				671	0	0
V/C Ratio(X)				1.34	0.00	0.00				1.10	0.00	0.00
Avail Cap(c_a), veh/h				1015	0	0				671	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				160.7	0.0	0.0				64.4	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				89.6	0.0	0.0				41.2	0.0	0.0
LnGrp Delay(d),s/veh				195.1	0.0	0.0				113.8	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1363						736	
Approach Delay, s/veh					195.1						113.8	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				166.6								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	650	0	0	1220	920	10	10	1560	0	0	0
Future Vol, veh/h	10	650	0	0	1220	920	10	10	1560	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	11	684	0	0	1284	968	11	11	1642	0	0	0























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1284	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	540	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	540	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	84.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	65	-	540	-	-
HCM Lane V/C Ratio	0.324	-	0.019	-	-
HCM Control Delay (s)	84.9	0	11.8	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.2	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative with Project, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1370	710	330	1160	140	830	110	540	90	100	150
Future Volume (veh/h)	140	1370	710	330	1160	140	830	110	540	90	100	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	1427	540	344	1208	146	865	115	328	94	104	125
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	184	1213	540	416	1145	138	794	503	425	133	203	178
Arrive On Green	0.10	0.34	0.34	0.12	0.36	0.36	0.23	0.26	0.26	0.07	0.11	0.11
Sat Flow, veh/h	1792	3574	1592	3476	3210	387	3510	1900	1602	1810	1805	1585
Grp Volume(v), veh/h	146	1427	540	344	671	683	865	115	328	94	104	125
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1810	1755	1900	1602	1810	1805	1585
Q Serve(g_s), s	7.0	30.0	30.0	8.5	31.5	31.5	20.0	4.2	16.7	4.5	4.8	6.7
Cycle Q Clear(g_c), s	7.0	30.0	30.0	8.5	31.5	31.5	20.0	4.2	16.7	4.5	4.8	6.7
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	1213	540	416	637	645	794	503	425	133	203	178
V/C Ratio(X)	0.80	1.18	1.00	0.83	1.05	1.06	1.09	0.23	0.77	0.71	0.51	0.70
Avail Cap(c_a), veh/h	304	1213	540	590	637	645	794	503	425	205	429	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	29.2	29.2	38.0	28.4	28.4	34.2	25.4	30.0	40.0	37.0	37.8
Incr Delay (d2), s/veh	3.0	88.3	38.6	4.5	50.2	52.0	59.0	0.1	7.8	2.6	0.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	29.5	18.9	4.4	24.3	24.9	16.1	2.2	8.3	2.3	2.4	3.0
LnGrp Delay(d),s/veh	41.7	117.5	67.8	42.6	78.7	80.4	93.2	25.5	37.8	42.6	37.7	39.7
LnGrp LOS	D	F	E	D	F	F	F	C	D	D	D	D
Approach Vol, veh/h		2113			1698			1308			323	
Approach Delay, s/veh		99.6			72.1			73.3			39.9	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	35.3	23.5	14.5	13.6	36.8	10.0	28.0				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	10.5	32.0	22.0	8.7	9.0	33.5	6.5	18.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			81.2									
HCM 2010 LOS			F									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1830	160	100	1260	20	220	10	150	10	10	50
Future Volume (veh/h)	50	1830	160	100	1260	20	220	10	150	10	10	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1867	155	102	1286	19	224	10	41	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	106	1720	141	131	1906	28	381	65	265	351	173	173
Arrive On Green	0.06	0.51	0.51	0.07	0.53	0.53	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3340	273	1792	3606	53	1412	326	1336	1373	872	872
Grp Volume(v), veh/h	51	985	1037	102	637	668	224	0	51	10	0	20
Grp Sat Flow(s),veh/h/ln	1792	1787	1826	1792	1787	1872	1412	0	1662	1373	0	1745
Q Serve(g_s), s	1.7	32.5	32.5	3.5	16.5	16.5	9.7	0.0	1.6	0.4	0.0	0.6
Cycle Q Clear(g_c), s	1.7	32.5	32.5	3.5	16.5	16.5	10.2	0.0	1.6	2.0	0.0	0.6
Prop In Lane	1.00		0.15	1.00		0.03	1.00		0.80	1.00		0.50
Lane Grp Cap(c), veh/h	106	920	940	131	945	990	381	0	329	351	0	346
V/C Ratio(X)	0.48	1.07	1.10	0.78	0.67	0.67	0.59	0.00	0.15	0.03	0.00	0.06
Avail Cap(c_a), veh/h	326	920	940	326	945	990	716	0	724	678	0	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.7	15.3	15.3	28.7	10.9	10.9	24.7	0.0	20.9	21.8	0.0	20.5
Incr Delay (d2), s/veh	1.2	50.4	61.8	3.7	1.6	1.5	0.5	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	28.7	32.3	1.9	8.4	8.8	3.8	0.0	0.7	0.1	0.0	0.3
LnGrp Delay(d),s/veh	30.0	65.7	77.1	32.5	12.5	12.4	25.2	0.0	21.0	21.8	0.0	20.6
LnGrp LOS	C	F	F	C	B	B	C		C	C		C
Approach Vol, veh/h		2073			1407			275			30	
Approach Delay, s/veh		70.5			13.9			24.4			21.0	
Approach LOS		E			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	38.0		17.0	7.2	38.9		17.0				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	1.5	34.5		4.0	3.7	18.5		12.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				45.7								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
7: 4th Avenue & Imjin Parkway

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	2000	10	10	1340	10	20	10	10	10	10	10
Future Volume (veh/h)	10	2000	10	10	1340	10	20	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	2062	10	10	1381	10	21	10	8	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	14	2208	11	14	2202	16	184	22	18	149	31	31
Arrive On Green	0.01	0.61	0.61	0.01	0.61	0.61	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1792	3647	18	1792	3637	26	884	421	337	573	573	573
Grp Volume(v), veh/h	10	1009	1063	10	678	713	39	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1878	1792	1787	1876	1641	0	0	1720	0	0
Q Serve(g_s), s	0.2	20.7	20.8	0.2	9.8	9.8	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	20.7	20.8	0.2	9.8	9.8	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.01	0.54		0.21	0.33		0.33
Lane Grp Cap(c), veh/h	14	1082	1137	14	1082	1136	224	0	0	210	0	0
V/C Ratio(X)	0.71	0.93	0.93	0.71	0.63	0.63	0.17	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	509	1434	1507	509	1434	1505	1198	0	0	1224	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.0	7.2	7.3	20.0	5.1	5.1	18.5	0.0	0.0	18.4	0.0	0.0
Incr Delay (d2), s/veh	21.3	8.3	8.1	21.3	0.2	0.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.3	12.9	0.2	4.8	5.0	0.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	41.3	15.5	15.4	41.3	5.3	5.3	18.7	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	D	B	B	D	A	A	B			B		
Approach Vol, veh/h		2082			1401			39			30	
Approach Delay, s/veh		15.6			5.6			18.7			18.6	
Approach LOS		B			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	30.0		6.7	3.8	30.0		6.7				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	12.2	22.8		2.6	2.2	11.8		2.9				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.0	1.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1670	10	10	1100	110	20	50	10	70	30	230
Future Volume (veh/h)	280	1670	10	10	1100	110	20	50	10	70	30	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	289	1722	10	10	1134	107	21	52	7	72	31	68
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	347	2075	12	14	1267	119	136	197	23	187	56	91
Arrive On Green	0.19	0.57	0.57	0.01	0.38	0.38	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1792	3643	21	1792	3301	311	285	1371	159	563	393	631
Grp Volume(v), veh/h	289	844	888	10	613	628	80	0	0	171	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1877	1792	1787	1825	1815	0	0	1586	0	0
Q Serve(g_s), s	7.5	18.5	18.6	0.3	15.5	15.5	0.0	0.0	0.0	3.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	18.5	18.6	0.3	15.5	15.5	1.8	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.17	0.26		0.09	0.42		0.40
Lane Grp Cap(c), veh/h	347	1018	1069	14	686	700	356	0	0	335	0	0
V/C Ratio(X)	0.83	0.83	0.83	0.72	0.89	0.90	0.22	0.00	0.00	0.51	0.00	0.00
Avail Cap(c_a), veh/h	559	1116	1172	559	1116	1140	813	0	0	747	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.6	8.4	8.4	23.8	13.9	13.9	18.4	0.0	0.0	19.6	0.0	0.0
Incr Delay (d2), s/veh	2.8	4.5	4.3	22.1	3.5	3.6	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	10.2	10.7	0.2	8.2	8.4	0.9	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	21.4	12.9	12.8	45.9	17.4	17.5	18.5	0.0	0.0	20.0	0.0	0.0
LnGrp LOS	C	B	B	D	B	B	B			C		
Approach Vol, veh/h		2021			1251			80			171	
Approach Delay, s/veh		14.1			17.7			18.5			20.0	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.9	32.7		11.5	12.8	23.7		11.5				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	5.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1/2), s	12.3	20.6		6.9	9.5	17.5		3.8				
Green Ext Time (p_c), s	0.0	1.3		0.1	0.0	0.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				15.7								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	10	10	20	400	260	10
Future Vol, veh/h	10	10	20	400	260	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	435	283	11












Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	768	289	294	0	0
Stage 1	289	-	-	-	-
Stage 2	479	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	370	750	1268	-	-
Stage 1	760	-	-	-	-
Stage 2	623	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	364	750	1268	-	-
Mov Cap-2 Maneuver	364	-	-	-	-
Stage 1	747	-	-	-	-
Stage 2	623	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1268	-	490	-	-
HCM Lane V/C Ratio	0.017	-	0.044	-	-
HCM Control Delay (s)	7.9	-	12.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative with Project, PM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	1590	150	260	920	250	520		
Future Volume (veh/h)	1590	150	260	920	250	520		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1674	155	274	968	248	497		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1429	131	317	2448	325	579		
Arrive On Green	0.43	0.43	0.18	0.69	0.18	0.18		
Sat Flow, veh/h	3406	303	1792	3668	1792	3198		
Grp Volume(v), veh/h	894	935	274	968	248	497		
Grp Sat Flow(s),veh/h/ln	1787	1828	1792	1787	1792	1599		
Q Serve(g_s), s	30.0	30.0	10.3	8.1	9.1	10.5		
Cycle Q Clear(g_c), s	30.0	30.0	10.3	8.1	9.1	10.5		
Prop In Lane		0.17	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	771	789	317	2448	325	579		
V/C Ratio(X)	1.16	1.19	0.86	0.40	0.76	0.86		
Avail Cap(c_a), veh/h	771	789	516	2448	567	1012		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.8	19.8	27.8	4.7	27.0	27.6		
Incr Delay (d2), s/veh	85.8	96.0	4.6	0.0	1.4	1.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	32.9	35.9	5.5	3.9	4.6	4.7		
LnGrp Delay(d),s/veh	105.5	115.7	32.4	4.8	28.5	29.1		
LnGrp LOS	F	F	C	A	C	C		
Approach Vol, veh/h	1829			1242	745			
Approach Delay, s/veh	110.7			10.9	28.9			
Approach LOS	F			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	17.6	35.3				52.9		16.6
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	12.3	32.0				10.1		12.5
Green Ext Time (p_c), s	0.0	0.0				1.1		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			62.2					
HCM 2010 LOS			E					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↗		↔	↗		↔	↑	↗	↔	↑	↗
Traffic Volume (veh/h)	130	1630	250	180	950	120	180	30	190	60	20	130
Future Volume (veh/h)	130	1630	250	180	950	120	180	30	190	60	20	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	140	1753	220	194	1022	109	194	32	0	65	22	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	260	1856	228	277	1882	201	323	326	277	312	323	274
Arrive On Green	0.07	0.58	0.58	0.08	0.58	0.58	0.17	0.17	0.00	0.17	0.17	0.00
Sat Flow, veh/h	3476	3205	394	3476	3260	347	1395	1881	1599	1369	1863	1583
Grp Volume(v), veh/h	140	961	1012	194	560	571	194	32	0	65	22	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1812	1738	1787	1820	1395	1881	1599	1369	1863	1583
Q Serve(g_s), s	3.0	37.3	40.6	4.1	14.7	14.7	10.3	1.1	0.0	3.2	0.8	0.0
Cycle Q Clear(g_c), s	3.0	37.3	40.6	4.1	14.7	14.7	11.0	1.1	0.0	4.3	0.8	0.0
Prop In Lane	1.00		0.22	1.00		0.19	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	1035	1049	277	1032	1051	323	326	277	312	323	274
V/C Ratio(X)	0.54	0.93	0.96	0.70	0.54	0.54	0.60	0.10	0.00	0.21	0.07	0.00
Avail Cap(c_a), veh/h	913	1173	1189	913	1173	1194	630	741	630	614	734	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.0	14.6	15.3	34.2	9.9	9.9	31.0	26.5	0.0	28.3	26.3	0.0
Incr Delay (d2), s/veh	0.6	11.2	16.6	1.2	0.2	0.2	0.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	21.4	24.8	2.0	7.2	7.3	4.0	0.6	0.0	1.2	0.4	0.0
LnGrp Delay(d),s/veh	34.6	25.8	31.9	35.4	10.1	10.1	31.6	26.5	0.0	28.4	26.4	0.0
LnGrp LOS	C	C	C	D	B	B	C	C		C	C	
Approach Vol, veh/h		2113			1325			226			87	
Approach Delay, s/veh		29.3			13.8			30.9			27.9	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	49.4		17.2	9.7	49.3		17.2				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+10), s	10.0	42.6		6.3	5.0	16.7		13.0				
Green Ext Time (p_c), s	0.0	1.6		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				23.9								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	110	20	1730	10	40	30	1000	630	10	20	950	200
Future Volume (veh/h)	110	20	1730	10	40	30	1000	630	10	20	950	200
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	124	22	1543	11	45	12	1124	708	10	22	1067	91
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	799	433	1292	75	79	66	799	2052	918	55	1287	576
Arrive On Green	0.23	0.23	0.23	0.04	0.04	0.04	0.23	0.57	0.57	0.02	0.36	0.36
Sat Flow, veh/h	3476	1881	2802	1740	1827	1531	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	124	22	1543	11	45	12	1124	708	10	22	1067	91
Grp Sat Flow(s),veh/h/ln	1738	1881	1401	1740	1827	1531	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	4.3	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	41.4	5.9
Cycle Q Clear(g_c), s	4.3	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	41.4	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	799	433	1292	75	79	66	799	2052	918	55	1287	576
V/C Ratio(X)	0.16	0.05	1.19	0.15	0.57	0.18	1.41	0.34	0.01	0.40	0.83	0.16
Avail Cap(c_a), veh/h	799	433	1292	354	372	312	799	2052	918	457	1409	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	45.6	41.1	70.1	71.4	70.2	58.6	17.2	13.9	74.2	44.4	33.0
Incr Delay (d2), s/veh	0.0	0.0	95.4	0.3	2.4	0.5	190.2	0.3	0.0	1.7	5.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.7	44.2	0.5	1.9	0.5	37.9	7.9	0.2	0.5	21.4	2.7
LnGrp Delay(d),s/veh	46.8	45.7	136.5	70.4	73.8	70.7	248.8	17.5	13.9	75.9	49.5	33.4
LnGrp LOS	D	D	F	E	E	E	F	B	B	E	D	C
Approach Vol, veh/h		1689			68			1842			1180	
Approach Delay, s/veh		128.8			72.7			158.6			48.8	
Approach LOS		F			E			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	61.0		11.6	6.5	93.6		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	43.4		5.7	3.0	18.0		37.0				
Green Ext Time (p_c), s	0.0	11.4		0.2	0.0	10.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			119.7									
HCM 2010 LOS			F									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	430	290	450	1350	270		
Future Volume (veh/h)	110	430	290	450	1350	270		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	134	369	354	549	1646	320		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	373	598	291	2458	1492	281		
Arrive On Green	0.21	0.21	0.17	0.70	0.50	0.50		
Sat Flow, veh/h	1792	1599	1757	3597	3097	565		
Grp Volume(v), veh/h	134	369	354	549	958	1008		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1781		
Q Serve(g_s), s	7.7	22.7	20.0	6.7	60.0	60.0		
Cycle Q Clear(g_c), s	7.7	22.7	20.0	6.7	60.0	60.0		
Prop In Lane	1.00	1.00	1.00			0.32		
Lane Grp Cap(c), veh/h	373	598	291	2458	888	885		
V/C Ratio(X)	0.36	0.62	1.22	0.22	1.08	1.14		
Avail Cap(c_a), veh/h	401	622	291	2458	888	885		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	40.9	30.8	50.4	6.4	30.4	30.4		
Incr Delay (d2), s/veh	0.6	1.7	124.7	0.1	53.7	76.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.9	10.3	19.7	3.2	42.6	48.0		
LnGrp Delay(d),s/veh	41.5	32.5	175.0	6.5	84.1	106.6		
LnGrp LOS	D	C	F	A	F	F		
Approach Vol, veh/h	503			903	1966			
Approach Delay, s/veh	34.9			72.6	95.7			
Approach LOS	C			E	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	24.7	66.4				91.1		29.7
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Q), s	22.6	62.0				8.7		24.7
Green Ext Time (p_c), s	0.0	0.0				6.7		0.5
Intersection Summary								
HCM 2010 Ctrl Delay			80.4					
HCM 2010 LOS			F					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕↔		↖	↕↔	
Traffic Volume (veh/h)	10	10	30	40	10	20	20	760	50	40	620	10
Future Volume (veh/h)	10	10	30	40	10	20	20	760	50	40	620	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	11	23	44	11	3	22	835	51	44	681	-1
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	4	4	4
Cap, veh/h	255	204	296	357	77	15	49	1393	85	85	1491	0
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.41	0.41	0.05	0.43	0.00
Sat Flow, veh/h	601	1093	1591	1020	415	78	1792	3415	209	1740	3563	0
Grp Volume(v), veh/h	22	0	23	58	0	0	22	437	449	44	680	0
Grp Sat Flow(s),veh/h/ln	1694	0	1591	1514	0	0	1792	1787	1836	1740	1736	0
Q Serve(g_s), s	0.0	0.0	0.5	0.4	0.0	0.0	0.5	7.2	7.2	0.9	5.3	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.5	1.1	0.0	0.0	0.5	7.2	7.2	0.9	5.3	0.0
Prop In Lane	0.50		1.00	0.76		0.05	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	458	0	296	449	0	0	49	729	749	85	1491	0
V/C Ratio(X)	0.05	0.00	0.08	0.13	0.00	0.00	0.45	0.60	0.60	0.52	0.46	0.00
Avail Cap(c_a), veh/h	1657	0	1472	1541	0	0	545	1890	1942	529	3670	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.7	0.0	12.7	12.9	0.0	0.0	18.1	8.8	8.8	17.6	7.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.0	6.4	0.8	0.8	4.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.5	0.0	0.0	0.3	3.7	3.8	0.6	2.5	0.0
LnGrp Delay(d),s/veh	12.7	0.0	12.8	13.1	0.0	0.0	24.5	9.6	9.5	22.3	7.9	0.0
LnGrp LOS	B		B	B			C	A	A	C	A	
Approach Vol, veh/h		45			58			908			724	
Approach Delay, s/veh		12.8			13.1			9.9			8.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.0	4.5	21.3		12.0	5.4	20.4				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		2.5	2.5	7.3		3.1	2.9	9.2				
Green Ext Time (p_c), s		0.1	0.0	5.1		0.3	0.0	6.2				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative with Project, PM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	130	80	600	270	70	570		
Future Volume (veh/h)	130	80	600	270	70	570		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1827	1827		
Adj Flow Rate, veh/h	138	51	638	256	74	606		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	0	0	1	1	4	4		
Cap, veh/h	218	195	1085	435	126	2106		
Arrive On Green	0.12	0.12	0.44	0.44	0.07	0.61		
Sat Flow, veh/h	1810	1615	2566	991	1740	3563		
Grp Volume(v), veh/h	138	51	461	433	74	606		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1676	1740	1736		
Q Serve(g_s), s	2.7	1.1	7.2	7.2	1.5	3.1		
Cycle Q Clear(g_c), s	2.7	1.1	7.2	7.2	1.5	3.1		
Prop In Lane	1.00	1.00		0.59	1.00			
Lane Grp Cap(c), veh/h	218	195	785	736	126	2106		
V/C Ratio(X)	0.63	0.26	0.59	0.59	0.59	0.29		
Avail Cap(c_a), veh/h	1480	1321	2193	2057	546	5680		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.3	14.6	7.8	7.8	16.5	3.4		
Incr Delay (d2), s/veh	3.0	0.7	0.7	0.8	4.3	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	1.0	3.6	3.4	0.9	1.5		
LnGrp Delay(d),s/veh	18.4	15.3	8.5	8.5	20.8	3.5		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	189		894			680		
Approach Delay, s/veh	17.5		8.5			5.4		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				27.2		9.4	6.1	21.1
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				5.1		4.7	3.5	9.2
Green Ext Time (p_c), s				4.6		0.5	0.1	6.7
Intersection Summary								
HCM 2010 Ctrl Delay			8.3					
HCM 2010 LOS			A					



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	70	30	840	60	40	690		
Future Volume (veh/h)	70	30	840	60	40	690		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1863	1863		
Adj Flow Rate, veh/h	72	7	866	54	41	711		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	1	1	2	2		
Cap, veh/h	274	245	1466	91	83	2025		
Arrive On Green	0.15	0.15	0.43	0.43	0.05	0.57		
Sat Flow, veh/h	1810	1615	3512	213	1774	3632		
Grp Volume(v), veh/h	72	7	453	467	41	711		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1844	1774	1770		
Q Serve(g_s), s	1.3	0.1	7.0	7.0	0.8	3.9		
Cycle Q Clear(g_c), s	1.3	0.1	7.0	7.0	0.8	3.9		
Prop In Lane	1.00	1.00		0.12	1.00			
Lane Grp Cap(c), veh/h	274	245	766	791	83	2025		
V/C Ratio(X)	0.26	0.03	0.59	0.59	0.50	0.35		
Avail Cap(c_a), veh/h	1750	1562	1975	2038	564	5379		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.6	13.1	7.9	7.9	16.8	4.1		
Incr Delay (d2), s/veh	0.5	0.0	0.7	0.7	4.5	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	0.1	3.6	3.7	0.5	1.9		
LnGrp Delay(d),s/veh	14.1	13.1	8.6	8.6	21.4	4.2		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	79		920			752		
Approach Delay, s/veh	14.0		8.6			5.2		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.7		10.5	5.2	20.5
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				5.9		3.3	2.8	9.0
Green Ext Time (p_c), s				5.6		0.2	0.0	6.5
Intersection Summary								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh	9.5											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	20	30	120	30	20	20	80	100	20	90	10
Future Vol, veh/h	10	20	30	120	30	20	20	80	100	20	90	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	12	24	37	146	37	24	24	98	122	24	110	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	10.1	9.6	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	17%	71%	17%
Vol Thru, %	40%	33%	18%	75%
Vol Right, %	50%	50%	12%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	60	170	120
LT Vol	20	10	120	20
Through Vol	80	20	30	90
RT Vol	100	30	20	10
Lane Flow Rate	244	73	207	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.308	0.098	0.287	0.198
Departure Headway (Hd)	4.552	4.838	4.982	4.871
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	733	717	732
Service Time	2.608	2.916	3.047	2.935
HCM Lane V/C Ratio	0.311	0.1	0.289	0.199
HCM Control Delay	9.6	8.4	10.1	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.3	0.3	1.2	0.7

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

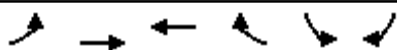
Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	260	0	0	180	60	50	240	180	220	0	10
Future Volume (veh/h)	10	260	0	0	180	60	50	240	180	220	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	0	0	1827	1827	1900	1810	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	280	0	0	194	50	54	258	122	237	0	2
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	0	0	4	4	5	5	5	0	0	0
Cap, veh/h	20	527	0	0	375	316	65	311	147	320	0	285
Arrive On Green	0.01	0.28	0.00	0.00	0.21	0.21	0.31	0.31	0.31	0.18	0.00	0.18
Sat Flow, veh/h	1792	1881	0	0	1827	1538	212	1011	478	1810	0	1610
Grp Volume(v), veh/h	11	280	0	0	194	50	434	0	0	237	0	2
Grp Sat Flow(s),veh/h/ln	1792	1881	0	0	1827	1538	1701	0	0	1810	0	1610
Q Serve(g_s), s	0.3	6.9	0.0	0.0	5.2	1.5	13.1	0.0	0.0	6.8	0.0	0.1
Cycle Q Clear(g_c), s	0.3	6.9	0.0	0.0	5.2	1.5	13.1	0.0	0.0	6.8	0.0	0.1
Prop In Lane	1.00		0.00	0.00		1.00	0.12		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	20	527	0	0	375	316	523	0	0	320	0	285
V/C Ratio(X)	0.55	0.53	0.00	0.00	0.52	0.16	0.83	0.00	0.00	0.74	0.00	0.01
Avail Cap(c_a), veh/h	130	1364	0	0	1076	906	740	0	0	754	0	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	16.8	0.0	0.0	19.5	18.0	17.8	0.0	0.0	21.5	0.0	18.7
Incr Delay (d2), s/veh	21.0	0.8	0.0	0.0	1.1	0.2	5.5	0.0	0.0	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.7	0.0	0.0	2.7	0.6	6.9	0.0	0.0	3.7	0.0	0.0
LnGrp Delay(d),s/veh	48.2	17.6	0.0	0.0	20.6	18.2	23.3	0.0	0.0	24.9	0.0	18.7
LnGrp LOS	D	B			C	B	C			C		B
Approach Vol, veh/h		291			244			434			239	
Approach Delay, s/veh		18.8			20.1			23.3			24.8	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		20.5		13.8	4.1	16.3		21.0				
Change Period (Y+Rc), s		5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s		40.0		23.0	4.0	32.5		24.0				
Max Q Clear Time (g_c+I1), s		8.9		8.8	2.3	7.2		15.1				
Green Ext Time (p_c), s		1.6		1.1	0.0	1.3		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay					21.9							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	630	760	420	30	20	420		
Future Volume (veh/h)	630	760	420	30	20	420		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1792	1792	1827	1827		
Adj Flow Rate, veh/h	663	800	442	6	21	219		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	6	6	4	4		
Cap, veh/h	468	1178	516	430	583	268		
Arrive On Green	0.26	0.63	0.29	0.29	0.17	0.17		
Sat Flow, veh/h	1774	1863	1792	1491	3375	1553		
Grp Volume(v), veh/h	663	800	442	6	21	219		
Grp Sat Flow(s),veh/h/ln	1774	1863	1792	1491	1688	1553		
Q Serve(g_s), s	11.5	12.1	10.2	0.1	0.2	5.9		
Cycle Q Clear(g_c), s	11.5	12.1	10.2	0.1	0.2	5.9		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	468	1178	516	430	583	268		
V/C Ratio(X)	1.42	0.68	0.86	0.01	0.04	0.82		
Avail Cap(c_a), veh/h	468	2564	1850	1539	2439	1122		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	16.0	5.2	14.7	11.1	15.0	17.4		
Incr Delay (d2), s/veh	199.7	0.3	1.6	0.0	0.0	2.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	6.1	5.1	0.1	0.1	5.0		
LnGrp Delay(d),s/veh	215.8	5.4	16.3	11.1	15.0	19.7		
LnGrp LOS	F	A	B	B	B	B		
Approach Vol, veh/h		1463	448		240			
Approach Delay, s/veh		100.8	16.2		19.3			
Approach LOS		F	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		32.6		11.0	15.0	17.6		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		14.1		7.9	13.5	12.2		
Green Ext Time (p_c), s		0.8		0.0	0.0	0.4		
Intersection Summary								
HCM 2010 Ctrl Delay			74.1					
HCM 2010 LOS			E					
Notes								

User approved changes to right turn type.

Intersection	
Intersection Delay, s/veh	67.1
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	610	350	50	20	70
Future Vol, veh/h	200	610	350	50	20	70
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	1	1	5	5	17	17
Mvmt Flow	233	709	407	58	23	81
Number of Lanes	1	1	2	1	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	3
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	99.6	13.5	12.2
HCM LOS	F	B	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	610	175	175	50	20	70
LT Vol	200	0	0	0	0	20	0
Through Vol	0	610	175	175	0	0	0
RT Vol	0	0	0	0	50	0	70
Lane Flow Rate	233	709	203	203	58	23	81
Geometry Grp	8	8	8	8	8	8	8
Degree of Util (X)	0.427	1.202	0.388	0.388	0.071	0.056	0.17
Departure Headway (Hd)	6.607	6.103	7.165	7.165	4.647	9.124	7.899
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	547	596	505	505	776	395	457
Service Time	4.334	3.83	4.865	4.865	2.347	6.824	5.599
HCM Lane V/C Ratio	0.426	1.19	0.402	0.402	0.075	0.058	0.177
HCM Control Delay	14.2	127.6	14.3	14.3	7.7	12.4	12.2
HCM Lane LOS	B	F	B	B	A	B	B
HCM 95th-tile Q	2.1	25.3	1.8	1.8	0.2	0.2	0.6

Intersection	
Intersection Delay, s/veh	34.5
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	460	150	100	130	190	180
Future Vol, veh/h	460	150	100	130	190	180
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	529	172	115	149	218	207
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	53.4	15.2	15.2
HCM LOS	F	C	C

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	43%	0%	0%
Vol Right, %	0%	0%	57%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	460	150	230	190	180
LT Vol	460	0	0	190	0
Through Vol	0	150	100	0	0
RT Vol	0	0	130	0	180
Lane Flow Rate	529	172	264	218	207
Geometry Grp	7	7	4	7	7
Degree of Util (X)	1.006	0.304	0.473	0.468	0.373
Departure Headway (Hd)	6.849	6.341	6.438	7.707	6.482
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	529	566	558	465	552
Service Time	4.613	4.104	4.507	5.481	4.256
HCM Lane V/C Ratio	1	0.304	0.473	0.469	0.375
HCM Control Delay	66.9	11.9	15.2	17.1	13.1
HCM Lane LOS	F	B	C	C	B
HCM 95th-tile Q	14.2	1.3	2.5	2.4	1.7

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1500	190	240	570	0	150	0	150	0	0	0
Future Volume (veh/h)	0	1500	190	240	570	0	150	0	150	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	0	1546	194	247	588	0	155	0	126			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	2	1876	232	280	2808	0	191	0	170			
Arrive On Green	0.00	0.59	0.59	0.16	0.79	0.00	0.11	0.00	0.11			
Sat Flow, veh/h	1774	3170	393	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	0	854	886	247	588	0	155	0	126			
Grp Sat Flow(s),veh/h/ln	1774	1770	1793	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	36.3	38.0	12.9	4.0	0.0	8.2	0.0	7.4			
Cycle Q Clear(g_c), s	0.0	36.3	38.0	12.9	4.0	0.0	8.2	0.0	7.4			
Prop In Lane	1.00		0.22	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	1047	1061	280	2808	0	191	0	170			
V/C Ratio(X)	0.00	0.82	0.84	0.88	0.21	0.00	0.81	0.00	0.74			
Avail Cap(c_a), veh/h	372	1113	1128	376	2808	0	497	0	444			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	15.4	15.7	39.4	2.6	0.0	41.6	0.0	41.2			
Incr Delay (d2), s/veh	0.0	5.2	5.9	14.1	0.0	0.0	3.2	0.0	2.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	19.1	20.4	7.5	2.0	0.0	4.2	0.0	3.3			
LnGrp Delay(d),s/veh	0.0	20.5	21.6	53.5	2.7	0.0	44.7	0.0	43.6			
LnGrp LOS		C	C	D	A		D		D			
Approach Vol, veh/h		1740			835			281				
Approach Delay, s/veh		21.1			17.7			44.2				
Approach LOS		C			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	8.5	61.8			0.0	80.3		15.1				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+1/4), s	14.5	40.0			0.0	6.0		10.2				
Green Ext Time (p_c), s	0.0	16.4			0.0	4.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				22.4								
HCM 2010 LOS				C								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
27: Reservation Road & Watkins Gate Road

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	230	210	1000	2110	60		
Future Volume (veh/h)	10	230	210	1000	2110	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1881	1881	1863	1900		
Adj Flow Rate, veh/h	11	43	228	1087	2293	62		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	1	1	2	2		
Cap, veh/h	64	58	242	3096	2470	66		
Arrive On Green	0.04	0.04	0.13	0.87	0.70	0.70		
Sat Flow, veh/h	1774	1583	1792	3668	3614	95		
Grp Volume(v), veh/h	11	43	228	1087	1147	1208		
Grp Sat Flow(s),veh/h/ln	1774	1583	1792	1787	1770	1846		
Q Serve(g_s), s	0.8	3.6	16.8	7.8	73.5	75.4		
Cycle Q Clear(g_c), s	0.8	3.6	16.8	7.8	73.5	75.4		
Prop In Lane	1.00	1.00	1.00			0.05		
Lane Grp Cap(c), veh/h	64	58	242	3096	1241	1295		
V/C Ratio(X)	0.17	0.75	0.94	0.35	0.92	0.93		
Avail Cap(c_a), veh/h	272	243	242	3119	1253	1307		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	62.4	63.7	57.3	1.7	16.9	17.2		
Incr Delay (d2), s/veh	0.5	7.0	42.1	0.1	11.7	12.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	1.7	11.2	3.8	39.4	42.3		
LnGrp Delay(d),s/veh	62.8	70.7	99.4	1.8	28.6	29.5		
LnGrp LOS	E	E	F	A	C	C		
Approach Vol, veh/h	54			1315	2355			
Approach Delay, s/veh	69.1			18.7	29.1			
Approach LOS	E			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.4	22.0	100.2				122.2
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		20.5	18.0	94.5				116.5
Max Q Clear Time (g_c+I1), s		5.6	18.8	77.4				9.8
Green Ext Time (p_c), s		0.0	0.0	16.3				15.9
Intersection Summary								
HCM 2010 Ctrl Delay			26.0					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1260	500	10	10	360	100	10	10	10	120	10	540
Future Volume (veh/h)	1260	500	10	10	360	100	10	10	10	120	10	540
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1835	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	1340	532	11	11	383	106	11	11	9	128	11	439
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	486	2069	43	18	444	123	18	18	14	356	31	782
Arrive On Green	0.27	0.58	0.58	0.01	0.32	0.32	0.03	0.03	0.03	0.22	0.22	0.22
Sat Flow, veh/h	1774	3546	73	1740	1384	383	631	631	516	1656	142	1599
Grp Volume(v), veh/h	1340	265	278	11	0	489	31	0	0	139	0	439
Grp Sat Flow(s),veh/h/ln	1774	1770	1850	1740	0	1767	1777	0	0	1798	0	1599
Q Serve(g_s), s	30.0	8.1	8.1	0.7	0.0	28.5	1.9	0.0	0.0	7.2	0.0	21.2
Cycle Q Clear(g_c), s	30.0	8.1	8.1	0.7	0.0	28.5	1.9	0.0	0.0	7.2	0.0	21.2
Prop In Lane	1.00		0.04	1.00		0.22	0.35		0.29	0.92		1.00
Lane Grp Cap(c), veh/h	486	1032	1079	18	0	567	50	0	0	387	0	782
V/C Ratio(X)	2.76	0.26	0.26	0.61	0.00	0.86	0.63	0.00	0.00	0.36	0.00	0.56
Avail Cap(c_a), veh/h	486	1032	1079	476	0	967	487	0	0	492	0	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.8	11.2	11.2	54.0	0.0	34.9	52.7	0.0	0.0	36.6	0.0	19.7
Incr Delay (d2), s/veh	797.5	0.2	0.2	11.6	0.0	6.3	4.7	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	4.0	4.1	0.4	0.0	14.8	1.0	0.0	0.0	3.6	0.0	9.3
LnGrp Delay(d),s/veh	837.3	11.4	11.4	65.6	0.0	41.2	57.4	0.0	0.0	36.8	0.0	20.0
LnGrp LOS	F	B	B	E		D	E			D		B
Approach Vol, veh/h		1883			500			31			578	
Approach Delay, s/veh		599.1			41.8			57.4			24.0	
Approach LOS		F			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	68.9		28.6	33.8	40.2		7.1				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1/2), s	11.2	10.1		23.2	32.0	30.5		3.9				
Green Ext Time (p_c), s	0.0	5.1		0.4	0.0	4.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				389.3								
HCM 2010 LOS				F								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	200	10	80	140	10	30	40	660	110	30	630	100
Future Volume (veh/h)	200	10	80	140	10	30	40	660	110	30	630	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1881	1881	1900
Adj Flow Rate, veh/h	213	11	85	149	11	32	43	702	117	32	670	106
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	382	37	113	572	38	558	81	1076	179	64	1046	165
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.04	0.35	0.35	0.04	0.34	0.34
Sat Flow, veh/h	752	107	326	1249	108	1608	1810	3095	515	1792	3090	488
Grp Volume(v), veh/h	309	0	0	160	0	32	43	409	410	32	387	389
Grp Sat Flow(s),veh/h/ln	1185	0	0	1358	0	1608	1810	1805	1806	1792	1787	1792
Q Serve(g_s), s	8.6	0.0	0.0	0.0	0.0	0.7	1.2	9.6	9.6	0.9	9.2	9.2
Cycle Q Clear(g_c), s	12.9	0.0	0.0	4.3	0.0	0.7	1.2	9.6	9.6	0.9	9.2	9.2
Prop In Lane	0.69		0.28	0.93		1.00	1.00		0.29	1.00		0.27
Lane Grp Cap(c), veh/h	532	0	0	610	0	558	81	628	628	64	605	607
V/C Ratio(X)	0.58	0.00	0.00	0.26	0.00	0.06	0.53	0.65	0.65	0.50	0.64	0.64
Avail Cap(c_a), veh/h	1044	0	0	1084	0	1124	416	1442	1443	412	1250	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	0.0	12.1	0.0	10.9	23.4	13.8	13.8	23.7	14.0	14.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.2	0.0	0.0	5.2	1.2	1.2	5.8	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	0.0	1.6	0.0	0.3	0.7	4.9	5.0	0.5	4.7	4.7
LnGrp Delay(d),s/veh	17.0	0.0	0.0	12.3	0.0	10.9	28.6	14.9	14.9	29.5	15.1	15.1
LnGrp LOS	B			B		B	C	B	B	C	B	B
Approach Vol, veh/h		309			192			862			808	
Approach Delay, s/veh		17.0			12.1			15.6			15.7	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.4	5.8	21.9		22.4	5.3	22.4				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	35.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		14.9	3.2	11.2		6.3	2.9	11.6				
Green Ext Time (p_c), s		1.8	0.0	5.0		1.0	0.0	5.5				
Intersection Summary												
HCM 2010 Ctrl Delay				15.5								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	20	10	40	10	10	10	30	180	10	10	220	20
Future Vol, veh/h	20	10	40	10	10	10	30	180	10	10	220	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	24	12	47	12	12	12	35	212	12	12	259	24
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.7	8.6	9.8	10.8
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	29%	33%	100%	0%
Vol Thru, %	0%	95%	14%	33%	0%	92%
Vol Right, %	0%	5%	57%	33%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	190	70	30	10	240
LT Vol	30	0	20	10	10	0
Through Vol	0	180	10	10	0	220
RT Vol	0	10	40	10	0	20
Lane Flow Rate	35	224	82	35	12	282
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.054	0.311	0.114	0.051	0.018	0.391
Departure Headway (Hd)	5.554	5.014	4.978	5.223	5.548	4.986
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	644	715	717	682	645	720
Service Time	3.295	2.754	3.027	3.28	3.287	2.725
HCM Lane V/C Ratio	0.054	0.313	0.114	0.051	0.019	0.392
HCM Control Delay	8.6	10	8.7	8.6	8.4	10.9
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0.2	1.3	0.4	0.2	0.1	1.9

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	860	110	20	1500	0	200	0	30	60	50	80
Future Volume (veh/h)	0	860	110	20	1500	0	200	0	30	60	50	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	905	0	21	1579	0	211	0	14	63	53	64
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2239	1002	23	2561	0	0	0	0	140	147	125
Arrive On Green	0.00	0.63	0.00	0.01	0.72	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	905	0	21	1579	0		0.0		63	53	64
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	5.8	0.0	0.5	10.2	0.0				1.6	1.3	1.8
Cycle Q Clear(g_c), s	0.0	5.8	0.0	0.5	10.2	0.0				1.6	1.3	1.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2239	1002	23	2561	0				140	147	125
V/C Ratio(X)	0.00	0.40	0.00	0.90	0.62	0.00				0.45	0.36	0.51
Avail Cap(c_a), veh/h	0	3533	1580	787	3533	0				946	994	845
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.3	0.0	22.4	3.3	0.0				19.9	19.8	20.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	32.4	0.3	0.0				0.8	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	0.0	0.5	4.9	0.0				0.8	0.7	0.8
LnGrp Delay(d),s/veh	0.0	4.4	0.0	54.8	3.6	0.0				20.8	20.3	21.2
LnGrp LOS		A		D	A					C	C	C
Approach Vol, veh/h		905			1600						180	
Approach Delay, s/veh		4.4			4.3						20.8	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.1	33.1		8.3		37.2				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.5	7.8		3.8		12.2				
Green Ext Time (p_c), s			0.0	11.2		0.3		20.4				
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	660	10	80	1230	220	20	20	50	230	30	330
Future Volume (veh/h)	290	660	10	80	1230	220	20	20	50	230	30	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	305	695	11	84	1295	227	21	21	47	242	32	244
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2179	34	108	1648	286	95	100	168	349	374	316
Arrive On Green	0.12	0.61	0.61	0.06	0.54	0.54	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3601	57	1792	3045	529	249	493	831	1308	1845	1559
Grp Volume(v), veh/h	305	345	361	84	755	767	89	0	0	242	32	244
Grp Sat Flow(s),veh/h/ln	1792	1787	1871	1792	1787	1787	1573	0	0	1308	1845	1559
Q Serve(g_s), s	12.4	9.4	9.4	4.6	33.6	34.5	0.0	0.0	0.0	12.7	1.4	14.8
Cycle Q Clear(g_c), s	12.4	9.4	9.4	4.6	33.6	34.5	4.3	0.0	0.0	17.0	1.4	14.8
Prop In Lane	1.00		0.03	1.00		0.30	0.24		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	222	1081	1132	108	967	967	364	0	0	349	374	316
V/C Ratio(X)	1.37	0.32	0.32	0.78	0.78	0.79	0.24	0.00	0.00	0.69	0.09	0.77
Avail Cap(c_a), veh/h	222	1081	1132	222	967	967	666	0	0	612	745	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.88	0.88	0.88	0.24	0.24	0.24	1.00	0.00	0.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	43.8	9.7	9.7	46.4	18.2	18.4	33.5	0.0	0.0	38.3	32.3	37.7
Incr Delay (d2), s/veh	190.8	0.7	0.7	1.1	1.6	1.7	0.1	0.0	0.0	0.7	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	4.8	5.0	2.3	16.8	17.3	2.1	0.0	0.0	6.5	0.7	6.5
LnGrp Delay(d),s/veh	234.6	10.3	10.3	47.5	19.8	20.1	33.6	0.0	0.0	39.0	32.4	38.8
LnGrp LOS	F	B	B	D	B	C	C			D	C	D
Approach Vol, veh/h		1011			1606			89			518	
Approach Delay, s/veh		78.0			21.4			33.6			38.5	
Approach LOS		E			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.0	65.1		24.9	16.4	58.7		24.9				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	40.0	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+10), s	10.0	11.4		19.0	14.4	36.5		6.3				
Green Ext Time (p_c), s	0.0	2.5		0.9	0.0	0.0		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				42.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	280	690	40	250	50	670	70	20	60	100	40
Future Volume (veh/h)	50	280	690	40	250	50	670	70	20	60	100	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	292	0	42	260	51	698	73	19	62	104	-70
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	75	468	398	65	375	74	731	417	109	85	456	0
Arrive On Green	0.04	0.25	0.00	0.04	0.24	0.24	0.21	0.29	0.29	0.05	0.13	0.00
Sat Flow, veh/h	1792	1881	1599	1810	1544	303	3476	1440	375	1810	3705	0
Grp Volume(v), veh/h	52	292	0	42	0	311	698	0	92	62	34	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1847	1738	0	1815	1810	1805	0
Q Serve(g_s), s	1.4	6.6	0.0	1.1	0.0	7.3	9.4	0.0	1.8	1.6	0.4	0.0
Cycle Q Clear(g_c), s	1.4	6.6	0.0	1.1	0.0	7.3	9.4	0.0	1.8	1.6	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.21	1.00		0.00
Lane Grp Cap(c), veh/h	75	468	398	65	0	449	731	0	525	85	456	0
V/C Ratio(X)	0.69	0.62	0.00	0.65	0.00	0.69	0.95	0.00	0.18	0.73	0.07	0.00
Avail Cap(c_a), veh/h	754	1187	1009	761	0	1165	731	0	1145	571	2278	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.5	15.9	0.0	22.6	0.0	16.4	18.5	0.0	12.6	22.4	18.3	0.0
Incr Delay (d2), s/veh	10.9	1.6	0.0	4.0	0.0	2.3	22.7	0.0	0.3	4.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.6	0.0	0.6	0.0	4.0	6.8	0.0	0.9	0.9	0.2	0.0
LnGrp Delay(d),s/veh	33.4	17.5	0.0	26.6	0.0	18.7	41.3	0.0	13.0	26.7	18.4	0.0
LnGrp LOS	C	B		C		B	D		B	C	B	
Approach Vol, veh/h		344			353			790			96	
Approach Delay, s/veh		19.9			19.6			38.0			23.8	
Approach LOS		B			B			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	6.5	16.1	6.7	18.3	6.2	16.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s	4.5	2.4	3.4	9.3	3.6	3.8	3.1	8.6				
Green Ext Time (p_c), s	0.0	0.1	0.1	2.3	0.0	0.8	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				29.1								
HCM 2010 LOS				C								

Intersection

Intersection Delay, s/veh 12.1
 Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	10	250	90	20	270	90
Future Vol, veh/h	10	250	90	20	270	90
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	11	284	102	23	307	102
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10.5	9.2	14.1
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	75%
Vol Thru, %	82%	0%	25%
Vol Right, %	18%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	110	260	360
LT Vol	0	10	270
Through Vol	90	0	90
RT Vol	20	250	0
Lane Flow Rate	125	295	409
Geometry Grp	1	1	1
Degree of Util (X)	0.175	0.38	0.558
Departure Headway (Hd)	5.031	4.625	4.913
Convergence, Y/N	Yes	Yes	Yes
Cap	704	771	728
Service Time	3.128	2.689	2.992
HCM Lane V/C Ratio	0.178	0.383	0.562
HCM Control Delay	9.2	10.5	14.1
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.6	1.8	3.5

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	50	30	220	40	30
Future Vol, veh/h	250	50	30	220	40	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	294	59	35	259	47	35

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	353	0	653
Stage 1	-	-	-	-	324
Stage 2	-	-	-	-	329
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1217	-	435
Stage 1	-	-	-	-	738
Stage 2	-	-	-	-	734
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1217	-	420
Mov Cap-2 Maneuver	-	-	-	-	420
Stage 1	-	-	-	-	713
Stage 2	-	-	-	-	734

Approach	EB	WB	NB
HCM Control Delay, s	0	1	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	512	-	-	1217	-
HCM Lane V/C Ratio	0.161	-	-	0.029	-
HCM Control Delay (s)	13.4	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	22
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	200	60	30	180	10	50	230	20	10	220	30
Future Vol, veh/h	10	200	60	30	180	10	50	230	20	10	220	30
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	12	244	73	37	220	12	61	280	24	12	268	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	21.8	18.8	25.5	21
HCM LOS	C	C	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	4%	14%	4%
Vol Thru, %	77%	74%	82%	85%
Vol Right, %	7%	22%	5%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	270	220	260
LT Vol	50	10	30	10
Through Vol	230	200	180	220
RT Vol	20	60	10	30
Lane Flow Rate	366	329	268	317
Geometry Grp	1	1	1	1
Degree of Util (X)	0.71	0.64	0.544	0.62
Departure Headway (Hd)	6.982	6.999	7.301	7.038
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	516	514	491	510
Service Time	5.052	5.071	5.377	5.112
HCM Lane V/C Ratio	0.709	0.64	0.546	0.622
HCM Control Delay	25.5	21.8	18.8	21
HCM Lane LOS	D	C	C	C
HCM 95th-tile Q	5.6	4.5	3.2	4.2

Intersection												
Int Delay, s/veh	18.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	70	110	50	30	90	10	90	210	20	0	0	0
Future Vol, veh/h	70	110	50	30	90	10	90	210	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	95	149	68	41	122	14	122	284	27	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	611	556	1	652	543	298	1	0	0	311	0	0
Stage 1	1	1	-	542	542	-	-	-	-	-	-	-
Stage 2	610	555	-	110	1	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	404	438	1081	381	447	741	1615	-	-	1216	-	-
Stage 1	1019	893	-	525	520	-	-	-	-	-	-	-
Stage 2	480	512	-	895	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	284	398	1081	237	406	741	1615	-	-	1216	-	-
Mov Cap-2 Maneuver	284	398	-	237	406	-	-	-	-	-	-	-
Stage 1	925	893	-	477	472	-	-	-	-	-	-	-
Stage 2	318	465	-	699	895	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	38		24.3		2.1		0	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1615	-	-	404	359	1216	-	-
HCM Lane V/C Ratio	0.075	-	-	0.769	0.489	-	-	-
HCM Control Delay (s)	7.4	0	-	38	24.3	0	-	-
HCM Lane LOS	A	A	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	6.4	2.6	0	-	-

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	130	10	10	450	380	120
Future Vol, veh/h	130	10	10	450	380	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	148	11	11	511	432	136
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1033	500	568	0	0
Stage 1	500	-	-	-	-
Stage 2	533	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	260	575	1004	-	-
Stage 1	613	-	-	-	-
Stage 2	593	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	256	575	1004	-	-
Mov Cap-2 Maneuver	256	-	-	-	-
Stage 1	604	-	-	-	-
Stage 2	593	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.6	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1004	-	267	-	-
HCM Lane V/C Ratio	0.011	-	0.596	-	-
HCM Control Delay (s)	8.6	0	36.6	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative with Project, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	290	50	380	60	340	460	400	350	50
Future Volume (veh/h)	20	20	30	290	50	380	60	340	460	400	350	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	326	56	0	67	382	0	449	393	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	44	255	34	381	972	435	105	557	249	356	1057	473
Arrive On Green	0.03	0.09	0.09	0.21	0.27	0.00	0.06	0.16	0.00	0.20	0.30	0.00
Sat Flow, veh/h	1691	2991	399	1792	3574	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	12	13	326	56	0	67	382	0	449	393	0
Grp Sat Flow(s),veh/h/ln	1691	1687	1702	1792	1787	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.7	0.3	0.4	9.2	0.6	0.0	1.9	5.3	0.0	10.5	4.6	0.0
Cycle Q Clear(g_c), s	0.7	0.3	0.4	9.2	0.6	0.0	1.9	5.3	0.0	10.5	4.6	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	144	145	381	972	435	105	557	249	356	1057	473
V/C Ratio(X)	0.50	0.08	0.09	0.86	0.06	0.00	0.64	0.69	0.00	1.26	0.37	0.00
Avail Cap(c_a), veh/h	662	983	992	702	2083	932	356	1724	771	356	1724	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.1	22.0	22.1	19.8	14.1	0.0	24.1	20.8	0.0	20.9	14.5	0.0
Incr Delay (d2), s/veh	3.2	0.1	0.1	2.2	0.0	0.0	2.3	0.6	0.0	138.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.2	0.2	4.8	0.3	0.0	1.0	2.6	0.0	18.7	2.2	0.0
LnGrp Delay(d),s/veh	28.3	22.1	22.2	22.0	14.1	0.0	26.4	21.4	0.0	159.4	14.6	0.0
LnGrp LOS	C	C	C	C	B		C	C		F	B	
Approach Vol, veh/h		47			382			449			842	
Approach Delay, s/veh		25.0			20.8			22.1			91.8	
Approach LOS		C			C			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	20.1	5.9	18.7	15.0	12.7	15.6	9.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.9	6.6	2.7	2.6	12.5	7.3	11.2	2.4				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.1	0.0	0.5	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			56.0									
HCM 2010 LOS			E									
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	20	850	10	30	680	40	30	60	50	40	40	10
Future Volume (veh/h)	20	850	10	30	680	40	30	60	50	40	40	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1810	1900
Adj Flow Rate, veh/h	22	934	11	33	747	44	33	66	55	44	44	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	5	5	5
Cap, veh/h	192	1326	15	204	1186	72	260	149	111	353	156	33
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	33	3422	40	50	3060	185	280	811	606	573	850	178
Grp Volume(v), veh/h	503	0	464	425	0	399	154	0	0	99	0	0
Grp Sat Flow(s),veh/h/ln	1806	0	1688	1617	0	1679	1696	0	0	1601	0	0
Q Serve(g_s), s	0.1	0.0	4.9	0.2	0.0	4.0	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	4.9	5.1	0.0	4.0	1.7	0.0	0.0	1.0	0.0	0.0
Prop In Lane	0.04		0.02	0.08		0.11	0.21		0.36	0.44		0.11
Lane Grp Cap(c), veh/h	879	0	654	811	0	650	520	0	0	542	0	0
V/C Ratio(X)	0.57	0.00	0.71	0.52	0.00	0.61	0.30	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	4375	0	4062	4065	0	4040	2625	0	0	2411	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.4	0.0	5.4	5.1	0.0	5.2	7.7	0.0	0.0	7.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.2	0.0	0.4	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.3	1.9	0.0	1.8	0.8	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	5.6	0.0	6.0	5.3	0.0	5.5	7.8	0.0	0.0	7.5	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		967			824			154			99	
Approach Delay, s/veh		5.8			5.4			7.8			7.5	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.4		12.6		8.4		12.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.7		6.9		3.0		7.1				
Green Ext Time (p_c), s		0.2		1.0		0.1		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				5.9								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	10	910	30	50	650	20	90	20	100	20	20	10
Future Volume (veh/h)	10	910	30	50	650	20	90	20	100	20	20	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	1022	34	56	730	22	101	22	112	22	22	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	0	0	0
Cap, veh/h	164	1416	47	210	1217	38	506	76	311	298	173	63
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	12	3394	112	77	2918	92	1151	393	1611	414	896	327
Grp Volume(v), veh/h	560	0	507	401	0	407	123	0	112	55	0	0
Grp Sat Flow(s),veh/h/ln	1844	0	1675	1391	0	1695	1544	0	1611	1637	0	0
Q Serve(g_s), s	0.0	0.0	5.8	0.6	0.0	4.2	0.5	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	5.8	6.5	0.0	4.2	1.4	0.0	1.4	0.6	0.0	0.0
Prop In Lane	0.02		0.07	0.14		0.05	0.82		1.00	0.40		0.20
Lane Grp Cap(c), veh/h	928	0	699	758	0	707	582	0	311	534	0	0
V/C Ratio(X)	0.60	0.00	0.73	0.53	0.00	0.58	0.21	0.00	0.36	0.10	0.00	0.00
Avail Cap(c_a), veh/h	4123	0	3664	3226	0	3709	2234	0	2128	2273	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	5.6	5.1	0.0	5.2	8.1	0.0	8.1	7.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.2	0.0	0.3	0.1	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	2.6	1.8	0.0	2.0	0.7	0.0	0.6	0.3	0.0	0.0
LnGrp Delay(d),s/veh	5.8	0.0	6.2	5.3	0.0	5.4	8.1	0.0	8.3	7.8	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		1067			808			235			55	
Approach Delay, s/veh		6.0			5.4			8.2			7.8	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.0		14.1		9.0		14.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.4		7.8		2.6		8.5				
Green Ext Time (p_c), s		0.1		1.1		0.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				6.0								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

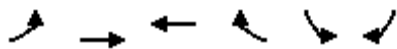
Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕	↗		↕	
Traffic Volume (veh/h)	310	710	10	10	440	10	10	10	20	10	10	280
Future Volume (veh/h)	310	710	10	10	440	10	10	10	20	10	10	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	326	747	11	11	463	11	11	11	0	11	11	295
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	503	1073	16	102	1839	43	274	232	391	96	22	366
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.24	0.24	0.00	0.24	0.24	0.24
Sat Flow, veh/h	657	1990	31	20	3410	80	588	958	1615	23	90	1511
Grp Volume(v), veh/h	469	0	615	253	0	232	22	0	0	317	0	0
Grp Sat Flow(s),veh/h/ln	971	0	1706	1829	0	1681	1546	0	1615	1624	0	0
Q Serve(g_s), s	15.6	0.0	10.7	0.0	0.0	3.0	0.0	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	18.6	0.0	10.7	3.0	0.0	3.0	0.4	0.0	0.0	7.6	0.0	0.0
Prop In Lane	0.70		0.02	0.04		0.05	0.50		1.00	0.03		0.93
Lane Grp Cap(c), veh/h	672	0	920	1078	0	907	505	0	391	483	0	0
V/C Ratio(X)	0.70	0.00	0.67	0.24	0.00	0.26	0.04	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	1424	0	2093	2273	0	2062	1196	0	1196	1289	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.7	0.0	6.8	5.1	0.0	5.1	12.0	0.0	0.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln#	4.8	0.0	5.0	1.5	0.0	1.4	0.2	0.0	0.0	3.4	0.0	0.0
LnGrp Delay(d),s/veh	10.2	0.0	7.1	5.1	0.0	5.1	12.0	0.0	0.0	15.2	0.0	0.0
LnGrp LOS	B		A	A		A	B			B		
Approach Vol, veh/h		1084			485			22			317	
Approach Delay, s/veh		8.5			5.1			12.0			15.2	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.5		26.7		14.5		26.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.4		20.6		9.6		5.0				
Green Ext Time (p_c), s		0.0		1.6		0.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				8.8								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	290	450	390	10	10	70		
Future Volume (veh/h)	290	450	390	10	10	70		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1863	1881	1900	1827	1900		
Adj Flow Rate, veh/h	302	469	406	10	10	73		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	1	1	0	0		
Cap, veh/h	648	915	1693	42	18	130		
Arrive On Green	0.47	0.47	0.47	0.47	0.10	0.10		
Sat Flow, veh/h	721	2012	3659	88	187	1368		
Grp Volume(v), veh/h	389	382	203	213	84	0		
Grp Sat Flow(s),veh/h/ln	1037	1610	1787	1866	1574	0		
Q Serve(g_s), s	5.4	3.4	1.4	1.4	1.1	0.0		
Cycle Q Clear(g_c), s	6.8	3.4	1.4	1.4	1.1	0.0		
Prop In Lane	0.78			0.05	0.12	0.87		
Lane Grp Cap(c), veh/h	798	765	849	886	150	0		
V/C Ratio(X)	0.49	0.50	0.24	0.24	0.56	0.00		
Avail Cap(c_a), veh/h	3156	4270	4739	4947	1918	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.8	3.8	3.3	3.3	9.1	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.1	0.1	1.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.9	1.5	0.7	0.7	0.5	0.0		
LnGrp Delay(d),s/veh	4.9	4.0	3.3	3.3	10.3	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h		771	416		84			
Approach Delay, s/veh		4.5	3.3		10.3			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				14.4		6.5		14.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				8.8		3.1		3.4
Green Ext Time (p_c), s				1.1		0.0		0.4
Intersection Summary								
HCM 2010 Ctrl Delay				4.5				
HCM 2010 LOS				A				
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative with Project, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	450	10	10	10	10	10	10	10	10	10	10	380
Future Volume (veh/h)	450	10	10	10	10	10	10	10	10	10	10	380
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	495	11	11	11	11	11	11	11	11	11	11	418
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	770	320	320	514	456	460	256	241	179	112	21	498
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1360	777	777	840	1107	1115	357	739	548	15	66	1526
Grp Volume(v), veh/h	495	0	22	18	0	15	33	0	0	440	0	0
Grp Sat Flow(s),veh/h/ln	1360	0	1555	1568	0	1493	1644	0	0	1607	0	0
Q Serve(g_s), s	11.4	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0	1.6	0.0	0.0
Cycle Q Clear(g_c), s	11.6	0.0	0.3	0.2	0.0	0.2	0.4	0.0	0.0	8.7	0.0	0.0
Prop In Lane	1.00		0.50	0.60		0.75	0.33		0.33	0.02		0.95
Lane Grp Cap(c), veh/h	770	0	641	814	0	616	676	0	0	632	0	0
V/C Ratio(X)	0.64	0.00	0.03	0.02	0.00	0.02	0.05	0.00	0.00	0.70	0.00	0.00
Avail Cap(c_a), veh/h	2024	0	2055	2213	0	1974	1650	0	0	1759	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.5	0.0	6.0	6.0	0.0	6.0	8.0	0.0	0.0	10.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.1	0.1	0.0	0.1	0.2	0.0	0.0	3.9	0.0	0.0
LnGrp Delay(d),s/veh	9.8	0.0	6.0	6.0	0.0	6.0	8.0	0.0	0.0	11.3	0.0	0.0
LnGrp LOS	A		A	A		A	A			B		
Approach Vol, veh/h		517			33			33			440	
Approach Delay, s/veh		9.6			6.0			8.0			11.3	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.7		18.7		15.7		18.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		35.5		45.5		35.5		45.5				
Max Q Clear Time (g_c+I1), s		2.4		13.6		10.7		2.2				
Green Ext Time (p_c), s		0.0		0.5		0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.2								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	7.3											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔			↔↔	
Traffic Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Future Vol, veh/h	10	10	10	10	10	10	10	10	10	10	10	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	11	11	11	11	11	11	11	11
Number of Lanes	0	2	0	0	2	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.5	7.5	7.1	7.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	67%	0%	67%	0%	33%
Vol Thru, %	33%	33%	33%	33%	33%	33%
Vol Right, %	33%	0%	67%	0%	67%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	15	15	15	15	30
LT Vol	10	10	0	10	0	10
Through Vol	10	5	5	5	5	10
RT Vol	10	0	10	0	10	10
Lane Flow Rate	33	16	16	16	16	33
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.036	0.023	0.019	0.023	0.019	0.036
Departure Headway (Hd)	3.931	4.998	4.197	4.998	4.197	3.931
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	903	715	851	715	851	903
Service Time	1.99	2.734	1.933	2.734	1.933	1.99
HCM Lane V/C Ratio	0.037	0.022	0.019	0.022	0.019	0.037
HCM Control Delay	7.1	7.9	7	7.9	7	7.1
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.1	0.1	0.1

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative with Project, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	150	30	100	50	30	10	90	860	70	30	570	80
Future Volume (veh/h)	150	30	100	50	30	10	90	860	70	30	570	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	33	84	54	33	8	98	935	53	33	620	28
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	355	59	106	343	182	33	241	1154	65	71	869	388
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.13	0.34	0.34	0.04	0.24	0.24
Sat Flow, veh/h	814	252	457	771	782	143	1792	3439	195	1810	3610	1612
Grp Volume(v), veh/h	280	0	0	95	0	0	98	486	502	33	620	28
Grp Sat Flow(s),veh/h/ln	1523	0	0	1696	0	0	1792	1787	1846	1810	1805	1612
Q Serve(g_s), s	4.4	0.0	0.0	0.0	0.0	0.0	1.7	8.5	8.5	0.6	5.4	0.5
Cycle Q Clear(g_c), s	5.8	0.0	0.0	1.4	0.0	0.0	1.7	8.5	8.5	0.6	5.4	0.5
Prop In Lane	0.58		0.30	0.57		0.08	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	519	0	0	558	0	0	241	600	620	71	869	388
V/C Ratio(X)	0.54	0.00	0.00	0.17	0.00	0.00	0.41	0.81	0.81	0.46	0.71	0.07
Avail Cap(c_a), veh/h	1585	0	0	1625	0	0	417	1325	1369	421	2677	1195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	10.7	0.0	0.0	13.6	10.4	10.4	16.2	12.0	10.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1	0.0	0.0	0.4	1.0	1.0	1.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	0.7	0.0	0.0	0.9	4.4	4.5	0.3	2.7	0.2
LnGrp Delay(d),s/veh	12.6	0.0	0.0	10.7	0.0	0.0	14.0	11.4	11.4	17.9	12.4	10.1
LnGrp LOS	B			B			B	B	B	B	B	B
Approach Vol, veh/h		280			95			1086			681	
Approach Delay, s/veh		12.6			10.7			11.7			12.6	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	12.8		12.5	5.9	16.0		12.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.0	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+1), s	13.5	7.4		3.4	2.6	10.5		7.8				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.0	0.9		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	35.2
Intersection LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	100	150	980	440	50
Future Vol, veh/h	60	100	150	980	440	50
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	67	112	169	1101	494	56
Number of Lanes	1	1	1	2	2	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	3	3
Conflicting Approach Left	SB		
Conflicting Lanes Left	3	2	0
Conflicting Approach Right		NB	EB
Conflicting Lanes Right	3	0	2
HCM Control Delay	14.1	45.8	17.7
HCM LOS	B	E	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	0%	100%	100%	0%	0%	100%	100%	0%
Vol Right, %	0%	0%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	490	490	60	100	220	220	50
LT Vol	150	0	0	60	0	0	0	0
Through Vol	0	490	490	0	0	220	220	0
RT Vol	0	0	0	0	100	0	0	50
Lane Flow Rate	169	551	551	67	112	247	247	56
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.344	1.047	0.781	0.175	0.257	0.524	0.524	0.081
Departure Headway (Hd)	7.356	6.849	5.106	9.561	8.345	7.809	7.809	5.351
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	492	534	710	378	433	465	465	674
Service Time	5.064	4.557	2.814	7.261	6.045	5.509	5.509	3.051
HCM Lane V/C Ratio	0.343	1.032	0.776	0.177	0.259	0.531	0.531	0.083
HCM Control Delay	13.9	77.9	23.5	14.3	13.9	18.8	18.8	8.5
HCM Lane LOS	B	F	C	B	B	C	C	A
HCM 95th-tile Q	1.5	16	7.7	0.6	1	3	3	0.3






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	170	70	90	100	70	110	1200	230	100	690	220
Future Volume (veh/h)	230	170	70	90	100	70	110	1200	230	100	690	220
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	206	218	25	93	103	66	113	1237	225	103	711	155
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	272	285	237	105	117	75	590	1379	249	127	671	297
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.33	0.46	0.46	0.07	0.19	0.19
Sat Flow, veh/h	1792	1881	1565	634	702	450	1792	3022	545	1774	3539	1568
Grp Volume(v), veh/h	206	218	25	262	0	0	113	727	735	103	711	155
Grp Sat Flow(s),veh/h/ln	1792	1881	1565	1785	0	0	1792	1787	1781	1774	1770	1568
Q Serve(g_s), s	13.8	13.9	1.7	17.9	0.0	0.0	5.6	46.7	47.7	7.2	23.7	11.1
Cycle Q Clear(g_c), s	13.8	13.9	1.7	17.9	0.0	0.0	5.6	46.7	47.7	7.2	23.7	11.1
Prop In Lane	1.00		1.00	0.35		0.25	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	272	285	237	297	0	0	590	815	812	127	671	297
V/C Ratio(X)	0.76	0.76	0.11	0.88	0.00	0.00	0.19	0.89	0.90	0.81	1.06	0.52
Avail Cap(c_a), veh/h	573	602	501	357	0	0	590	815	812	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	50.9	45.7	50.9	0.0	0.0	30.0	31.2	31.5	57.2	50.7	45.5
Incr Delay (d2), s/veh	3.0	3.0	0.1	20.8	0.0	0.0	0.1	14.2	15.4	4.6	51.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	7.4	0.8	10.6	0.0	0.0	2.8	26.0	27.0	3.7	16.4	5.4
LnGrp Delay(d),s/veh	53.9	53.9	45.9	71.7	0.0	0.0	30.1	45.3	46.9	61.8	102.2	51.9
LnGrp LOS	D	D	D	E			C	D	D	E	F	D
Approach Vol, veh/h		449			262			1575			969	
Approach Delay, s/veh		53.4			71.7			45.0			89.9	
Approach LOS		D			E			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.2	62.3		23.6	46.5	29.0		25.9				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	13	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+119), s	19.2	49.7		15.9	7.6	25.7		19.9				
Green Ext Time (p_c), s	0.1	0.0		1.9	0.1	0.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				61.7								
HCM 2010 LOS				E								
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	150	120	280	0	130	0	120	300	10	10	0
Future Volume (veh/h)	10	150	120	280	0	130	0	120	300	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	11	165	14	308	0	69	0	132	51	11	11	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	181	2850	1323	0	0	0	0	164	139	57	43	0
Arrive On Green	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.00
Sat Flow, veh/h	216	3406	1580		0		0	1881	1599	155	496	0
Grp Volume(v), veh/h	94	82	14		0.0		0	132	51	22	0	0
Grp Sat Flow(s),veh/h/ln	1852	1770	1580				0	1881	1599	651	0	0
Q Serve(g_s), s	1.1	1.0	0.2				0.0	8.6	3.8	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.1	1.0	0.2				0.0	8.6	3.8	8.7	0.0	0.0
Prop In Lane	0.12		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1550	1481	1323				0	164	139	100	0	0
V/C Ratio(X)	0.06	0.06	0.01				0.00	0.81	0.37	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1550	1481	1323				0	271	230	125	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.8	1.7	1.7				0.0	56.0	53.8	52.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.5	0.6	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1				0.0	4.6	1.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.8	1.7	1.7				0.0	59.5	54.4	53.3	0.0	0.0
LnGrp LOS	A	A	A					E	D	D		
Approach Vol, veh/h		190						183			22	
Approach Delay, s/veh		1.7						58.1			53.3	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				15.1		109.9		15.1				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.6		3.1		10.7				
Green Ext Time (p_c), s				0.3		0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			30.7									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

Cumulative with Project, PM
 06/11/2019























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↑			↕	
Traffic Volume (veh/h)	0	0	0	410	10	250	140	250	0	0	520	180
Future Volume (veh/h)	0	0	0	410	10	250	140	250	0	0	520	180
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				436	11	84	149	266	0	0	553	181
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				485	12	443	185	1091	0	0	587	192
Arrive On Green				0.28	0.28	0.28	0.03	0.20	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1732	44	1581	1757	1845	0	0	1319	432
Grp Volume(v), veh/h				447	0	84	149	266	0	0	0	734
Grp Sat Flow(s),veh/h/ln				1776	0	1581	1757	1845	0	0	0	1751
Q Serve(g_s), s				20.6	0.0	3.4	7.2	10.4	0.0	0.0	0.0	34.0
Cycle Q Clear(g_c), s				20.6	0.0	3.4	7.2	10.4	0.0	0.0	0.0	34.0
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.25
Lane Grp Cap(c), veh/h				498	0	443	185	1091	0	0	0	780
V/C Ratio(X)				0.90	0.00	0.19	0.81	0.24	0.00	0.00	0.00	0.94
Avail Cap(c_a), veh/h				564	0	502	248	1091	0	0	0	780
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.4	0.0	23.3	40.2	18.1	0.0	0.0	0.0	22.5
Incr Delay (d2), s/veh				15.9	0.0	0.2	9.3	0.5	0.0	0.0	0.0	20.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	1.5	4.0	5.5	0.0	0.0	0.0	20.8
LnGrp Delay(d),s/veh				45.4	0.0	23.5	49.5	18.6	0.0	0.0	0.0	43.3
LnGrp LOS				D		C	D	B				D
Approach Vol, veh/h					531			415			734	
Approach Delay, s/veh					41.9			29.7			43.3	
Approach LOS					D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	2.4	43.8		28.7		56.3						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+19.2), s	19.2	36.0		22.6		12.4						
Green Ext Time (p_c), s	0.0	0.0		1.2		1.3						
Intersection Summary												
HCM 2010 Ctrl Delay				39.5								
HCM 2010 LOS				D								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↖	↑	
Traffic Volume (veh/h)	110	10	190	0	0	0	0	300	320	260	670	0
Future Volume (veh/h)	110	10	190	0	0	0	0	300	320	260	670	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	117	11	23				0	319	201	277	713	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	159	15	155				0	1022	869	307	1414	0
Arrive On Green	0.10	0.10	0.10				0.00	0.55	0.55	0.35	1.00	0.00
Sat Flow, veh/h	1628	153	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	128	0	23				0	319	201	277	713	0
Grp Sat Flow(s),veh/h/ln	1781	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	5.9	0.0	1.1				0.0	7.9	5.6	12.8	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	1.1				0.0	7.9	5.6	12.8	0.0	0.0
Prop In Lane	0.91		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	174	0	155				0	1022	869	307	1414	0
V/C Ratio(X)	0.74	0.00	0.15				0.00	0.31	0.23	0.90	0.50	0.00
Avail Cap(c_a), veh/h	524	0	466				0	1022	869	348	1414	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.10	0.10	0.00
Uniform Delay (d), s/veh	37.3	0.0	35.1				0.0	10.2	9.7	26.8	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.4				0.0	0.8	0.6	3.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.5				0.0	4.2	2.6	6.4	0.1	0.0
LnGrp Delay(d),s/veh	43.2	0.0	35.5				0.0	11.0	10.3	30.2	0.1	0.0
LnGrp LOS	D		D					B	B	C	A	
Approach Vol, veh/h		151						520			990	
Approach Delay, s/veh		42.0						10.7			8.5	
Approach LOS		D						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		71.8			18.7	53.1		13.2				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			14.8	9.9		7.9				
Green Ext Time (p_c), s		4.9			0.2	2.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			12.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
1: Del Monte Boulevard & Reindollar Avenue

Cumulative with Eastside Parkway, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	420	10	640	120	410	1170	0
Future Volume (veh/h)	0	0	0	450	0	420	10	640	120	410	1170	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				468	54	429	11	719	68	461	1315	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				575	58	461	24	892	397	499	1832	0
Arrive On Green				0.32	0.32	0.32	0.01	0.25	0.25	0.28	0.52	0.00
Sat Flow, veh/h				1810	183	1451	1774	3539	1577	1757	3597	0
Grp Volume(v), veh/h				468	0	483	11	719	68	461	1315	0
Grp Sat Flow(s),veh/h/ln				1810	0	1634	1774	1770	1577	1757	1752	0
Q Serve(g_s), s				21.9	0.0	26.4	0.6	17.6	3.1	23.5	26.4	0.0
Cycle Q Clear(g_c), s				21.9	0.0	26.4	0.6	17.6	3.1	23.5	26.4	0.0
Prop In Lane				1.00		0.89	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				575	0	519	24	892	397	499	1832	0
V/C Ratio(X)				0.81	0.00	0.93	0.47	0.81	0.17	0.92	0.72	0.00
Avail Cap(c_a), veh/h				589	0	532	578	1153	514	572	1832	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				28.9	0.0	30.5	45.1	32.3	26.9	32.0	16.8	0.0
Incr Delay (d2), s/veh				8.5	0.0	23.0	13.6	3.3	0.2	19.4	1.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	15.1	0.4	9.0	1.4	14.1	13.0	0.0
LnGrp Delay(d),s/veh				37.4	0.0	53.4	58.7	35.7	27.1	51.5	18.2	0.0
LnGrp LOS				D		D	E	D	C	D	B	
Approach Vol, veh/h					951			798			1776	
Approach Delay, s/veh					45.5			35.3			26.8	
Approach LOS					D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.7	53.1			29.7	28.2		34.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	28.4			25.5	19.6		28.4				
Green Ext Time (p_c), s	0.0	1.2			0.7	3.6		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
2: 2nd Avenue & Patton Parkway

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Future Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	98	65	33	98	109	76	239	109	98	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	247	164	67	177	197	121	330	151	139	407	101
Arrive On Green	0.05	0.24	0.24	0.04	0.22	0.22	0.07	0.27	0.27	0.08	0.28	0.28
Sat Flow, veh/h	1774	1046	694	1774	807	897	1774	1212	553	1774	1441	359
Grp Volume(v), veh/h	54	0	163	33	0	207	76	0	348	98	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1740	1774	0	1704	1774	0	1765	1774	0	1799
Q Serve(g_s), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Cycle Q Clear(g_c), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Prop In Lane	1.00		0.40	1.00		0.53	1.00		0.31	1.00		0.20
Lane Grp Cap(c), veh/h	97	0	411	67	0	374	121	0	481	139	0	509
V/C Ratio(X)	0.56	0.00	0.40	0.50	0.00	0.55	0.63	0.00	0.72	0.71	0.00	0.53
Avail Cap(c_a), veh/h	235	0	1364	235	0	1336	235	0	1384	235	0	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	14.6	21.4	0.0	15.7	20.5	0.0	14.9	20.4	0.0	13.7
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.6	0.0	1.3	5.3	0.0	2.1	6.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8	0.5	0.0	2.4	1.1	0.0	4.1	1.4	0.0	3.0
LnGrp Delay(d),s/veh	25.9	0.0	15.2	27.0	0.0	17.0	25.9	0.0	17.0	26.8	0.0	14.6
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		217			240			424			369	
Approach Delay, s/veh		17.8			18.4			18.6			17.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.8	5.7	15.2	7.1	17.3	6.5	14.4				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	6.0	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	14.4	10.1	2.8	5.6	3.9	7.8	3.3	6.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.0	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1040	0	0	0	0	0	920	10	0
Future Volume (veh/h)	0	0	0	1040	0	0	0	0	0	920	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1143	0	0				1011	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				996	0	0				657	7	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1757	0	0				1739	19	0
Grp Volume(v), veh/h				1143	0	0				1022	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				996	0	0				664	0	0
V/C Ratio(X)				1.15	0.00	0.00				1.54	0.00	0.00
Avail Cap(c_a), veh/h				996	0	0				664	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				78.5	0.0	0.0				250.0	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				65.1	0.0	0.0				75.1	0.0	0.0
LnGrp Delay(d),s/veh				112.9	0.0	0.0				299.4	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1143						1022	
Approach Delay, s/veh					112.9						299.4	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				200.9								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↑	↗		↖	↗			
Traffic Vol, veh/h	10	930	0	0	1000	410	10	10	950	0	0	0
Future Vol, veh/h	10	930	0	0	1000	410	10	10	950	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	10	959	0	0	1031	423	10	10	979	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1031	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	670	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	670	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	87.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	63	-	670	-	-
HCM Lane V/C Ratio	0.327	-	0.015	-	-
HCM Control Delay (s)	87.8	0	10.5	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.2	-	0	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative with Eastside Parkway, AM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	970	890	470	830	120	390	90	200	50	100	210
Future Volume (veh/h)	180	970	890	470	830	120	390	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	990	689	480	847	122	398	92	82	51	102	209
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	221	1214	543	549	1174	169	467	439	372	91	276	247
Arrive On Green	0.12	0.34	0.34	0.16	0.38	0.38	0.14	0.24	0.24	0.05	0.15	0.15
Sat Flow, veh/h	1774	3539	1583	3442	3106	447	3343	1810	1536	1810	1805	1612
Grp Volume(v), veh/h	184	990	689	480	483	486	398	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1784	1672	1810	1536	1810	1805	1612
Q Serve(g_s), s	8.9	22.3	30.0	11.9	20.4	20.4	10.2	3.5	3.7	2.4	4.4	11.0
Cycle Q Clear(g_c), s	8.9	22.3	30.0	11.9	20.4	20.4	10.2	3.5	3.7	2.4	4.4	11.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	1214	543	549	669	674	467	439	372	91	276	247
V/C Ratio(X)	0.83	0.82	1.27	0.88	0.72	0.72	0.85	0.21	0.22	0.56	0.37	0.85
Avail Cap(c_a), veh/h	304	1214	543	590	669	674	765	439	372	207	433	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	26.2	28.7	35.9	23.3	23.3	36.7	26.4	26.5	40.6	33.2	36.0
Incr Delay (d2), s/veh	9.8	4.1	134.8	12.4	3.3	3.3	2.5	0.1	0.1	2.0	0.3	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	11.6	33.4	6.6	10.5	10.6	4.9	1.8	1.6	1.3	2.2	5.3
LnGrp Delay(d),s/veh	47.2	30.3	163.6	48.3	26.6	26.5	39.2	26.5	26.6	42.5	33.5	41.7
LnGrp LOS	D	C	F	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1863			1449			572			362	
Approach Delay, s/veh		81.3			33.7			35.4			39.5	
Approach LOS		F			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.4	35.3	15.7	18.0	15.4	38.4	7.9	25.8				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	13.9	32.0	12.2	13.0	10.9	22.4	4.4	5.7				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3	0.0	0.9	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			55.3									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	820	230	340	1240	30	130	10	60	10	10	40
Future Volume (veh/h)	50	820	230	340	1240	30	130	10	60	10	10	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	854	211	354	1292	30	135	10	8	10	10	7
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	63	983	243	409	1926	45	330	135	108	334	148	104
Arrive On Green	0.04	0.35	0.35	0.23	0.54	0.54	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1774	2814	695	1774	3536	82	1345	930	744	1384	1020	714
Grp Volume(v), veh/h	52	537	528	354	646	676	135	0	18	10	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1739	1774	1770	1848	1345	0	1675	1384	0	1733
Q Serve(g_s), s	1.4	13.9	13.9	9.4	12.9	12.9	4.7	0.0	0.5	0.3	0.0	0.4
Cycle Q Clear(g_c), s	1.4	13.9	13.9	9.4	12.9	12.9	5.1	0.0	0.5	0.8	0.0	0.4
Prop In Lane	1.00		0.40	1.00		0.04	1.00		0.44	1.00		0.41
Lane Grp Cap(c), veh/h	63	618	608	409	964	1007	330	0	243	334	0	251
V/C Ratio(X)	0.82	0.87	0.87	0.87	0.67	0.67	0.41	0.00	0.07	0.03	0.00	0.07
Avail Cap(c_a), veh/h	415	1171	1150	415	1171	1223	888	0	937	908	0	970
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	14.9	14.9	18.2	8.0	8.0	20.4	0.0	18.1	18.5	0.0	18.1
Incr Delay (d2), s/veh	9.6	1.5	1.5	16.2	0.7	0.6	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.0	6.9	6.4	6.3	6.6	1.8	0.0	0.2	0.1	0.0	0.2
LnGrp Delay(d),s/veh	33.1	16.4	16.5	34.4	8.7	8.7	20.7	0.0	18.2	18.5	0.0	18.2
LnGrp LOS	C	B	B	C	A	A	C		B	B		B
Approach Vol, veh/h		1117			1676			153			27	
Approach Delay, s/veh		17.2			14.1			20.4			18.3	
Approach LOS		B			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	22.7		11.6	5.2	32.3		11.6				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+I1), s	1.4	15.9		2.8	3.4	14.9		7.1				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	1.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				15.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: 4th Avenue & Imjin Parkway

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	910	20	10	1530	10	10	10	10	10	10	10
Future Volume (veh/h)	10	910	20	10	1530	10	10	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1267	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	948	20	10	1594	9	10	10	9	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	50	50	50	0	0	0
Cap, veh/h	14	1776	37	14	1809	10	178	20	18	186	30	30
Arrive On Green	0.01	0.50	0.50	0.01	0.50	0.50	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1774	3544	75	1774	3608	20	389	389	351	578	578	578
Grp Volume(v), veh/h	10	473	495	10	781	822	29	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1849	1774	1770	1859	1129	0	0	1735	0	0
Q Serve(g_s), s	0.2	5.6	5.6	0.2	12.1	12.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	5.6	5.6	0.2	12.1	12.1	0.7	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.34		0.31	0.33		0.33
Lane Grp Cap(c), veh/h	14	887	927	14	887	932	216	0	0	246	0	0
V/C Ratio(X)	0.71	0.53	0.53	0.71	0.88	0.88	0.13	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	664	1871	1956	664	1871	1966	1126	0	0	1612	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.2	5.2	5.2	15.2	6.8	6.8	14.2	0.0	0.0	14.0	0.0	0.0
Incr Delay (d2), s/veh	21.0	0.2	0.2	21.0	1.2	1.1	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	2.8	0.2	5.9	6.2	0.2	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	36.2	5.4	5.4	36.2	8.0	8.0	14.3	0.0	0.0	14.1	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	B			B		
Approach Vol, veh/h		978			1613			29			30	
Approach Delay, s/veh		5.7			8.2			14.3			14.1	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.7	20.9		6.1	3.7	20.9		6.1				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1/2), s	12.2	7.6		2.5	2.2	14.1		2.7				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	1.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	790	20	10	960	70	20	20	10	80	150	460
Future Volume (veh/h)	140	790	20	10	960	70	20	20	10	80	150	460
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	147	832	19	11	1011	68	21	21	10	84	158	410
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	186	1530	35	15	1120	75	175	152	58	122	152	348
Arrive On Green	0.10	0.43	0.43	0.01	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1792	3570	82	1774	3366	226	266	452	171	157	452	1032
Grp Volume(v), veh/h	147	416	435	11	531	548	52	0	0	652	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1865	1774	1770	1823	889	0	0	1640	0	0
Q Serve(g_s), s	4.8	10.3	10.3	0.4	17.0	17.0	0.0	0.0	0.0	15.0	0.0	0.0
Cycle Q Clear(g_c), s	4.8	10.3	10.3	0.4	17.0	17.0	1.4	0.0	0.0	20.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.12	0.40		0.19	0.13		0.63
Lane Grp Cap(c), veh/h	186	766	799	15	589	607	385	0	0	622	0	0
V/C Ratio(X)	0.79	0.54	0.54	0.74	0.90	0.90	0.14	0.00	0.00	1.05	0.00	0.00
Avail Cap(c_a), veh/h	453	904	943	449	895	922	385	0	0	622	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	25.9	12.6	12.6	29.3	18.9	18.9	13.5	0.0	0.0	20.7	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.2	0.2	23.0	6.2	6.1	0.1	0.0	0.0	49.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.0	5.2	0.3	9.3	9.5	0.6	0.0	0.0	18.6	0.0	0.0
LnGrp Delay(d),s/veh	28.7	12.9	12.8	52.3	25.1	25.0	13.5	0.0	0.0	70.2	0.0	0.0
LnGrp LOS	C	B	B	D	C	C	B			F		
Approach Vol, veh/h		998			1090			52			652	
Approach Delay, s/veh		15.2			25.3			13.5			70.2	
Approach LOS		B			C			B			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	30.7		24.6	9.7	25.0		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	5.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1), s	12.4	12.3		22.0	6.8	19.0		3.4				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				32.0								
HCM 2010 LOS				C								

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	
Traffic Vol, veh/h	30	30	30	210	610	80
Future Vol, veh/h	30	30	30	210	610	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	33	33	228	663	87












Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1001	707	750	0	-	0
Stage 1	707	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	269	435	859	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	259	435	859	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	756	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.8	1.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	859	-	325	-	-
HCM Lane V/C Ratio	0.038	-	0.201	-	-
HCM Control Delay (s)	9.4	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative with Eastside Parkway, AM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	750	150	310	1000	30	20		
Future Volume (veh/h)	750	150	310	1000	30	20		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	789	145	326	1053	35	18		
Adj No. of Lanes	2	0	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	959	176	397	2449	119	53		
Arrive On Green	0.32	0.32	0.23	0.70	0.03	0.03		
Sat Flow, veh/h	3080	549	1757	3597	3447	1538		
Grp Volume(v), veh/h	467	467	326	1053	35	18		
Grp Sat Flow(s),veh/h/ln	1770	1766	1757	1752	1723	1538		
Q Serve(g_s), s	8.5	8.5	6.2	4.5	0.3	0.4		
Cycle Q Clear(g_c), s	8.5	8.5	6.2	4.5	0.3	0.4		
Prop In Lane		0.31	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	568	567	397	2449	119	53		
V/C Ratio(X)	0.82	0.82	0.82	0.43	0.29	0.34		
Avail Cap(c_a), veh/h	1523	1520	1008	3016	2175	971		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.9	10.9	12.8	2.3	16.4	16.4		
Incr Delay (d2), s/veh	1.2	1.2	1.6	0.0	0.5	1.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.2	4.2	3.1	2.1	0.2	0.2		
LnGrp Delay(d),s/veh	12.1	12.1	14.5	2.3	16.9	17.8		
LnGrp LOS	B	B	B	A	B	B		
Approach Vol, veh/h	934			1379	53			
Approach Delay, s/veh	12.1			5.2	17.2			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.2	16.5				29.7		5.2
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	8.2	10.5				6.5		2.4
Green Ext Time (p_c), s	0.1	0.7				1.2		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			8.2					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↗		↔	↗		↔	↑	↗	↔	↑	↗
Traffic Volume (veh/h)	50	590	50	80	960	70	170	30	160	90	50	250
Future Volume (veh/h)	50	590	50	80	960	70	170	30	160	90	50	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	54	634	42	86	1032	70	183	32	0	97	54	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	193	1998	132	149	1909	129	320	347	295	340	351	298
Arrive On Green	0.06	0.59	0.59	0.04	0.57	0.57	0.19	0.19	0.00	0.19	0.19	0.00
Sat Flow, veh/h	3476	3403	225	3442	3364	228	1330	1845	1568	1370	1863	1583
Grp Volume(v), veh/h	54	333	343	86	543	559	183	32	0	97	54	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1841	1721	1770	1822	1330	1845	1568	1370	1863	1583
Q Serve(g_s), s	1.1	6.7	6.7	1.7	13.5	13.5	9.4	1.0	0.0	4.4	1.7	0.0
Cycle Q Clear(g_c), s	1.1	6.7	6.7	1.7	13.5	13.5	11.1	1.0	0.0	5.4	1.7	0.0
Prop In Lane	1.00		0.12	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	193	1049	1081	149	1004	1034	320	347	295	340	351	298
V/C Ratio(X)	0.28	0.32	0.32	0.58	0.54	0.54	0.57	0.09	0.00	0.29	0.15	0.00
Avail Cap(c_a), veh/h	986	1268	1306	977	1255	1293	636	785	667	665	793	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.9	7.4	7.4	33.1	9.5	9.5	28.6	23.6	0.0	25.9	23.9	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.1	1.3	0.2	0.2	0.6	0.0	0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.3	3.4	0.9	6.5	6.7	3.5	0.5	0.0	1.7	0.9	0.0
LnGrp Delay(d),s/veh	32.2	7.4	7.4	34.4	9.7	9.7	29.2	23.7	0.0	26.1	24.0	0.0
LnGrp LOS	C	A	A	C	A	A	C	C		C	C	
Approach Vol, veh/h		730			1188			215			151	
Approach Delay, s/veh		9.3			11.5			28.3			25.3	
Approach LOS		A			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.5	46.7		17.3	7.9	45.3		17.3				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+13), s	13.5	8.7		7.4	3.1	15.5		13.1				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.3									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative with Eastside Parkway, AM
 06/11/2019

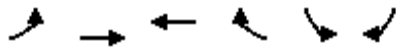


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	50	670	10	20	30	940	880	20	60	590	90
Future Volume (veh/h)	170	50	670	10	20	30	940	880	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	183	54	306	11	22	19	1011	946	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	379	205	1192	57	60	51	1096	2050	916	125	1052	463
Arrive On Green	0.11	0.11	0.11	0.04	0.04	0.04	0.32	0.58	0.58	0.04	0.30	0.30
Sat Flow, veh/h	3442	1863	2774	1560	1638	1383	3442	3539	1581	3442	3539	1558
Grp Volume(v), veh/h	183	54	306	11	22	19	1011	946	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1387	1560	1638	1383	1721	1770	1581	1721	1770	1558
Q Serve(g_s), s	4.4	2.3	6.2	0.6	1.1	1.2	24.8	13.4	0.4	1.6	13.4	1.4
Cycle Q Clear(g_c), s	4.4	2.3	6.2	0.6	1.1	1.2	24.8	13.4	0.4	1.6	13.4	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	205	1192	57	60	51	1096	2050	916	125	1052	463
V/C Ratio(X)	0.48	0.26	0.26	0.19	0.37	0.37	0.92	0.46	0.02	0.52	0.60	0.07
Avail Cap(c_a), veh/h	1377	745	1997	553	580	490	1377	2050	916	787	2427	1069
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	35.7	16.1	40.9	41.1	41.2	28.8	10.6	7.8	41.4	26.3	22.1
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.6	1.4	1.7	8.1	0.4	0.0	1.2	1.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.2	2.4	0.3	0.5	0.5	13.0	6.6	0.2	0.8	6.7	0.6
LnGrp Delay(d),s/veh	37.0	35.9	16.1	41.5	42.5	42.8	36.9	11.0	7.8	42.7	27.9	22.3
LnGrp LOS	D	D	B	D	D	D	D	B	A	D	C	C
Approach Vol, veh/h		543			52			1973			733	
Approach Delay, s/veh		25.1			42.4			24.3			28.9	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0			8.2	7.3	56.9		15.1				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Tb), s	26.8	15.4		3.2	3.6	15.4		8.2				
Green Ext Time (p_c), s	1.0	10.6		0.1	0.0	15.5		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			25.7									
HCM 2010 LOS			C									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 13: Reservation Road & Blanco Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖↗	↑↑	↑	↑	↖↗	↖↗		
Traffic Volume (veh/h)	1000	300	500	40	40	1340		
Future Volume (veh/h)	1000	300	500	40	40	1340		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1075	323	538	24	43	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1191	2816	644	548	119	97		
Arrive On Green	0.35	0.80	0.35	0.35	0.04	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1075	323	538	24	43	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	16.3	1.1	14.7	0.6	0.7	0.0		
Cycle Q Clear(g_c), s	16.3	1.1	14.7	0.6	0.7	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1191	2816	644	548	119	97		
V/C Ratio(X)	0.90	0.11	0.83	0.04	0.36	0.00		
Avail Cap(c_a), veh/h	2508	3869	2016	1714	1676	1357		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	17.1	1.3	16.4	11.8	25.9	0.0		
Incr Delay (d2), s/veh	1.1	0.0	2.2	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.8	0.5	7.9	0.2	0.3	0.0		
LnGrp Delay(d),s/veh	18.2	1.3	18.6	11.8	26.6	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1398	562		43			
Approach Delay, s/veh		14.3	18.3		26.6			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		49.5		5.4	24.5	25.0		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		3.1		2.7	18.3	16.7		
Green Ext Time (p_c), s		1.5		0.0	0.7	2.5		
Intersection Summary								
HCM 2010 Ctrl Delay			15.7					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	500	790	460	260	160		
Future Volume (veh/h)	110	500	790	460	260	160		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	117	493	840	489	277	154		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	458	870	523	2049	473	255		
Arrive On Green	0.26	0.26	0.29	0.58	0.21	0.21		
Sat Flow, veh/h	1757	1568	1774	3632	2291	1188		
Grp Volume(v), veh/h	117	493	840	489	219	212		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1635		
Q Serve(g_s), s	3.6	13.8	20.0	4.6	7.6	7.9		
Cycle Q Clear(g_c), s	3.6	13.8	20.0	4.6	7.6	7.9		
Prop In Lane	1.00	1.00	1.00			0.73		
Lane Grp Cap(c), veh/h	458	870	523	2049	377	351		
V/C Ratio(X)	0.26	0.57	1.61	0.24	0.58	0.60		
Avail Cap(c_a), veh/h	699	1086	523	3129	1549	1446		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.9	9.8	23.9	7.0	23.9	24.0		
Incr Delay (d2), s/veh	0.3	0.6	281.8	0.1	2.6	3.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.8	6.1	50.7	2.3	3.9	3.9		
LnGrp Delay(d),s/veh	20.2	10.4	305.7	7.1	26.5	27.1		
LnGrp LOS	C	B	F	A	C	C		
Approach Vol, veh/h	610			1329	431			
Approach Delay, s/veh	12.3			195.8	26.8			
Approach LOS	B			F	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	24.7	21.0				45.7		22.2
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Yc), s	22.5	9.9				6.6		15.8
Green Ext Time (p_c), s	0.0	4.7				5.8		1.8
Intersection Summary								
HCM 2010 Ctrl Delay			117.8					
HCM 2010 LOS			F					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	10	10	10	260	10	20	20	360	30	40	850	10
Future Volume (veh/h)	10	10	10	260	10	20	20	360	30	40	850	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	11	-24	277	11	20	21	383	27	43	904	4
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	325	288	455	525	15	27	46	1266	89	82	1425	6
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.03	0.37	0.37	0.05	0.39	0.39
Sat Flow, veh/h	725	1012	1599	1318	52	95	1792	3386	238	1774	3613	16
Grp Volume(v), veh/h	22	0	-24	308	0	0	21	201	209	43	443	465
Grp Sat Flow(s),veh/h/ln	1737	0	1599	1466	0	0	1792	1787	1837	1774	1770	1860
Q Serve(g_s), s	0.0	0.0	0.0	8.3	0.0	0.0	0.5	3.6	3.7	1.1	9.2	9.2
Cycle Q Clear(g_c), s	0.4	0.0	0.0	8.7	0.0	0.0	0.5	3.6	3.7	1.1	9.2	9.2
Prop In Lane	0.50		1.00	0.90		0.06	1.00		0.13	1.00		0.01
Lane Grp Cap(c), veh/h	612	0	455	567	0	0	46	668	687	82	698	733
V/C Ratio(X)	0.04	0.00	-0.05	0.54	0.00	0.00	0.46	0.30	0.30	0.53	0.63	0.63
Avail Cap(c_a), veh/h	1205	0	1051	1109	0	0	451	1761	1811	447	1744	1833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	14.7	0.0	0.0	21.9	10.1	10.1	21.3	11.2	11.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	7.0	0.3	0.2	5.2	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.6	0.0	0.0	0.3	1.8	1.9	0.6	4.6	4.8
LnGrp Delay(d),s/veh	11.9	0.0	0.0	15.6	0.0	0.0	28.9	10.3	10.3	26.5	12.1	12.1
LnGrp LOS	B			B			C	B	B	C	B	B
Approach Vol, veh/h		-2			308			431			951	
Approach Delay, s/veh		-130.4			15.6			11.2			12.8	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.0	4.7	23.0		18.0	5.6	22.1				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		30.0	11.5	45.0		30.0	11.5	45.0				
Max Q Clear Time (g_c+I1), s		2.4	2.5	11.2		10.7	3.1	5.7				
Green Ext Time (p_c), s		0.1	0.0	6.5		1.7	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				13.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	210	20	480	110	50	910		
Future Volume (veh/h)	210	20	480	110	50	910		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1583	1583	1863	1900	1881	1881		
Adj Flow Rate, veh/h	221	5	505	100	53	958		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	20	20	2	2	1	1		
Cap, veh/h	289	258	988	195	105	1791		
Arrive On Green	0.19	0.19	0.34	0.34	0.06	0.50		
Sat Flow, veh/h	1508	1346	3042	581	1792	3668		
Grp Volume(v), veh/h	221	5	302	303	53	958		
Grp Sat Flow(s),veh/h/ln	1508	1346	1770	1760	1792	1787		
Q Serve(g_s), s	4.5	0.1	4.5	4.5	0.9	5.9		
Cycle Q Clear(g_c), s	4.5	0.1	4.5	4.5	0.9	5.9		
Prop In Lane	1.00	1.00		0.33	1.00			
Lane Grp Cap(c), veh/h	289	258	593	590	105	1791		
V/C Ratio(X)	0.77	0.02	0.51	0.51	0.51	0.53		
Avail Cap(c_a), veh/h	1391	1241	2448	2435	633	6593		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.5	10.7	8.7	8.7	14.9	5.5		
Incr Delay (d2), s/veh	4.2	0.0	0.7	0.7	3.7	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.2	0.1	2.2	2.3	0.6	2.9		
LnGrp Delay(d),s/veh	16.7	10.7	9.4	9.4	18.6	5.8		
LnGrp LOS	B	B	A	A	B	A		
Approach Vol, veh/h	226		605			1011		
Approach Delay, s/veh	16.6		9.4			6.5		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.3		11.2	5.4	15.9
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				7.9		6.5	2.9	6.5
Green Ext Time (p_c), s				8.4		0.6	0.0	4.0
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
 19: 2nd Avenue & Inter-Garrison Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	50	30	590	70	20	1110		
Future Volume (veh/h)	50	30	590	70	20	1110		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1881	1881		
Adj Flow Rate, veh/h	54	8	634	67	22	1194		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	1	1	1	1		
Cap, veh/h	233	208	1506	159	49	2102		
Arrive On Green	0.13	0.13	0.46	0.46	0.03	0.59		
Sat Flow, veh/h	1810	1615	3357	344	1792	3668		
Grp Volume(v), veh/h	54	8	347	354	22	1194		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1820	1792	1787		
Q Serve(g_s), s	0.9	0.2	4.6	4.6	0.4	7.3		
Cycle Q Clear(g_c), s	0.9	0.2	4.6	4.6	0.4	7.3		
Prop In Lane	1.00	1.00		0.19	1.00			
Lane Grp Cap(c), veh/h	233	208	825	840	49	2102		
V/C Ratio(X)	0.23	0.04	0.42	0.42	0.45	0.57		
Avail Cap(c_a), veh/h	1792	1600	2023	2061	583	5563		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.8	13.5	6.4	6.4	16.9	4.5		
Incr Delay (d2), s/veh	0.5	0.1	0.3	0.3	6.2	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.5	0.2	2.3	2.3	0.3	3.6		
LnGrp Delay(d),s/veh	14.3	13.5	6.7	6.7	23.1	4.7		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	62		701			1216		
Approach Delay, s/veh	14.2		6.7			5.1		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.8		9.6	4.5	21.3
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				9.3		2.9	2.4	6.6
Green Ext Time (p_c), s				11.5		0.1	0.0	4.7
Intersection Summary								
HCM 2010 Ctrl Delay			5.9					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh 10.1												
Intersection LOS B												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	40	10	90	40	20	20	130	120	20	110	10
Future Vol, veh/h	10	40	10	90	40	20	20	130	120	20	110	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	12	47	12	106	47	24	24	153	141	24	129	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	10	10.7	9.4
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	17%	60%	14%
Vol Thru, %	48%	67%	27%	79%
Vol Right, %	44%	17%	13%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	270	60	150	140
LT Vol	20	10	90	20
Through Vol	130	40	40	110
RT Vol	120	10	20	10
Lane Flow Rate	318	71	176	165
Geometry Grp	1	1	1	1
Degree of Util (X)	0.403	0.104	0.254	0.224
Departure Headway (Hd)	4.563	5.307	5.181	4.902
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	667	686	726
Service Time	2.625	3.405	3.266	2.978
HCM Lane V/C Ratio	0.405	0.106	0.257	0.227
HCM Control Delay	10.7	9	10	9.4
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2	0.3	1	0.9

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

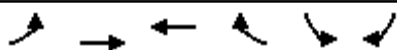
Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	110	30	80	240	20	50	100	80	130	80	10
Future Volume (veh/h)	10	110	30	80	240	20	50	100	80	130	80	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1845	1845	1845	1900	1597	1900	1900	1776	1776
Adj Flow Rate, veh/h	12	136	28	99	296	0	62	123	66	160	99	5
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	8	3	3	3	19	19	19	7	7	7
Cap, veh/h	20	293	60	127	493	419	79	156	84	210	130	298
Arrive On Green	0.01	0.21	0.21	0.07	0.27	0.00	0.21	0.21	0.21	0.20	0.20	0.20
Sat Flow, veh/h	1675	1414	291	1757	1845	1568	373	739	397	1064	658	1509
Grp Volume(v), veh/h	12	0	164	99	296	0	251	0	0	259	0	5
Grp Sat Flow(s),veh/h/ln	1675	0	1705	1757	1845	1568	1508	0	0	1722	0	1509
Q Serve(g_s), s	0.4	0.0	4.5	2.9	7.4	0.0	8.3	0.0	0.0	7.5	0.0	0.1
Cycle Q Clear(g_c), s	0.4	0.0	4.5	2.9	7.4	0.0	8.3	0.0	0.0	7.5	0.0	0.1
Prop In Lane	1.00		0.17	1.00		1.00	0.25		0.26	0.62		1.00
Lane Grp Cap(c), veh/h	20	0	354	127	493	419	318	0	0	340	0	298
V/C Ratio(X)	0.59	0.00	0.46	0.78	0.60	0.00	0.79	0.00	0.00	0.76	0.00	0.02
Avail Cap(c_a), veh/h	127	0	1033	249	1240	1054	628	0	0	717	0	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	18.4	24.1	16.9	0.0	19.7	0.0	0.0	20.0	0.0	17.1
Incr Delay (d2), s/veh	23.8	0.0	0.9	10.0	1.2	0.0	4.4	0.0	0.0	3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	2.2	1.8	3.9	0.0	3.8	0.0	0.0	3.9	0.0	0.1
LnGrp Delay(d),s/veh	49.8	0.0	19.3	34.1	18.1	0.0	24.1	0.0	0.0	23.6	0.0	17.1
LnGrp LOS	D		B	C	B		C			C		B
Approach Vol, veh/h		176			395			251			264	
Approach Delay, s/veh		21.4			22.1			24.1			23.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	16.0		14.4	4.1	19.1		15.1				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s	5	32.0		22.0	4.0	35.5		22.0				
Max Q Clear Time (g_c+14), s	5	6.5		9.5	2.4	9.4		10.3				
Green Ext Time (p_c), s	0.0	0.9		1.1	0.0	1.8		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			22.8									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	160	290	620	70	80	320		
Future Volume (veh/h)	160	290	620	70	80	320		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	188	341	729	76	94	158		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	234	1151	806	685	474	218		
Arrive On Green	0.14	0.65	0.43	0.43	0.14	0.14		
Sat Flow, veh/h	1675	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	188	341	729	76	94	158		
Grp Sat Flow(s),veh/h/ln	1675	1759	1881	1599	1738	1599		
Q Serve(g_s), s	4.4	3.4	14.7	1.2	1.0	3.8		
Cycle Q Clear(g_c), s	4.4	3.4	14.7	1.2	1.0	3.8		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	234	1151	806	685	474	218		
V/C Ratio(X)	0.80	0.30	0.90	0.11	0.20	0.72		
Avail Cap(c_a), veh/h	475	2602	2087	1774	2699	1242		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	16.9	3.0	10.8	7.0	15.5	16.8		
Incr Delay (d2), s/veh	2.5	0.1	1.6	0.0	0.1	1.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.2	1.6	7.9	0.5	0.5	3.4		
LnGrp Delay(d),s/veh	19.4	3.1	12.5	7.0	15.6	18.5		
LnGrp LOS	B	A	B	A	B	B		
Approach Vol, veh/h		529	805		252			
Approach Delay, s/veh		8.9	11.9		17.4			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		31.5		9.0	9.2	22.4		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		5.4		5.8	6.4	16.7		
Green Ext Time (p_c), s		0.3		0.0	0.0	0.7		
Intersection Summary								
HCM 2010 Ctrl Delay			11.8					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
 24: Inter-Garrison Road & Schoonover Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	270	60	560	490	10	60	10	340	40	40	120
Future Volume (veh/h)	60	270	60	560	490	10	60	10	340	40	40	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1819	1900	1863	1881	1881	1863	1863	1863	1900	1854	1845
Adj Flow Rate, veh/h	76	342	51	709	620	9	76	13	0	51	51	101
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	0	1	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	5	5	5	2	1	1	2	2	2	2	2	3
Cap, veh/h	102	420	62	736	1768	791	185	194	165	109	109	189
Arrive On Green	0.06	0.14	0.14	0.42	0.49	0.49	0.10	0.10	0.00	0.12	0.12	0.12
Sat Flow, veh/h	1723	3022	447	1774	3574	1599	1774	1863	1583	904	904	1564
Grp Volume(v), veh/h	76	194	199	709	620	9	76	13	0	102	0	101
Grp Sat Flow(s),veh/h/ln	1723	1728	1740	1774	1787	1599	1774	1863	1583	1808	0	1564
Q Serve(g_s), s	3.6	9.1	9.3	32.6	8.9	0.2	3.4	0.5	0.0	4.4	0.0	5.1
Cycle Q Clear(g_c), s	3.6	9.1	9.3	32.6	8.9	0.2	3.4	0.5	0.0	4.4	0.0	5.1
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	0.50		1.00
Lane Grp Cap(c), veh/h	102	240	242	736	1768	791	185	194	165	218	0	189
V/C Ratio(X)	0.74	0.81	0.82	0.96	0.35	0.01	0.41	0.07	0.00	0.47	0.00	0.53
Avail Cap(c_a), veh/h	319	619	623	1006	2645	1183	572	600	510	583	0	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	35.0	35.1	23.9	12.9	10.8	35.1	33.8	0.0	34.3	0.0	34.6
Incr Delay (d2), s/veh	3.9	2.5	2.7	15.2	0.0	0.0	0.5	0.1	0.0	0.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	4.5	4.6	18.9	4.4	0.1	1.7	0.3	0.0	2.2	0.0	2.3
LnGrp Delay(d),s/veh	42.7	37.5	37.7	39.0	13.0	10.8	35.6	33.9	0.0	34.9	0.0	35.5
LnGrp LOS	D	D	D	D	B	B	D	C		C		D
Approach Vol, veh/h		469			1338			89			203	
Approach Delay, s/veh		38.4			26.8			35.4			35.2	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	38.3	16.6		15.1	8.5	46.4		13.7				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	47.5	30.0		27.0	15.5	62.0		27.0				
Max Q Clear Time (g_c+3.6), s	34.6	11.3		7.1	5.6	10.9		5.4				
Green Ext Time (p_c), s	0.2	0.3		0.1	0.0	0.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				30.5								
HCM 2010 LOS				C								

Intersection	
Intersection Delay, s/veh	198.7
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	490	130	310	130	90	700
Future Vol, veh/h	490	130	310	130	90	700
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	598	159	378	159	110	854
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	165.2	97.2	281.5
HCM LOS	F	F	F

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	70%	0%	0%
Vol Right, %	0%	0%	30%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	490	130	440	90	700
LT Vol	490	0	0	90	0
Through Vol	0	130	310	0	0
RT Vol	0	0	130	0	700
Lane Flow Rate	598	159	537	110	854
Geometry Grp	7	7	4	7	7
Degree of Util (X)	1.357	0.338	1.077	0.247	1.639
Departure Headway (Hd)	9.865	9.341	8.921	8.734	7.488
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	376	388	413	414	495
Service Time	7.565	7.041	6.921	6.434	5.188
HCM Lane V/C Ratio	1.59	0.41	1.3	0.266	1.725
HCM Control Delay	204.6	16.7	97.2	14.3	315.8
HCM Lane LOS	F	C	F	B	F
HCM 95th-tile Q	24	1.5	14.9	1	45

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	620	80	150	1090	0	130	0	260	0	0	0
Future Volume (veh/h)	0	620	80	150	1090	0	130	0	260	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	697	88	169	1225	0	146	0	220			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	4	1287	162	215	2164	0	315	0	281			
Arrive On Green	0.00	0.41	0.41	0.12	0.61	0.00	0.18	0.00	0.18			
Sat Flow, veh/h	1740	3102	391	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	390	395	169	1225	0	146	0	220			
Grp Sat Flow(s),veh/h/ln	1740	1736	1758	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	8.1	8.1	4.4	9.8	0.0	3.5	0.0	6.2			
Cycle Q Clear(g_c), s	0.0	8.1	8.1	4.4	9.8	0.0	3.5	0.0	6.2			
Prop In Lane	1.00		0.22	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	4	720	729	215	2164	0	315	0	281			
V/C Ratio(X)	0.00	0.54	0.54	0.79	0.57	0.00	0.46	0.00	0.78			
Avail Cap(c_a), veh/h	732	2191	2219	746	4467	0	1018	0	908			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.5	10.5	20.3	5.5	0.0	17.6	0.0	18.7			
Incr Delay (d2), s/veh	0.0	1.2	1.2	2.4	0.3	0.0	0.4	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.0	4.1	2.3	4.7	0.0	1.7	0.0	2.9			
LnGrp Delay(d),s/veh	0.0	11.7	11.7	22.7	5.8	0.0	18.0	0.0	20.5			
LnGrp LOS		B	B	C	A		B		C			
Approach Vol, veh/h		785			1394			366				
Approach Delay, s/veh		11.7			7.8			19.5				
Approach LOS		B			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	9.4	25.1			0.0	34.5		13.1				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+10), s	10.4	10.1			0.0	11.8		8.2				
Green Ext Time (p_c), s	0.0	9.6			0.0	13.3		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 27: Reservation Road & Watkins Gate Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	250	160	1480	990	60		
Future Volume (veh/h)	10	250	160	1480	990	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	11	44	174	1609	1076	58		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	89	80	217	2583	1843	99		
Arrive On Green	0.05	0.05	0.12	0.73	0.54	0.54		
Sat Flow, veh/h	1774	1583	1774	3632	3509	184		
Grp Volume(v), veh/h	11	44	174	1609	557	577		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1830		
Q Serve(g_s), s	0.4	1.6	5.6	13.3	12.5	12.5		
Cycle Q Clear(g_c), s	0.4	1.6	5.6	13.3	12.5	12.5		
Prop In Lane	1.00	1.00	1.00			0.10		
Lane Grp Cap(c), veh/h	89	80	217	2583	955	988		
V/C Ratio(X)	0.12	0.55	0.80	0.62	0.58	0.58		
Avail Cap(c_a), veh/h	555	496	540	4102	1392	1440		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	26.8	27.4	25.2	4.0	9.1	9.1		
Incr Delay (d2), s/veh	0.2	2.2	2.6	0.4	0.9	0.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.7	2.9	6.4	6.3	6.5		
LnGrp Delay(d),s/veh	27.0	29.6	27.8	4.4	10.0	10.0		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	55			1783	1134			
Approach Delay, s/veh	29.1			6.6	10.0			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.5	11.2	38.4				49.6
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		18.5	18.0	46.5				68.5
Max Q Clear Time (g_c+I1), s		3.6	7.6	14.5				15.3
Green Ext Time (p_c), s		0.0	0.0	12.5				27.8
Intersection Summary								
HCM 2010 Ctrl Delay			8.4					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	650	310	10	10	560	90	10	10	10	150	10	750
Future Volume (veh/h)	650	310	10	10	560	90	10	10	10	150	10	750
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	756	360	12	12	651	105	12	12	9	174	12	630
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	376	2185	73	19	664	107	17	17	12	350	24	665
Arrive On Green	0.21	0.62	0.62	0.01	0.42	0.42	0.03	0.03	0.03	0.21	0.21	0.21
Sat Flow, veh/h	1774	3496	116	1774	1566	253	648	648	486	1649	114	1568
Grp Volume(v), veh/h	756	182	190	12	0	756	33	0	0	186	0	630
Grp Sat Flow(s),veh/h/ln	1774	1770	1842	1774	0	1818	1782	0	0	1762	0	1568
Q Serve(g_s), s	30.0	6.1	6.1	1.0	0.0	58.0	2.6	0.0	0.0	13.1	0.0	30.0
Cycle Q Clear(g_c), s	30.0	6.1	6.1	1.0	0.0	58.0	2.6	0.0	0.0	13.1	0.0	30.0
Prop In Lane	1.00		0.06	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	376	1106	1151	19	0	771	46	0	0	374	0	665
V/C Ratio(X)	2.01	0.16	0.17	0.64	0.00	0.98	0.72	0.00	0.00	0.50	0.00	0.95
Avail Cap(c_a), veh/h	376	1106	1151	376	0	771	378	0	0	374	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	11.1	11.1	69.7	0.0	40.1	68.4	0.0	0.0	49.1	0.0	39.2
Incr Delay (d2), s/veh	463.3	0.1	0.1	12.4	0.0	27.5	7.7	0.0	0.0	0.4	0.0	22.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	63.1	3.0	3.1	0.5	0.0	34.9	1.4	0.0	0.0	6.4	0.0	27.9
LnGrp Delay(d),s/veh	519.0	11.2	11.2	82.1	0.0	67.7	76.1	0.0	0.0	49.5	0.0	61.6
LnGrp LOS	F	B	B	F		E	E			D		E
Approach Vol, veh/h		1128			768			33			816	
Approach Delay, s/veh		351.5			67.9			76.1			58.9	
Approach LOS		F			E			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	93.4		35.0	33.8	65.0		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+13), s	13.0	8.1		32.0	32.0	60.0		4.6				
Green Ext Time (p_c), s	0.0	3.3		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			181.9									
HCM 2010 LOS			F									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	80	10	40	40	20	20	130	560	80	20	890	250
Future Volume (veh/h)	80	10	40	40	20	20	130	560	80	20	890	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	88	11	44	44	22	22	143	615	88	22	978	275
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	219	38	69	276	118	285	185	1739	248	46	1327	372
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.10	0.56	0.56	0.03	0.48	0.48
Sat Flow, veh/h	656	217	388	961	669	1612	1774	3109	444	1792	2758	772
Grp Volume(v), veh/h	143	0	0	66	0	22	143	350	353	22	632	621
Grp Sat Flow(s),veh/h/ln	1262	0	0	1630	0	1612	1774	1770	1783	1792	1787	1743
Q Serve(g_s), s	4.3	0.0	0.0	0.0	0.0	0.6	4.5	6.1	6.2	0.7	16.1	16.3
Cycle Q Clear(g_c), s	6.1	0.0	0.0	1.8	0.0	0.6	4.5	6.1	6.2	0.7	16.1	16.3
Prop In Lane	0.62		0.31	0.67		1.00	1.00		0.25	1.00		0.44
Lane Grp Cap(c), veh/h	325	0	0	394	0	285	185	990	998	46	860	839
V/C Ratio(X)	0.44	0.00	0.00	0.17	0.00	0.08	0.77	0.35	0.35	0.48	0.74	0.74
Avail Cap(c_a), veh/h	897	0	0	1059	0	996	360	1249	1259	364	1261	1230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	0.0	19.9	0.0	19.5	24.7	6.9	6.9	27.2	11.8	11.9
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.1	6.8	0.2	0.2	7.4	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	0.9	0.0	0.3	2.5	3.0	3.0	0.4	8.2	8.1
LnGrp Delay(d),s/veh	22.7	0.0	0.0	20.1	0.0	19.6	31.5	7.1	7.1	34.6	13.1	13.2
LnGrp LOS	C			C		B	C	A	A	C	B	B
Approach Vol, veh/h		143			88			846			1275	
Approach Delay, s/veh		22.7			20.0			11.2			13.5	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.0	9.4	32.3		15.0	5.0	36.7				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		8.1	6.5	18.3		3.8	2.7	8.2				
Green Ext Time (p_c), s		0.8	0.1	9.0		0.4	0.0	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay				13.5								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	10	20	40	10	10	30	240	20	10	190	20
Future Vol, veh/h	10	10	20	40	10	10	30	240	20	10	190	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	11	11	22	44	11	11	33	264	22	11	209	22
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.5	9	10.7	10
HCM LOS	A	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	25%	67%	100%	0%
Vol Thru, %	0%	92%	25%	17%	0%	90%
Vol Right, %	0%	8%	50%	17%	0%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	260	40	60	10	210
LT Vol	30	0	10	40	10	0
Through Vol	0	240	10	10	0	190
RT Vol	0	20	20	10	0	20
Lane Flow Rate	33	286	44	66	11	231
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.051	0.395	0.062	0.098	0.017	0.322
Departure Headway (Hd)	5.531	4.974	5.081	5.34	5.587	5.017
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	647	723	701	668	640	715
Service Time	3.271	2.714	3.141	3.397	3.329	2.759
HCM Lane V/C Ratio	0.051	0.396	0.063	0.099	0.017	0.323
HCM Control Delay	8.6	10.9	8.5	9	8.4	10.1
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.2	1.9	0.2	0.3	0.1	1.4

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1180	130	20	1190	0	160	0	20	120	30	100
Future Volume (veh/h)	0	1180	130	20	1190	0	160	0	20	120	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1405	0	24	1417	0	190	0	10	143	36	100
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2198	983	27	2486	0	0	0	0	212	222	189
Arrive On Green	0.00	0.62	0.00	0.02	0.70	0.00	0.00	0.00	0.00	0.12	0.12	0.12
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1405	0	24	1417	0		0.0		143	36	100
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	13.2	0.0	0.7	10.5	0.0				4.2	1.0	3.3
Cycle Q Clear(g_c), s	0.0	13.2	0.0	0.7	10.5	0.0				4.2	1.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2198	983	27	2486	0				212	222	189
V/C Ratio(X)	0.00	0.64	0.00	0.88	0.57	0.00				0.68	0.16	0.53
Avail Cap(c_a), veh/h	0	3004	1344	669	3004	0				805	845	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.3	0.0	26.1	3.9	0.0				22.2	20.8	21.8
Incr Delay (d2), s/veh	0.0	0.4	0.0	26.7	0.3	0.0				1.4	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	0.0	0.5	5.0	0.0				2.1	0.5	1.4
LnGrp Delay(d),s/veh	0.0	6.8	0.0	52.7	4.2	0.0				23.6	20.9	22.6
LnGrp LOS		A		D	A					C	C	C
Approach Vol, veh/h		1405			1441						279	
Approach Delay, s/veh		6.8			5.0						22.9	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.3	37.5		11.2		41.8				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.7	15.2		6.2		12.5				
Green Ext Time (p_c), s			0.0	17.7		0.4		17.8				
Intersection Summary												
HCM 2010 Ctrl Delay			7.4									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 32: 2nd Avenue & Lightfighter Drive

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	970	10	40	760	190	20	20	50	350	10	490
Future Volume (veh/h)	340	970	10	40	760	190	20	20	50	350	10	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	378	1078	11	44	844	202	22	22	55	389	11	268
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1909	19	56	1223	293	123	132	264	489	572	486
Arrive On Green	0.12	0.53	0.53	0.03	0.44	0.44	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	3589	37	1740	2780	665	261	434	869	1330	1881	1599
Grp Volume(v), veh/h	378	531	558	44	527	519	99	0	0	389	11	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1856	1740	1736	1710	1564	0	0	1330	1881	1599
Q Serve(g_s), s	12.4	20.1	20.1	2.5	24.4	24.4	0.0	0.0	0.0	23.2	0.4	14.0
Cycle Q Clear(g_c), s	12.4	20.1	20.1	2.5	24.4	24.4	4.2	0.0	0.0	27.4	0.4	14.0
Prop In Lane	1.00		0.02	1.00		0.39	0.22		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	941	988	56	763	752	520	0	0	489	572	486
V/C Ratio(X)	1.72	0.56	0.56	0.79	0.69	0.69	0.19	0.00	0.00	0.79	0.02	0.55
Avail Cap(c_a), veh/h	220	941	988	216	763	752	671	0	0	622	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.09	0.09	0.09	1.00	0.00	0.00	0.57	0.57	0.57
Uniform Delay (d), s/veh	43.8	15.7	15.7	48.1	22.5	22.5	25.7	0.0	0.0	33.4	24.4	29.1
Incr Delay (d2), s/veh	334.0	1.4	1.3	0.9	0.5	0.5	0.1	0.0	0.0	2.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.5	10.1	10.6	1.2	11.8	11.6	2.0	0.0	0.0	10.7	0.2	6.2
LnGrp Delay(d),s/veh	377.8	17.1	17.0	49.0	23.0	23.0	25.7	0.0	0.0	35.8	24.4	29.3
LnGrp LOS	F	B	B	D	C	C	C			D	C	C
Approach Vol, veh/h		1467			1090			99			668	
Approach Delay, s/veh		110.0			24.0			25.7			33.0	
Approach LOS		F			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	57.8		35.0	16.4	48.6		35.0				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1), s	14.5	22.1		29.4	14.4	26.4		6.2				
Green Ext Time (p_c), s	0.0	3.5		1.0	0.0	0.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			63.8									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	280	710	20	210	60	760	90	10	30	80	70
Future Volume (veh/h)	80	280	710	20	210	60	760	90	10	30	80	70
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	90	315	0	22	236	65	854	101	10	34	90	79
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	118	538	458	36	330	91	696	504	50	53	242	192
Arrive On Green	0.07	0.29	0.00	0.02	0.24	0.24	0.20	0.30	0.30	0.03	0.13	0.13
Sat Flow, veh/h	1774	1863	1583	1707	1352	372	3476	1685	167	1774	1872	1489
Grp Volume(v), veh/h	90	315	0	22	0	301	854	0	111	34	85	84
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1725	1738	0	1851	1774	1770	1592
Q Serve(g_s), s	2.5	7.2	0.0	0.6	0.0	8.0	10.0	0.0	2.2	0.9	2.2	2.4
Cycle Q Clear(g_c), s	2.5	7.2	0.0	0.6	0.0	8.0	10.0	0.0	2.2	0.9	2.2	2.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.09	1.00		0.94
Lane Grp Cap(c), veh/h	118	538	458	36	0	420	696	0	554	53	228	206
V/C Ratio(X)	0.76	0.59	0.00	0.61	0.00	0.72	1.23	0.00	0.20	0.64	0.37	0.41
Avail Cap(c_a), veh/h	711	1119	951	684	0	1036	696	0	1112	533	1063	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	15.2	0.0	24.2	0.0	17.3	20.0	0.0	13.0	23.9	19.9	20.0
Incr Delay (d2), s/veh	9.8	1.2	0.0	6.1	0.0	2.8	114.5	0.0	0.4	4.6	1.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.9	0.0	0.4	0.0	4.1	15.8	0.0	1.2	0.5	1.1	1.1
LnGrp Delay(d),s/veh	32.7	16.4	0.0	30.3	0.0	20.1	134.4	0.0	13.4	28.5	21.1	21.6
LnGrp LOS	C	B		C		C	F		B	C	C	C
Approach Vol, veh/h		405			323			965			203	
Approach Delay, s/veh		20.0			20.8			120.5			22.5	
Approach LOS		C			C			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.9	7.8	16.7	6.0	19.4	5.6	18.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	4.4	4.5	10.0	2.9	4.2	2.6	9.2					
Green Ext Time (p_c), s	0.0	1.1	0.2	2.2	0.0	1.0	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				71.6								
HCM 2010 LOS				E								

Intersection

Intersection Delay, s/veh 13.1

Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	240	50	20	270	50
Future Vol, veh/h	30	240	50	20	270	50
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	39	312	65	26	351	65
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11.8	9.1	15.1
HCM LOS	B	A	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	11%	84%
Vol Thru, %	71%	0%	16%
Vol Right, %	29%	89%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	70	270	320
LT Vol	0	30	270
Through Vol	50	0	50
RT Vol	20	240	0
Lane Flow Rate	91	351	416
Geometry Grp	1	1	1
Degree of Util (X)	0.133	0.46	0.583
Departure Headway (Hd)	5.285	4.723	5.054
Convergence, Y/N	Yes	Yes	Yes
Cap	683	757	706
Service Time	3.285	2.797	3.149
HCM Lane V/C Ratio	0.133	0.464	0.589
HCM Control Delay	9.1	11.8	15.1
HCM Lane LOS	A	B	C
HCM 95th-tile Q	0.5	2.4	3.8

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	30	20	250	30	30
Future Vol, veh/h	260	30	20	250	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	333	38	26	321	38	38

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	371	0	725
Stage 1	-	-	-	-	352
Stage 2	-	-	-	-	373
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	1177	-	395
Stage 1	-	-	-	-	716
Stage 2	-	-	-	-	701
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1177	-	384
Mov Cap-2 Maneuver	-	-	-	-	384
Stage 1	-	-	-	-	697
Stage 2	-	-	-	-	701

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	495	-	-	1177	-
HCM Lane V/C Ratio	0.155	-	-	0.022	-
HCM Control Delay (s)	13.6	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	250	30	10	190	10	50	70	20	10	50	30
Future Vol, veh/h	10	250	30	10	190	10	50	70	20	10	50	30
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	13	316	38	13	241	13	63	89	25	13	63	38
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.3	12	11.8	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	3%	5%	11%
Vol Thru, %	50%	86%	90%	56%
Vol Right, %	14%	10%	5%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	290	210	90
LT Vol	50	10	10	10
Through Vol	70	250	190	50
RT Vol	20	30	10	30
Lane Flow Rate	177	367	266	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.302	0.536	0.399	0.184
Departure Headway (Hd)	6.129	5.257	5.405	5.814
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	585	686	665	614
Service Time	4.183	3.3	3.452	3.875
HCM Lane V/C Ratio	0.303	0.535	0.4	0.186
HCM Control Delay	11.8	14.3	12	10.2
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	3.2	1.9	0.7

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	70	110	90	10	110	20	50	60	20	10	60	40
Future Vol, veh/h	70	110	90	10	110	20	50	60	20	10	60	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	85	134	110	12	134	24	61	73	24	12	73	49

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	408	342	98	452	354	86	122	0	0	98	0	0
Stage 1	122	122	-	208	208	-	-	-	-	-	-	-
Stage 2	286	220	-	244	146	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	536	564	931	521	574	978	1417	-	-	1446	-	-
Stage 1	859	776	-	799	734	-	-	-	-	-	-	-
Stage 2	700	703	-	764	780	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	406	532	931	355	542	977	1417	-	-	1445	-	-
Mov Cap-2 Maneuver	406	532	-	355	542	-	-	-	-	-	-	-
Stage 1	819	769	-	761	700	-	-	-	-	-	-	-
Stage 2	526	670	-	551	773	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.8		14.3		2.9		0.7	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1417	-	-	567	556	1445	-
HCM Lane V/C Ratio	0.043	-	-	0.581	0.307	0.008	-
HCM Control Delay (s)	7.7	0	-	19.8	14.3	7.5	0
HCM Lane LOS	A	A	-	C	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	3.7	1.3	0	-

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	130	10	10	220	370	130
Future Vol, veh/h	130	10	10	220	370	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	146	11	11	247	416	146
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	758	489	562	0	0
Stage 1	489	-	-	-	-
Stage 2	269	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-
Pot Cap-1 Maneuver	360	557	1009	-	-
Stage 1	594	-	-	-	-
Stage 2	751	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	355	557	1009	-	-
Mov Cap-2 Maneuver	355	-	-	-	-
Stage 1	586	-	-	-	-
Stage 2	751	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.2	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1009	-	364	-	-
HCM Lane V/C Ratio	0.011	-	0.432	-	-
HCM Control Delay (s)	8.6	0	22.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	2.1	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative with Eastside Parkway, AM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	430	40	450	50	350	270	330	480	50
Future Volume (veh/h)	30	100	80	430	40	450	50	350	270	330	480	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	494	46	0	57	402	0	379	552	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	60	193	95	518	1219	545	86	514	230	392	1121	502
Arrive On Green	0.03	0.09	0.09	0.29	0.34	0.00	0.05	0.14	0.00	0.22	0.32	0.00
Sat Flow, veh/h	1723	2232	1098	1774	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	87	88	494	46	0	57	402	0	379	552	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1611	1774	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.4	3.4	3.7	19.2	0.6	0.0	2.2	7.6	0.0	14.9	8.9	0.0
Cycle Q Clear(g_c), s	1.4	3.4	3.7	19.2	0.6	0.0	2.2	7.6	0.0	14.9	8.9	0.0
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	149	140	518	1219	545	86	514	230	392	1121	502
V/C Ratio(X)	0.57	0.58	0.63	0.95	0.04	0.00	0.67	0.78	0.00	0.97	0.49	0.00
Avail Cap(c_a), veh/h	258	760	712	518	2068	925	140	1274	570	392	1766	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.4	30.8	31.0	24.4	15.3	0.0	32.9	29.0	0.0	27.1	19.4	0.0
Incr Delay (d2), s/veh	3.2	1.3	1.7	27.8	0.0	0.0	3.3	1.0	0.0	36.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	1.7	13.3	0.3	0.0	1.2	3.8	0.0	11.2	4.3	0.0
LnGrp Delay(d),s/veh	36.5	32.2	32.7	52.2	15.3	0.0	36.1	30.0	0.0	63.6	19.5	0.0
LnGrp LOS	D	C	C	D	B		D	C		E	B	
Approach Vol, veh/h		209			540			459			931	
Approach Delay, s/veh		33.1			49.0			30.7			37.5	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.7	6.9	28.7	20.0	14.6	25.0	10.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	4.2	10.9	3.4	2.6	16.9	9.6	21.2	5.7				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.1	0.0	0.5	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				38.5								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	20	610	30	50	850	10	20	30	30	10	60	30
Future Volume (veh/h)	20	610	30	50	850	10	20	30	30	10	60	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1900	1900	1863	1900	1900	1827	1900
Adj Flow Rate, veh/h	23	693	34	57	966	11	23	34	34	11	68	34
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	195	1279	63	228	1320	15	267	117	102	206	176	84
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	36	3132	155	96	3234	36	325	710	618	116	1065	509
Grp Volume(v), veh/h	389	0	361	528	0	506	91	0	0	113	0	0
Grp Sat Flow(s),veh/h/ln	1672	0	1651	1694	0	1672	1653	0	0	1690	0	0
Q Serve(g_s), s	0.1	0.0	3.5	1.6	0.0	5.4	0.0	0.0	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.0	3.5	5.3	0.0	5.4	1.0	0.0	0.0	1.2	0.0	0.0
Prop In Lane	0.06		0.09	0.11		0.02	0.25		0.37	0.10		0.30
Lane Grp Cap(c), veh/h	863	0	674	881	0	683	487	0	0	467	0	0
V/C Ratio(X)	0.45	0.00	0.54	0.60	0.00	0.74	0.19	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	4094	0	3950	4010	0	4001	2509	0	0	2607	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.7	0.0	4.7	5.2	0.0	5.3	7.8	0.0	0.0	7.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.2	0.0	0.6	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.6	2.6	0.0	2.5	0.5	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	4.8	0.0	5.0	5.4	0.0	5.9	7.8	0.0	0.0	8.0	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		750			1034			91			113	
Approach Delay, s/veh		4.9			5.7			7.8			8.0	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.0		13.1		8.0		13.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.0		7.6		3.2		7.4				
Green Ext Time (p_c), s		0.1		0.8		0.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				5.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕		↕↕	
Traffic Volume (veh/h)	10	560	80	110	850	10	40	10	50	10	30	10
Future Volume (veh/h)	10	560	80	110	850	10	40	10	50	10	30	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	12	667	95	131	1012	12	48	12	60	12	36	12
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	163	1416	200	288	1362	16	426	67	231	218	167	51
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	16	2976	420	213	2863	34	1052	457	1583	250	1139	347
Grp Volume(v), veh/h	411	0	363	559	0	596	60	0	60	60	0	0
Grp Sat Flow(s),veh/h/ln1807	0	1605	1421	0	1689	1509	0	1583	1737	0	0	0
Q Serve(g_s), s	0.0	0.0	3.7	4.1	0.0	6.8	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.6	0.0	3.7	7.8	0.0	6.8	0.7	0.0	0.8	0.7	0.0	0.0
Prop In Lane	0.03		0.26	0.23		0.02	0.80		1.00	0.20		0.20
Lane Grp Cap(c), veh/h	1015	0	763	863	0	804	493	0	231	435	0	0
V/C Ratio(X)	0.40	0.00	0.48	0.65	0.00	0.74	0.12	0.00	0.26	0.14	0.00	0.00
Avail Cap(c_a), veh/h	4215	0	3741	3353	0	3938	1816	0	1696	2009	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.2	0.0	4.2	5.1	0.0	5.1	9.0	0.0	9.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.5	0.0	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln1.7	0.0	1.5	3.0	0.0	3.1	0.4	0.0	0.4	0.4	0.4	0.0	0.0
LnGrp Delay(d),s/veh	4.3	0.0	4.4	5.4	0.0	5.6	9.0	0.0	9.2	9.0	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		774			1155			120			60	
Approach Delay, s/veh		4.3			5.5			9.1			9.0	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.0		15.8		8.0		15.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5		55.5		25.5		55.5				
Max Q Clear Time (g_c+I1), s		2.8		5.7		2.7		9.8				
Green Ext Time (p_c), s		0.0		0.8		0.0		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				5.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

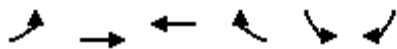
Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	90	520	10	30	850	10	10	10	10	10	10	120
Future Volume (veh/h)	90	520	10	30	850	10	10	10	10	10	10	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1429	1429	1900	1863	1900
Adj Flow Rate, veh/h	101	584	11	34	955	11	11	11	0	11	11	135
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	2	2	2	33	33	33	2	2	2
Cap, veh/h	282	1063	21	201	1416	16	321	142	198	192	23	223
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.16	0.16	0.00	0.16	0.16	0.16
Sat Flow, veh/h	150	2546	50	53	3393	39	423	869	1214	79	144	1368
Grp Volume(v), veh/h	329	0	367	519	0	481	22	0	0	157	0	0
Grp Sat Flow(s),veh/h/ln	1076	0	1670	1796	0	1688	1292	0	1214	1591	0	0
Q Serve(g_s), s	0.9	0.0	3.5	0.1	0.0	5.0	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	3.5	4.8	0.0	5.0	0.3	0.0	0.0	2.0	0.0	0.0
Prop In Lane	0.31		0.03	0.07		0.02	0.50		1.00	0.07		0.86
Lane Grp Cap(c), veh/h	668	0	697	928	0	705	462	0	198	439	0	0
V/C Ratio(X)	0.49	0.00	0.53	0.56	0.00	0.68	0.05	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	2793	0	3927	4254	0	3971	1894	0	1725	2427	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.6	0.0	4.7	5.1	0.0	5.1	7.6	0.0	0.0	8.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.6	2.5	0.0	2.4	0.1	0.0	0.0	0.9	0.0	0.0
LnGrp Delay(d),s/veh	4.8	0.0	4.9	5.2	0.0	5.5	7.6	0.0	0.0	8.5	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		696			1000			22			157	
Approach Delay, s/veh		4.8			5.4			7.6			8.5	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.0		13.5		8.0		13.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.3		7.9		4.0		7.0				
Green Ext Time (p_c), s		0.0		1.1		0.2		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				5.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	100	450	750	10	10	130		
Future Volume (veh/h)	100	450	750	10	10	130		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1759	1900		
Adj Flow Rate, veh/h	116	523	872	12	12	151		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	3	3	0	0	0	0		
Cap, veh/h	331	979	1455	20	17	208		
Arrive On Green	0.40	0.40	0.40	0.40	0.15	0.15		
Sat Flow, veh/h	208	2537	3741	50	110	1389		
Grp Volume(v), veh/h	312	327	432	452	164	0		
Grp Sat Flow(s),veh/h/ln	1067	1595	1805	1891	1509	0		
Q Serve(g_s), s	1.2	3.1	3.8	3.8	2.1	0.0		
Cycle Q Clear(g_c), s	4.9	3.1	3.8	3.8	2.1	0.0		
Prop In Lane	0.37			0.03	0.07	0.92		
Lane Grp Cap(c), veh/h	673	636	720	755	226	0		
V/C Ratio(X)	0.46	0.51	0.60	0.60	0.73	0.00		
Avail Cap(c_a), veh/h	3208	4438	5023	5263	1929	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.6	4.5	4.7	4.7	8.1	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.3	1.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.4	1.3	1.9	1.9	0.9	0.0		
LnGrp Delay(d),s/veh	4.8	4.8	5.0	5.0	9.8	0.0		
LnGrp LOS	A	A	A	A	A			
Approach Vol, veh/h		639	884		164			
Approach Delay, s/veh		4.8	5.0		9.8			
Approach LOS		A	A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				12.5		7.5		12.5
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				6.9		4.1		5.8
Green Ext Time (p_c), s				1.0		0.0		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			5.4					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	220	240	10	10	400	10	10	10	10	10	10	360
Future Volume (veh/h)	220	240	10	10	400	10	10	10	10	10	10	360
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	259	282	12	12	471	12	12	12	12	12	12	248
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	586	737	32	150	1537	39	240	188	126	146	24	325
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	720	1636	70	26	3413	86	293	855	574	36	107	1482
Grp Volume(v), veh/h	265	0	288	260	0	235	36	0	0	272	0	0
Grp Sat Flow(s),veh/h/ln	743	0	1683	1844	0	1680	1722	0	0	1626	0	0
Q Serve(g_s), s	6.9	0.0	3.1	0.0	0.0	2.4	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	9.4	0.0	3.1	2.4	0.0	2.4	0.4	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.98		0.04	0.05		0.05	0.33		0.33	0.04		0.91
Lane Grp Cap(c), veh/h	596	0	758	969	0	757	554	0	0	495	0	0
V/C Ratio(X)	0.44	0.00	0.38	0.27	0.00	0.31	0.06	0.00	0.00	0.55	0.00	0.00
Avail Cap(c_a), veh/h	1379	0	2191	2504	0	2187	2701	0	0	2836	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	0.0	5.0	4.8	0.0	4.8	8.5	0.0	0.0	10.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	1.4	1.2	0.0	1.1	0.2	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	7.9	0.0	5.1	4.8	0.0	4.9	8.5	0.0	0.0	10.3	0.0	0.0
LnGrp LOS	A		A	A		A	A			B		
Approach Vol, veh/h		553			495			36			272	
Approach Delay, s/veh		6.4			4.9			8.5			10.3	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.5		16.8		10.5		16.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		45.5		35.5		45.5		35.5				
Max Q Clear Time (g_c+I1), s		2.4		11.4		6.3		4.4				
Green Ext Time (p_c), s		0.0		0.9		0.4		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				6.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
45: Eastside Parkway & Gigling Road

Cumulative with Eastside Parkway, AM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	10	10	10	10	10	10	180	10	10	280	390
Future Volume (veh/h)	230	10	10	10	10	10	10	180	10	10	280	390
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	250	11	11	11	11	11	11	196	11	11	304	299
Adj No. of Lanes	1	2	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	327	282	23	23	23	26	433	24	26	462	393
Arrive On Green	0.18	0.18	0.18	0.04	0.04	0.04	0.01	0.25	0.25	0.01	0.25	0.25
Sat Flow, veh/h	1774	1803	1555	577	577	577	1774	1747	98	1774	1863	1583
Grp Volume(v), veh/h	250	11	11	33	0	0	11	0	207	11	304	299
Grp Sat Flow(s),veh/h/ln	1774	1770	1588	1732	0	0	1774	0	1845	1774	1863	1583
Q Serve(g_s), s	4.2	0.2	0.2	0.6	0.0	0.0	0.2	0.0	2.9	0.2	4.5	5.4
Cycle Q Clear(g_c), s	4.2	0.2	0.2	0.6	0.0	0.0	0.2	0.0	2.9	0.2	4.5	5.4
Prop In Lane	1.00		0.98	0.33		0.33	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	322	321	288	69	0	0	26	0	458	26	462	393
V/C Ratio(X)	0.78	0.03	0.04	0.48	0.00	0.00	0.43	0.00	0.45	0.43	0.66	0.76
Avail Cap(c_a), veh/h	1373	1370	1230	1033	0	0	315	0	1548	315	1562	1328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	10.5	10.5	14.6	0.0	0.0	15.1	0.0	9.9	15.1	10.5	10.8
Incr Delay (d2), s/veh	1.5	0.0	0.0	1.9	0.0	0.0	10.7	0.0	0.3	10.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.1	0.1	0.3	0.0	0.0	0.2	0.0	1.5	0.2	2.4	2.5
LnGrp Delay(d),s/veh	13.6	10.5	10.5	16.5	0.0	0.0	25.8	0.0	10.1	25.8	11.1	12.0
LnGrp LOS	B	B	B	B			C		B	C	B	B
Approach Vol, veh/h		272			33			218			614	
Approach Delay, s/veh		13.4			16.5			10.9			11.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	11.7		9.6	4.5	11.7		5.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.5	26.0		24.0	5.5	26.0		18.5				
Max Q Clear Time (g_c+1/2), s	12.2	4.9		6.2	2.2	7.4		2.6				
Green Ext Time (p_c), s	0.0	0.2		0.1	0.0	0.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	90	110	150	370	80	40	200	380	320	80	730	250
Future Volume (veh/h)	90	110	150	370	80	40	200	380	320	80	730	250
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	115	141	163	474	103	47	256	487	383	103	936	252
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	231	283	289	418	73	33	187	539	423	196	1029	455
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.10	0.28	0.28	0.11	0.29	0.29
Sat Flow, veh/h	398	658	673	781	170	77	1792	1896	1488	1774	3539	1564
Grp Volume(v), veh/h	419	0	0	624	0	0	256	459	411	103	936	252
Grp Sat Flow(s),veh/h/ln	1729	0	0	1028	0	0	1792	1787	1597	1774	1770	1564
Q Serve(g_s), s	0.0	0.0	0.0	19.0	0.0	0.0	8.0	19.0	19.1	4.2	19.6	10.5
Cycle Q Clear(g_c), s	14.0	0.0	0.0	33.0	0.0	0.0	8.0	19.0	19.1	4.2	19.6	10.5
Prop In Lane	0.27		0.39	0.76		0.08	1.00		0.93	1.00		1.00
Lane Grp Cap(c), veh/h	802	0	0	524	0	0	187	508	454	196	1029	455
V/C Ratio(X)	0.52	0.00	0.00	1.19	0.00	0.00	1.37	0.90	0.90	0.53	0.91	0.55
Avail Cap(c_a), veh/h	802	0	0	524	0	0	187	593	530	196	1174	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	0.0	25.6	0.0	0.0	34.4	26.5	26.5	32.3	26.3	23.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	103.8	0.0	0.0	197.8	14.5	16.1	1.3	9.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	0.0	26.0	0.0	0.0	14.1	11.4	10.4	2.1	10.8	4.5
LnGrp Delay(d),s/veh	16.8	0.0	0.0	129.4	0.0	0.0	232.2	41.0	42.6	33.6	35.3	23.4
LnGrp LOS	B			F			F	D	D	C	D	C
Approach Vol, veh/h		419		624			1126			1291		
Approach Delay, s/veh		16.8		129.4			85.0			32.8		
Approach LOS		B		F			F			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.5	26.8		37.5	13.0	26.4		37.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	3.0	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+110), s	11.0	21.6		35.0	6.2	21.1		16.0				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			65.3									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue

Cumulative with Eastside Parkway, AM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	10	430	370	10	10	230	460	250	10	1040	90
Future Volume (veh/h)	100	10	430	370	10	10	230	460	250	10	1040	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1881	1863	1863	1863	1881	1881	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	11	367	411	11	11	256	511	244	11	1156	39
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	2	1	2	2	2	1	1	2	2	2	2
Cap, veh/h	625	750	644	466	750	638	257	1641	727	23	1163	520
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.14	0.46	0.46	0.01	0.33	0.33
Sat Flow, veh/h	1398	1863	1598	1000	1863	1583	1792	3574	1583	1774	3539	1583
Grp Volume(v), veh/h	111	11	367	411	11	11	256	511	244	11	1156	39
Grp Sat Flow(s),veh/h/ln	1398	1863	1598	1000	1863	1583	1792	1787	1583	1774	1770	1583
Q Serve(g_s), s	5.6	0.4	19.2	43.1	0.4	0.5	15.4	9.7	10.6	0.7	35.2	1.8
Cycle Q Clear(g_c), s	6.0	0.4	19.2	43.5	0.4	0.5	15.4	9.7	10.6	0.7	35.2	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	750	644	466	750	638	257	1641	727	23	1163	520
V/C Ratio(X)	0.18	0.01	0.57	0.88	0.01	0.02	1.00	0.31	0.34	0.48	0.99	0.07
Avail Cap(c_a), veh/h	625	750	644	466	750	638	257	1641	727	90	1163	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	19.4	25.0	33.1	19.4	19.4	46.2	18.4	18.7	52.9	36.1	24.9
Incr Delay (d2), s/veh	0.0	0.0	0.8	17.1	0.0	0.0	54.8	0.0	0.1	5.5	24.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.2	8.5	14.4	0.2	0.2	11.5	4.8	4.6	0.4	21.2	0.8
LnGrp Delay(d),s/veh	21.2	19.4	25.8	50.1	19.4	19.4	101.0	18.5	18.8	58.5	60.9	25.0
LnGrp LOS	C	B	C	D	B	B	F	B	B	E	E	C
Approach Vol, veh/h		489			433			1011			1206	
Approach Delay, s/veh		24.6			48.6			39.4			59.7	
Approach LOS		C			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	40.0		48.0	5.9	54.1		48.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	35.5	35.5		43.5	5.5	45.5		43.5				
Max Q Clear Time (g_c+11), s	11.4	37.2		45.5	2.7	12.6		21.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			46.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	140	120	220	30	230	670	140	10	1000	70
Future Volume (veh/h)	80	100	140	120	220	30	230	670	140	10	1000	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	88	110	65	132	242	31	253	736	139	11	1099	10
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	202	212	172	133	244	31	425	1444	273	18	880	388
Arrive On Green	0.11	0.11	0.11	0.22	0.22	0.22	0.24	0.50	0.50	0.01	0.25	0.25
Sat Flow, veh/h	1757	1845	1494	594	1088	139	1740	2908	549	1740	3471	1529
Grp Volume(v), veh/h	88	110	65	405	0	0	253	439	436	11	1099	10
Grp Sat Flow(s),veh/h/ln	1757	1845	1494	1822	0	0	1740	1736	1721	1740	1736	1529
Q Serve(g_s), s	5.8	7.0	5.0	27.7	0.0	0.0	16.1	21.3	21.3	0.8	31.7	0.6
Cycle Q Clear(g_c), s	5.8	7.0	5.0	27.7	0.0	0.0	16.1	21.3	21.3	0.8	31.7	0.6
Prop In Lane	1.00		1.00	0.33		0.08	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	172	408	0	0	425	862	855	18	880	388
V/C Ratio(X)	0.44	0.52	0.38	0.99	0.00	0.00	0.59	0.51	0.51	0.62	1.25	0.03
Avail Cap(c_a), veh/h	436	457	371	408	0	0	425	862	855	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	52.1	51.2	48.4	0.0	0.0	41.8	21.2	21.2	61.6	46.7	35.0
Incr Delay (d2), s/veh	1.1	1.5	1.1	42.5	0.0	0.0	1.6	2.1	2.2	12.5	121.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.7	2.1	18.8	0.0	0.0	7.9	10.8	10.7	0.4	30.0	0.3
LnGrp Delay(d),s/veh	52.7	53.6	52.3	90.9	0.0	0.0	43.3	23.3	23.4	74.2	167.9	35.2
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		263			405			1128			1120	
Approach Delay, s/veh		53.0			90.9			27.8			165.8	
Approach LOS		D			F			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	67.4		19.0	35.9	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+1/2g), s	12.8	23.3		9.0	18.1	33.7		29.7				
Green Ext Time (p_c), s	0.0	3.0		1.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				91.9								
HCM 2010 LOS				F								
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway, AM
 49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp 06/12/10 Monterey Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗	↖		↗		↕	↗		↕	
Traffic Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Future Volume (veh/h)	10	200	100	240	0	380	0	50	120	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	10	206	9	247	0	253	0	52	21	10	10	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	136	2942	1343	0	0	0	0	122	104	74	60	0
Arrive On Green	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	159	3430	1566				0	1845	1568	466	899	0
Grp Volume(v), veh/h	116	100	9		0.0		0	52	21	20	0	0
Grp Sat Flow(s),veh/h/ln	1837	1752	1566				0	1845	1568	1365	0	0
Q Serve(g_s), s	1.2	1.1	0.1				0.0	3.4	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.1				0.0	3.4	1.6	3.4	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1575	1503	1343				0	122	104	134	0	0
V/C Ratio(X)	0.07	0.07	0.01				0.00	0.43	0.20	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1575	1503	1343				0	148	125	155	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.4	1.3	1.3				0.0	56.1	55.2	55.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	0.9	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0				0.0	1.8	0.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.4	1.3	1.3				0.0	56.9	55.6	55.3	0.0	0.0
LnGrp LOS	A	A	A					E	E	E		
Approach Vol, veh/h		225						73			20	
Approach Delay, s/veh		1.4						56.5			55.3	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				12.5		112.5		12.5				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				5.4		3.2		5.4				
Green Ext Time (p_c), s				0.1		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			17.4									
HCM 2010 LOS			B									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary

Cumulative with Eastside Parkway, AM

50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp

06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↑			↕	
Traffic Volume (veh/h)	0	0	0	260	10	310	120	400	0	0	350	120
Future Volume (veh/h)	0	0	0	260	10	310	120	400	0	0	350	120
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				274	11	74	126	421	0	0	368	117
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				389	16	360	211	1006	0	0	462	147
Arrive On Green				0.23	0.23	0.23	0.12	0.54	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1676	67	1553	1774	1863	0	0	1330	423
Grp Volume(v), veh/h				285	0	74	126	421	0	0	0	485
Grp Sat Flow(s),veh/h/ln				1743	0	1553	1774	1863	0	0	0	1752
Q Serve(g_s), s				7.2	0.0	1.8	3.2	6.4	0.0	0.0	0.0	11.9
Cycle Q Clear(g_c), s				7.2	0.0	1.8	3.2	6.4	0.0	0.0	0.0	11.9
Prop In Lane				0.96		1.00	1.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				404	0	360	211	1006	0	0	0	609
V/C Ratio(X)				0.71	0.00	0.21	0.60	0.42	0.00	0.00	0.00	0.80
Avail Cap(c_a), veh/h				1460	0	1300	966	1482	0	0	0	1394
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				16.8	0.0	14.8	20.0	6.5	0.0	0.0	0.0	14.1
Incr Delay (d2), s/veh				2.3	0.0	0.3	1.0	0.3	0.0	0.0	0.0	2.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.7	0.0	0.8	1.6	3.4	0.0	0.0	0.0	6.1
LnGrp Delay(d),s/veh				19.1	0.0	15.1	21.0	6.8	0.0	0.0	0.0	16.5
LnGrp LOS				B		B	C	A				B
Approach Vol, veh/h					359			547			485	
Approach Delay, s/veh					18.3			10.1			16.5	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.2	22.6		16.0		31.8						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+15), s	15.2	13.9		9.2		8.4						
Green Ext Time (p_c), s	0.1	2.7		2.0		2.2						
Intersection Summary												
HCM 2010 Ctrl Delay				14.4								
HCM 2010 LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	120	10	110	0	0	0	0	390	660	230	370	0
Future Volume (veh/h)	120	10	110	0	0	0	0	390	660	230	370	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	130	11	19				0	424	388	250	402	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	190	16	183				0	650	553	327	1137	0
Arrive On Green	0.11	0.11	0.11				0.00	0.35	0.35	0.19	0.62	0.00
Sat Flow, veh/h	1658	140	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	141	0	19				0	424	388	250	402	0
Grp Sat Flow(s),veh/h/ln	1798	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	3.1	0.0	0.4				0.0	7.9	8.7	5.7	4.4	0.0
Cycle Q Clear(g_c), s	3.1	0.0	0.4				0.0	7.9	8.7	5.7	4.4	0.0
Prop In Lane	0.92		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	206	0	183				0	650	553	327	1137	0
V/C Ratio(X)	0.68	0.00	0.10				0.00	0.65	0.70	0.77	0.35	0.00
Avail Cap(c_a), veh/h	1735	0	1543				0	1679	1427	1007	1630	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	16.4				0.0	11.5	11.7	16.0	3.8	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.1				0.0	1.1	1.6	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.2				0.0	4.2	4.0	3.0	2.2	0.0
LnGrp Delay(d),s/veh	19.1	0.0	16.5				0.0	12.6	13.4	19.7	4.0	0.0
LnGrp LOS	B		B					B	B	B	A	
Approach Vol, veh/h		160						812			652	
Approach Delay, s/veh		18.8						13.0			10.0	
Approach LOS		B						B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		31.8			11.5	20.3		9.7				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		6.4			7.7	10.7		5.1				
Green Ext Time (p_c), s		2.2			0.6	3.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			12.4									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	110	50	170	210	20	100
Future Vol, veh/h	110	50	170	210	20	100
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	54	185	228	22	109
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	8.7	10.3	9
HCM LOS	A	B	A




















Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	100	110	50	170	210
LT Vol	20	0	0	0	170	0
Through Vol	0	0	110	0	0	210
RT Vol	0	100	0	50	0	0
Lane Flow Rate	22	109	120	54	185	228
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.039	0.157	0.176	0.069	0.284	0.319
Departure Headway (Hd)	6.406	5.198	5.294	4.589	5.538	5.036
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	688	676	777	647	712
Service Time	4.156	2.947	3.046	2.341	3.283	2.78
HCM Lane V/C Ratio	0.039	0.158	0.178	0.069	0.286	0.32
HCM Control Delay	9.4	8.9	9.2	7.7	10.5	10.1
HCM Lane LOS	A	A	A	A	B	B
HCM 95th-tile Q	0.1	0.6	0.6	0.2	1.2	1.4

Intersection				
Intersection Delay, s/veh	8.0			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	135	197	49	518
Demand Flow Rate, veh/h	138	207	49	523
Vehicles Circulating, veh/h	324	113	425	90
Vehicles Exiting, veh/h	289	361	37	230
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.3	5.7	5.6	9.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	138	207	49	523
Cap Entry Lane, veh/h	817	1009	739	1033
Entry HV Adj Factor	0.975	0.951	1.000	0.990
Flow Entry, veh/h	135	197	49	518
Cap Entry, veh/h	797	960	739	1023
V/C Ratio	0.169	0.205	0.066	0.506
Control Delay, s/veh	6.3	5.7	5.6	9.6
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	3

Intersection			
Intersection Delay, s/veh 50.5			
Intersection LOS F			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	368	1080	425
Demand Flow Rate, veh/h	460	1091	438
Vehicles Circulating, veh/h	778	95	230
Vehicles Exiting, veh/h	408	573	1008
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	51.6	65.8	10.4
Approach LOS	F	F	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	460	1091	438
Cap Entry Lane, veh/h	519	1028	898
Entry HV Adj Factor	0.800	0.990	0.970
Flow Entry, veh/h	368	1080	425
Cap Entry, veh/h	415	1017	871
V/C Ratio	0.886	1.062	0.488
Control Delay, s/veh	51.6	65.8	10.4
LOS	F	F	B
95th %tile Queue, veh	9	24	3

HCM 2010 Signalized Intersection Summary
 1: Del Monte Boulevard & Reindollar Avenue

Cumulative with Eastside Parkway, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	0	450	10	1290	340	400	840	0
Future Volume (veh/h)	0	0	0	190	0	450	10	1290	340	400	840	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				198	0	397	10	1344	271	417	875	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				501	0	444	22	1145	512	458	2015	0
Arrive On Green				0.28	0.00	0.28	0.01	0.32	0.32	0.26	0.56	0.00
Sat Flow, veh/h				1792	0	1585	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				198	0	397	10	1344	271	417	875	0
Grp Sat Flow(s),veh/h/ln				1792	0	1585	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.2	0.0
Cycle Q Clear(g_c), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.2	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				501	0	444	22	1145	512	458	2015	0
V/C Ratio(X)				0.39	0.00	0.89	0.46	1.17	0.53	0.91	0.43	0.00
Avail Cap(c_a), veh/h				574	0	508	574	1145	512	574	2015	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	32.4	45.9	31.8	26.0	33.8	11.8	0.0
Incr Delay (d2), s/veh				0.5	0.0	16.8	14.1	87.7	1.0	16.2	0.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	11.9	0.3	28.6	5.9	12.5	6.5	0.0
LnGrp Delay(d),s/veh				27.8	0.0	49.2	60.0	119.5	27.1	50.0	11.9	0.0
LnGrp LOS				C		D	E	F	C	D	B	
Approach Vol, veh/h					595			1625			1292	
Approach Delay, s/veh					42.1			103.8			24.2	
Approach LOS					D			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.6	57.8			27.5	35.0		31.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	15.2			23.1	32.0		24.5				
Green Ext Time (p_c), s	0.0	5.4			0.8	0.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				64.1								
HCM 2010 LOS				E								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
2: 2nd Avenue & Patton Parkway

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Future Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	54	65	98	87	87	76	261	98	87	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	163	196	137	201	201	119	356	134	128	405	101
Arrive On Green	0.05	0.21	0.21	0.08	0.23	0.23	0.07	0.28	0.28	0.07	0.28	0.28
Sat Flow, veh/h	1774	771	928	1774	856	856	1774	1292	485	1774	1441	359
Grp Volume(v), veh/h	54	0	119	98	0	174	76	0	359	87	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1699	1774	0	1712	1774	0	1777	1774	0	1799
Q Serve(g_s), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Cycle Q Clear(g_c), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Prop In Lane	1.00		0.55	1.00		0.50	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	96	0	359	137	0	402	119	0	490	128	0	505
V/C Ratio(X)	0.56	0.00	0.33	0.72	0.00	0.43	0.64	0.00	0.73	0.68	0.00	0.54
Avail Cap(c_a), veh/h	228	0	1290	228	0	1300	228	0	1349	228	0	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	15.6	21.1	0.0	15.2	21.3	0.0	15.4	21.2	0.0	14.2
Incr Delay (d2), s/veh	5.1	0.0	0.5	6.9	0.0	0.7	5.6	0.0	2.1	6.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.5	0.0	2.0	1.1	0.0	4.5	1.3	0.0	3.1
LnGrp Delay(d),s/veh	26.7	0.0	16.2	27.9	0.0	16.0	26.8	0.0	17.5	27.3	0.0	15.1
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		173			272			435			358	
Approach Delay, s/veh		19.5			20.3			19.1			18.1	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	17.4	7.6	14.4	7.1	17.6	6.5	15.5				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	35.5	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	10.6	10.6	4.5	4.8	4.0	8.0	3.4	6.0				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.7	0.0	1.7	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1200	0	0	0	0	0	680	10	0
Future Volume (veh/h)	0	0	0	1200	0	0	0	0	0	680	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1319	0	0				747	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1015	0	0				661	10	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1792	0	0				1750	26	0
Grp Volume(v), veh/h				1319	0	0				758	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1775	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				1015	0	0				671	0	0
V/C Ratio(X)				1.30	0.00	0.00				1.13	0.00	0.00
Avail Cap(c_a), veh/h				1015	0	0				671	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				141.9	0.0	0.0				76.4	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				84.3	0.0	0.0				43.5	0.0	0.0
LnGrp Delay(d),s/veh				176.3	0.0	0.0				125.8	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1319						758	
Approach Delay, s/veh					176.3						125.8	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				157.8								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	660	0	0	1180	840	10	10	1180	0	0	0
Future Vol, veh/h	10	660	0	0	1180	840	10	10	1180	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	11	695	0	0	1242	884	11	11	1242	0	0	0
























Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1242	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	561	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	561	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	80.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	68	-	561	-	-
HCM Lane V/C Ratio	0.31	-	0.019	-	-
HCM Control Delay (s)	80.1	0	11.5	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cumulative with Eastside Parkway, PM
06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	990	720	330	1030	140	840	110	480	90	90	150
Future Volume (veh/h)	140	990	720	330	1030	140	840	110	480	90	90	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	1031	550	344	1073	146	875	115	266	94	94	125
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	184	1213	540	416	1127	153	794	503	424	133	202	178
Arrive On Green	0.10	0.34	0.34	0.12	0.36	0.36	0.23	0.26	0.26	0.07	0.11	0.11
Sat Flow, veh/h	1792	3574	1592	3476	3160	429	3510	1900	1602	1810	1805	1585
Grp Volume(v), veh/h	146	1031	550	344	606	613	875	115	266	94	94	125
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1802	1755	1900	1602	1810	1805	1585
Q Serve(g_s), s	7.0	23.7	30.0	8.5	29.2	29.3	20.0	4.2	12.9	4.5	4.3	6.7
Cycle Q Clear(g_c), s	7.0	23.7	30.0	8.5	29.2	29.3	20.0	4.2	12.9	4.5	4.3	6.7
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	1213	540	416	637	643	794	503	424	133	202	178
V/C Ratio(X)	0.80	0.85	1.02	0.83	0.95	0.95	1.10	0.23	0.63	0.71	0.46	0.70
Avail Cap(c_a), veh/h	304	1213	540	590	637	643	794	503	424	205	429	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	27.1	29.2	38.0	27.7	27.7	34.2	25.4	28.6	40.0	36.8	37.8
Incr Delay (d2), s/veh	3.0	5.6	43.3	4.5	23.9	24.3	63.4	0.1	2.2	2.6	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	12.5	19.6	4.4	18.5	18.8	16.6	2.2	5.9	2.3	2.2	3.0
LnGrp Delay(d),s/veh	41.7	32.7	72.5	42.5	51.6	52.0	97.6	25.5	30.8	42.6	37.4	39.7
LnGrp LOS	D	C	F	D	D	D	F	C	C	D	D	D
Approach Vol, veh/h		1727			1563			1256			313	
Approach Delay, s/veh		46.1			49.8			76.9			39.9	
Approach LOS		D			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	35.3	23.5	14.5	13.6	36.8	10.0	28.0				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	10.5	32.0	22.0	8.7	9.0	31.3	6.5	14.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			54.8									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
6: 3rd Avenue & Imjin Parkway

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	1380	170	90	1100	20	220	10	140	10	10	50
Future Volume (veh/h)	50	1380	170	90	1100	20	220	10	140	10	10	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1408	165	92	1122	19	224	10	31	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	116	1546	180	118	1731	29	407	82	256	387	176	176
Arrive On Green	0.06	0.48	0.48	0.07	0.48	0.48	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3218	374	1792	3597	61	1412	408	1266	1386	872	872
Grp Volume(v), veh/h	51	776	797	92	557	584	224	0	41	10	0	20
Grp Sat Flow(s),veh/h/ln	1792	1787	1805	1792	1787	1870	1412	0	1674	1386	0	1745
Q Serve(g_s), s	1.5	21.4	22.0	2.7	12.6	12.6	8.2	0.0	1.1	0.3	0.0	0.5
Cycle Q Clear(g_c), s	1.5	21.4	22.0	2.7	12.6	12.6	8.6	0.0	1.1	1.4	0.0	0.5
Prop In Lane	1.00		0.21	1.00		0.03	1.00		0.76	1.00		0.50
Lane Grp Cap(c), veh/h	116	858	867	118	860	900	407	0	338	387	0	352
V/C Ratio(X)	0.44	0.90	0.92	0.78	0.65	0.65	0.55	0.00	0.12	0.03	0.00	0.06
Avail Cap(c_a), veh/h	385	1084	1095	385	1084	1134	846	0	859	818	0	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	12.8	12.9	24.7	10.5	10.5	20.7	0.0	17.5	18.1	0.0	17.3
Incr Delay (d2), s/veh	1.0	8.0	9.3	4.2	0.4	0.4	0.4	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.3	13.1	1.5	6.1	6.4	3.2	0.0	0.5	0.1	0.0	0.2
LnGrp Delay(d),s/veh	25.1	20.8	22.3	28.9	10.9	10.9	21.2	0.0	17.5	18.1	0.0	17.3
LnGrp LOS	C	C	C	C	B	B	C		B	B		B
Approach Vol, veh/h		1624			1233			265			30	
Approach Delay, s/veh		21.7			12.2			20.6			17.5	
Approach LOS		C			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	31.2		15.3	7.0	31.3		15.3				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+14), s	14.5	24.0		3.4	3.5	14.6		10.6				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: 4th Avenue & Imjin Parkway

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1520	10	10	1170	10	20	10	10	10	10	10
Future Volume (veh/h)	10	1520	10	10	1170	10	20	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1567	10	10	1206	10	21	10	8	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	14	1789	11	14	1784	15	233	24	19	191	33	33
Arrive On Green	0.01	0.49	0.49	0.01	0.49	0.49	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1792	3641	23	1792	3632	30	880	419	335	570	570	570
Grp Volume(v), veh/h	10	769	808	10	593	623	39	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1877	1792	1787	1875	1634	0	0	1711	0	0
Q Serve(g_s), s	0.2	11.7	11.7	0.2	7.7	7.7	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	11.7	11.7	0.2	7.7	7.7	0.6	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.02	0.54		0.21	0.33		0.33
Lane Grp Cap(c), veh/h	14	878	922	14	878	921	276	0	0	257	0	0
V/C Ratio(X)	0.70	0.88	0.88	0.70	0.68	0.68	0.14	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	676	1904	2000	676	1904	1998	1589	0	0	1624	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	6.9	6.9	15.1	5.9	5.9	13.8	0.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	20.3	1.1	1.1	20.3	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	5.8	6.1	0.2	3.7	3.9	0.3	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	35.4	8.1	8.0	35.4	6.2	6.2	13.9	0.0	0.0	13.8	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	B			B		
Approach Vol, veh/h		1587			1226			39			30	
Approach Delay, s/veh		8.2			6.5			13.9			13.8	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.7	20.5		6.3	3.7	20.5		6.3				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1/2), s	12.2	13.7		2.5	2.2	9.7		2.6				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 8: 5th Avenue/California Avenue & Imjin Parkway

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	1140	10	10	950	80	20	50	10	40	40	240
Future Volume (veh/h)	320	1140	10	10	950	80	20	50	10	40	40	240
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	330	1175	10	10	979	76	21	52	7	41	41	78
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	393	1993	17	14	1134	88	144	186	22	146	72	109
Arrive On Green	0.22	0.55	0.55	0.01	0.34	0.34	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1792	3632	31	1792	3360	261	296	1352	158	308	521	789
Grp Volume(v), veh/h	330	578	607	10	521	534	80	0	0	160	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1876	1792	1787	1834	1806	0	0	1618	0	0
Q Serve(g_s), s	7.7	9.5	9.5	0.2	11.9	11.9	0.0	0.0	0.0	2.4	0.0	0.0
Cycle Q Clear(g_c), s	7.7	9.5	9.5	0.2	11.9	11.9	1.7	0.0	0.0	4.1	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.14	0.26		0.09	0.26		0.49
Lane Grp Cap(c), veh/h	393	980	1029	14	603	619	352	0	0	326	0	0
V/C Ratio(X)	0.84	0.59	0.59	0.71	0.86	0.86	0.23	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	613	1224	1284	613	1224	1256	884	0	0	827	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.4	6.6	6.6	21.7	13.6	13.6	17.0	0.0	0.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.2	0.2	21.6	1.5	1.4	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	4.6	4.8	0.2	6.0	6.2	0.9	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	19.8	6.8	6.8	43.3	15.1	15.0	17.1	0.0	0.0	18.4	0.0	0.0
LnGrp LOS	B	A	A	D	B	B	B			B		
Approach Vol, veh/h		1515			1065			80			160	
Approach Delay, s/veh		9.6			15.3			17.1			18.4	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	29.3		10.6	13.1	20.1		10.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	5.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1/2), s	11.5	11.5		6.1	9.7	13.9		3.7				
Green Ext Time (p_c), s	0.0	0.8		0.1	0.1	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				12.5								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	
Traffic Vol, veh/h	10	10	20	410	240	10
Future Vol, veh/h	10	10	20	410	240	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	446	261	11












Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	757	267	272	0	0
Stage 1	267	-	-	-	-
Stage 2	490	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	375	772	1291	-	-
Stage 1	778	-	-	-	-
Stage 2	616	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	369	772	1291	-	-
Mov Cap-2 Maneuver	369	-	-	-	-
Stage 1	765	-	-	-	-
Stage 2	616	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1291	-	499	-	-
HCM Lane V/C Ratio	0.017	-	0.044	-	-
HCM Control Delay (s)	7.8	-	12.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cumulative with Eastside Parkway, PM
 06/11/2019

								
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	1110	70	70	860	150	360		
Future Volume (veh/h)	1110	70	70	860	150	360		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1168	71	74	905	157	314		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1351	82	91	2118	267	476		
Arrive On Green	0.39	0.39	0.05	0.59	0.15	0.15		
Sat Flow, veh/h	3518	208	1792	3668	1792	3198		
Grp Volume(v), veh/h	609	630	74	905	157	314		
Grp Sat Flow(s),veh/h/ln	1787	1844	1792	1787	1792	1599		
Q Serve(g_s), s	11.3	11.3	1.5	5.0	2.9	3.3		
Cycle Q Clear(g_c), s	11.3	11.3	1.5	5.0	2.9	3.3		
Prop In Lane		0.11	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	705	728	91	2118	267	476		
V/C Ratio(X)	0.86	0.86	0.82	0.43	0.59	0.66		
Avail Cap(c_a), veh/h	1490	1538	996	2979	1095	1955		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.0	10.0	16.9	4.0	14.3	14.5		
Incr Delay (d2), s/veh	1.3	1.2	6.5	0.1	0.8	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.7	5.8	0.9	2.4	1.5	1.5		
LnGrp Delay(d),s/veh	11.3	11.3	23.4	4.0	15.1	15.0		
LnGrp LOS	B	B	C	A	B	B		
Approach Vol, veh/h	1239			979	471			
Approach Delay, s/veh	11.3			5.5	15.0			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	7.1	19.5				26.6		9.4
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	3.5	13.3				7.0		5.3
Green Ext Time (p_c), s	0.0	0.9				1.0		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			9.8					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 11: Abrams Drive & Imjin Parkway

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↗		↖ ↗	↗		↖	↗	↗	↖	↗	↗
Traffic Volume (veh/h)	130	1090	180	160	730	120	120	30	180	60	20	120
Future Volume (veh/h)	130	1090	180	160	730	120	120	30	180	60	20	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	140	1172	145	172	785	109	129	32	0	65	22	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	286	1937	239	260	1861	258	275	248	210	266	245	208
Arrive On Green	0.08	0.60	0.60	0.07	0.59	0.59	0.13	0.13	0.00	0.13	0.13	0.00
Sat Flow, veh/h	3476	3203	395	3476	3153	438	1395	1881	1599	1369	1863	1583
Grp Volume(v), veh/h	140	653	664	172	445	449	129	32	0	65	22	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1811	1738	1787	1804	1395	1881	1599	1369	1863	1583
Q Serve(g_s), s	2.6	15.4	15.5	3.3	9.2	9.2	6.1	1.0	0.0	3.0	0.7	0.0
Cycle Q Clear(g_c), s	2.6	15.4	15.5	3.3	9.2	9.2	6.8	1.0	0.0	4.0	0.7	0.0
Prop In Lane	1.00		0.22	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1081	1095	260	1054	1064	275	248	210	266	245	208
V/C Ratio(X)	0.49	0.60	0.61	0.66	0.42	0.42	0.47	0.13	0.00	0.24	0.09	0.00
Avail Cap(c_a), veh/h	1025	1318	1336	1025	1318	1330	709	832	708	691	824	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.8	8.3	8.4	30.5	7.6	7.6	28.8	26.0	0.0	27.8	25.9	0.0
Incr Delay (d2), s/veh	0.5	0.2	0.2	1.1	0.1	0.1	0.5	0.1	0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.5	7.6	1.6	4.5	4.5	2.4	0.5	0.0	1.1	0.4	0.0
LnGrp Delay(d),s/veh	30.2	8.5	8.6	31.6	7.7	7.7	29.3	26.1	0.0	27.9	25.9	0.0
LnGrp LOS	C	A	A	C	A	A	C	C		C	C	
Approach Vol, veh/h		1457			1066			161			87	
Approach Delay, s/veh		10.6			11.5			28.7			27.4	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	46.3		12.9	9.6	45.3		12.9				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+15), s	15.3	17.5		6.0	4.6	11.2		8.8				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.0	0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑	↖
Traffic Volume (veh/h)	120	20	1190	10	40	30	780	630	10	20	940	180
Future Volume (veh/h)	120	20	1190	10	40	30	780	630	10	20	940	180
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	135	22	936	11	45	12	876	708	10	22	1056	68
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	802	434	1296	75	79	66	802	2048	916	55	1280	572
Arrive On Green	0.23	0.23	0.23	0.04	0.04	0.04	0.23	0.57	0.57	0.02	0.36	0.36
Sat Flow, veh/h	3476	1881	2802	1740	1827	1531	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	135	22	936	11	45	12	876	708	10	22	1056	68
Grp Sat Flow(s),veh/h/ln	1738	1881	1401	1740	1827	1531	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	4.7	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	40.8	4.3
Cycle Q Clear(g_c), s	4.7	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	40.8	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	802	434	1296	75	79	66	802	2048	916	55	1280	572
V/C Ratio(X)	0.17	0.05	0.72	0.15	0.57	0.18	1.09	0.35	0.01	0.40	0.83	0.12
Avail Cap(c_a), veh/h	802	434	1296	356	373	313	802	2048	916	458	1414	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	45.4	33.0	69.9	71.2	70.0	58.3	17.3	13.9	73.9	44.4	32.6
Incr Delay (d2), s/veh	0.0	0.0	1.7	0.3	2.4	0.5	59.9	0.3	0.0	1.7	5.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.7	16.1	0.5	1.9	0.5	23.4	7.9	0.2	0.5	21.0	1.9
LnGrp Delay(d),s/veh	46.7	45.4	34.7	70.2	73.5	70.4	118.2	17.5	13.9	75.6	49.3	32.9
LnGrp LOS	D	D	C	E	E	E	F	B	B	E	D	C
Approach Vol, veh/h		1093			68			1594			1146	
Approach Delay, s/veh		36.4			72.5			72.8			48.9	
Approach LOS		D			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	60.5		11.6	6.5	93.1		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	42.8		5.7	3.0	18.0		37.0				
Green Ext Time (p_c), s	0.0	11.5		0.2	0.0	10.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			55.6									
HCM 2010 LOS			E									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	80	870	510	380	860	210		
Future Volume (veh/h)	80	870	510	380	860	210		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	98	906	622	463	1049	247		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	423	658	308	2342	1299	305		
Arrive On Green	0.24	0.24	0.18	0.67	0.45	0.45		
Sat Flow, veh/h	1792	1599	1757	3597	2969	674		
Grp Volume(v), veh/h	98	906	622	463	650	646		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1762		
Q Serve(g_s), s	5.0	27.0	20.0	5.8	35.8	36.2		
Cycle Q Clear(g_c), s	5.0	27.0	20.0	5.8	35.8	36.2		
Prop In Lane	1.00	1.00	1.00			0.38		
Lane Grp Cap(c), veh/h	423	658	308	2342	808	796		
V/C Ratio(X)	0.23	1.38	2.02	0.20	0.81	0.81		
Avail Cap(c_a), veh/h	423	658	308	2342	939	926		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	35.2	33.6	47.1	7.2	27.0	27.1		
Incr Delay (d2), s/veh	0.3	179.1	471.2	0.1	5.5	5.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.5	53.4	49.9	2.8	18.8	18.9		
LnGrp Delay(d),s/veh	35.5	212.7	518.3	7.3	32.5	32.9		
LnGrp LOS	D	F	F	A	C	C		
Approach Vol, veh/h	1004			1085	1296			
Approach Delay, s/veh	195.4			300.3	32.7			
Approach LOS	F			F	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.7	58.0				82.7		31.5
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Q), s	22.5	38.2				7.8		29.0
Green Ext Time (p_c), s	0.0	13.4				5.4		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			166.7					
HCM 2010 LOS			F					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 15: 2nd Avenue & 9th Street

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	10	10	30	40	10	20	20	650	50	40	550	10
Future Volume (veh/h)	10	10	30	40	10	20	20	650	50	40	550	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	11	23	44	11	3	22	714	51	44	604	-1
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	4	4	4
Cap, veh/h	267	212	305	375	81	15	49	1266	90	86	1379	0
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.38	0.38	0.05	0.40	0.00
Sat Flow, veh/h	594	1102	1591	1016	421	78	1792	3375	241	1740	3563	0
Grp Volume(v), veh/h	22	0	23	58	0	0	22	378	387	44	603	0
Grp Sat Flow(s),veh/h/ln	1696	0	1591	1515	0	0	1792	1787	1829	1740	1736	0
Q Serve(g_s), s	0.0	0.0	0.4	0.4	0.0	0.0	0.4	5.9	5.9	0.9	4.5	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.4	1.0	0.0	0.0	0.4	5.9	5.9	0.9	4.5	0.0
Prop In Lane	0.50		1.00	0.76		0.05	1.00		0.13	1.00		0.00
Lane Grp Cap(c), veh/h	479	0	305	471	0	0	49	670	686	86	1379	0
V/C Ratio(X)	0.05	0.00	0.08	0.12	0.00	0.00	0.45	0.56	0.56	0.51	0.44	0.00
Avail Cap(c_a), veh/h	1780	0	1581	1655	0	0	585	2030	2078	568	3943	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.6	0.0	11.7	11.9	0.0	0.0	16.9	8.7	8.7	16.3	7.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.0	6.2	0.7	0.7	4.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.5	0.0	0.0	0.3	3.0	3.0	0.5	2.1	0.0
LnGrp Delay(d),s/veh	11.7	0.0	11.8	12.0	0.0	0.0	23.1	9.5	9.5	20.9	8.0	0.0
LnGrp LOS	B		B	B			C	A	A	C	A	
Approach Vol, veh/h		45			58			787			647	
Approach Delay, s/veh		11.7			12.0			9.8			8.8	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.8	4.5	19.0		11.8	5.2	18.2				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		2.4	2.4	6.5		3.0	2.9	7.9				
Green Ext Time (p_c), s		0.1	0.0	4.4		0.3	0.0	5.2				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	40	40	580	220	30	480		
Future Volume (veh/h)	40	40	580	220	30	480		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1827	1827		
Adj Flow Rate, veh/h	43	9	617	203	32	511		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	0	0	1	1	4	4		
Cap, veh/h	106	95	1176	386	68	2099		
Arrive On Green	0.06	0.06	0.45	0.45	0.04	0.60		
Sat Flow, veh/h	1810	1615	2721	863	1740	3563		
Grp Volume(v), veh/h	43	9	419	401	32	511		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1703	1740	1736		
Q Serve(g_s), s	0.7	0.2	5.0	5.0	0.5	2.0		
Cycle Q Clear(g_c), s	0.7	0.2	5.0	5.0	0.5	2.0		
Prop In Lane	1.00	1.00		0.51	1.00			
Lane Grp Cap(c), veh/h	106	95	800	762	68	2099		
V/C Ratio(X)	0.40	0.09	0.52	0.53	0.47	0.24		
Avail Cap(c_a), veh/h	1828	1631	2707	2579	674	7011		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.5	13.2	5.9	5.9	14.0	2.7		
Incr Delay (d2), s/veh	2.5	0.4	0.5	0.6	5.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	0.2	2.6	2.5	0.3	0.9		
LnGrp Delay(d),s/veh	15.9	13.7	6.5	6.5	19.0	2.8		
LnGrp LOS	B	B	A	A	B	A		
Approach Vol, veh/h	52		820			543		
Approach Delay, s/veh	15.5		6.5			3.7		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.0		6.7	4.7	18.3
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				4.0		2.7	2.5	7.0
Green Ext Time (p_c), s				3.8		0.1	0.0	6.0
Intersection Summary								
HCM 2010 Ctrl Delay			5.8					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
 19: 2nd Avenue & Inter-Garrison Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	70	30	780	80	30	510		
Future Volume (veh/h)	70	30	780	80	30	510		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1863	1863		
Adj Flow Rate, veh/h	72	7	804	74	31	526		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	1	1	2	2		
Cap, veh/h	278	248	1392	128	66	1977		
Arrive On Green	0.15	0.15	0.42	0.42	0.04	0.56		
Sat Flow, veh/h	1810	1615	3404	305	1774	3632		
Grp Volume(v), veh/h	72	7	434	444	31	526		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1827	1774	1770		
Q Serve(g_s), s	1.2	0.1	6.5	6.5	0.6	2.7		
Cycle Q Clear(g_c), s	1.2	0.1	6.5	6.5	0.6	2.7		
Prop In Lane	1.00	1.00		0.17	1.00			
Lane Grp Cap(c), veh/h	278	248	752	769	66	1977		
V/C Ratio(X)	0.26	0.03	0.58	0.58	0.47	0.27		
Avail Cap(c_a), veh/h	1823	1627	2058	2104	587	5603		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.0	12.5	7.7	7.7	16.4	4.0		
Incr Delay (d2), s/veh	0.5	0.0	0.7	0.7	5.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	0.1	3.3	3.4	0.4	1.3		
LnGrp Delay(d),s/veh	13.4	12.5	8.4	8.4	21.5	4.0		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	79		878			557		
Approach Delay, s/veh	13.4		8.4			5.0		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				24.4		10.3	4.8	19.6
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				4.7		3.2	2.6	8.5
Green Ext Time (p_c), s				3.9		0.2	0.0	6.2
Intersection Summary								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					

Intersection												
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	60	30	150	40	10	20	50	150	20	60	10
Future Vol, veh/h	10	60	30	150	40	10	20	50	150	20	60	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	12	73	37	183	49	12	24	61	183	24	73	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	10.9	10.1	9.2
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	10%	75%	22%
Vol Thru, %	23%	60%	20%	67%
Vol Right, %	68%	30%	5%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	100	200	90
LT Vol	20	10	150	20
Through Vol	50	60	40	60
RT Vol	150	30	10	10
Lane Flow Rate	268	122	244	110
Geometry Grp	1	1	1	1
Degree of Util (X)	0.344	0.169	0.344	0.156
Departure Headway (Hd)	4.62	4.981	5.082	5.131
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	770	711	700	690
Service Time	2.695	3.077	3.168	3.225
HCM Lane V/C Ratio	0.348	0.172	0.349	0.159
HCM Control Delay	10.1	9.1	10.9	9.2
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	1.5	0.6	1.5	0.6

HCM 2010 Signalized Intersection Summary
 21: 7th Avenue/8th Street & Inter-Garrison Road

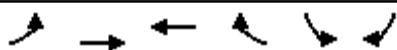
Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	240	70	80	160	30	50	120	170	90	10	10
Future Volume (veh/h)	10	240	70	80	160	30	50	120	170	90	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1827	1827	1827	1900	1810	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	258	69	86	172	17	54	129	111	97	11	2
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	4	4	4	5	5	5	0	0	0
Cap, veh/h	20	382	102	108	581	491	71	170	147	140	16	138
Arrive On Green	0.01	0.27	0.27	0.06	0.32	0.32	0.23	0.23	0.23	0.09	0.09	0.09
Sat Flow, veh/h	1792	1428	382	1740	1827	1543	306	731	629	1633	185	1607
Grp Volume(v), veh/h	11	0	327	86	172	17	294	0	0	108	0	2
Grp Sat Flow(s),veh/h/ln	1792	0	1810	1740	1827	1543	1665	0	0	1818	0	1607
Q Serve(g_s), s	0.3	0.0	7.6	2.3	3.3	0.4	7.7	0.0	0.0	2.7	0.0	0.1
Cycle Q Clear(g_c), s	0.3	0.0	7.6	2.3	3.3	0.4	7.7	0.0	0.0	2.7	0.0	0.1
Prop In Lane	1.00		0.21	1.00		1.00	0.18		0.38	0.90		1.00
Lane Grp Cap(c), veh/h	20	0	484	108	581	491	388	0	0	156	0	138
V/C Ratio(X)	0.54	0.00	0.68	0.80	0.30	0.03	0.76	0.00	0.00	0.69	0.00	0.01
Avail Cap(c_a), veh/h	153	0	1272	241	1381	1167	780	0	0	852	0	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	15.4	21.7	12.1	11.0	16.8	0.0	0.0	20.9	0.0	19.6
Incr Delay (d2), s/veh	20.3	0.0	1.7	12.4	0.3	0.0	3.0	0.0	0.0	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	3.9	1.5	1.7	0.2	3.8	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	43.4	0.0	17.0	34.1	12.3	11.1	19.8	0.0	0.0	26.2	0.0	19.7
LnGrp LOS	D		B	C	B	B	B			C		B
Approach Vol, veh/h		338			275			294			110	
Approach Delay, s/veh		17.9			19.1			19.8			26.1	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	17.6		8.0	4.0	19.9		15.0				
Change Period (Y+Rc), s	3.5	5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s	6.5	33.0		22.0	4.0	35.5		22.0				
Max Q Clear Time (g_c+14), s	14.3	9.6		4.7	2.3	5.3		9.7				
Green Ext Time (p_c), s	0.0	1.9		0.4	0.0	1.0		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	300	510	300	140	130	260		
Future Volume (veh/h)	300	510	300	140	130	260		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1792	1792	1827	1827		
Adj Flow Rate, veh/h	316	537	316	121	137	51		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	6	6	4	4		
Cap, veh/h	388	1185	554	461	340	157		
Arrive On Green	0.22	0.64	0.31	0.31	0.10	0.10		
Sat Flow, veh/h	1774	1863	1792	1491	3375	1553		
Grp Volume(v), veh/h	316	537	316	121	137	51		
Grp Sat Flow(s),veh/h/ln	1774	1863	1792	1491	1688	1553		
Q Serve(g_s), s	5.5	4.8	4.8	2.0	1.2	1.0		
Cycle Q Clear(g_c), s	5.5	4.8	4.8	2.0	1.2	1.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	388	1185	554	461	340	157		
V/C Ratio(X)	0.81	0.45	0.57	0.26	0.40	0.33		
Avail Cap(c_a), veh/h	631	3456	2494	2075	3288	1513		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.0	3.0	9.4	8.4	13.6	13.5		
Incr Delay (d2), s/veh	1.6	0.1	0.3	0.1	0.3	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	2.4	2.3	0.8	0.6	0.9		
LnGrp Delay(d),s/veh	13.6	3.1	9.7	8.5	13.9	14.0		
LnGrp LOS	B	A	A	A	B	B		
Approach Vol, veh/h		853	437		188			
Approach Delay, s/veh		7.0	9.4		13.9			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		25.6		6.8	10.6	15.0		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		6.8		3.2	7.5	6.8		
Green Ext Time (p_c), s		0.5		0.0	0.0	0.3		
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					
Notes								

User approved changes to right turn type.

HCM 2010 Signalized Intersection Summary
 24: Inter-Garrison Road & Schoonover Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	450	110	330	250	40	120	30	740	30	20	40
Future Volume (veh/h)	110	450	110	330	250	40	120	30	740	30	20	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1878	1900	1863	1810	1810	1863	1863	1863	1900	1711	1624
Adj Flow Rate, veh/h	128	523	93	384	291	30	140	35	0	35	23	33
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	2	5	5	2	2	2	2	2	17
Cap, veh/h	163	623	110	428	1223	547	260	273	232	124	81	171
Arrive On Green	0.09	0.21	0.21	0.24	0.36	0.36	0.15	0.15	0.00	0.12	0.12	0.12
Sat Flow, veh/h	1792	3030	537	1774	3438	1538	1774	1863	1583	1002	659	1380
Grp Volume(v), veh/h	128	307	309	384	291	30	140	35	0	58	0	33
Grp Sat Flow(s),veh/h/ln	1792	1784	1783	1774	1719	1538	1774	1863	1583	1661	0	1380
Q Serve(g_s), s	4.6	10.8	10.9	13.7	3.9	0.8	4.8	1.1	0.0	2.1	0.0	1.4
Cycle Q Clear(g_c), s	4.6	10.8	10.9	13.7	3.9	0.8	4.8	1.1	0.0	2.1	0.0	1.4
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	0.60		1.00
Lane Grp Cap(c), veh/h	163	367	367	428	1223	547	260	273	232	205	0	171
V/C Ratio(X)	0.78	0.84	0.84	0.90	0.24	0.05	0.54	0.13	0.00	0.28	0.00	0.19
Avail Cap(c_a), veh/h	836	818	818	936	1735	776	1085	1139	969	686	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	24.9	25.0	24.0	14.8	13.8	25.9	24.3	0.0	26.0	0.0	25.7
Incr Delay (d2), s/veh	3.1	2.0	2.0	2.8	0.0	0.0	0.6	0.1	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.5	5.5	7.0	1.9	0.4	2.4	0.6	0.0	1.0	0.0	0.5
LnGrp Delay(d),s/veh	32.2	26.9	27.0	26.8	14.9	13.9	26.5	24.3	0.0	26.3	0.0	25.9
LnGrp LOS	C	C	C	C	B	B	C	C		C		C
Approach Vol, veh/h		744			705			175			91	
Approach Delay, s/veh		27.9			21.3			26.1			26.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.3	18.4		13.1	9.5	28.3		14.6				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	31.5	30.0		27.0	30.5	33.0		40.0				
Max Q Clear Time (g_c+1.5), s	11.5	12.9		4.1	6.6	5.9		6.8				
Green Ext Time (p_c), s	0.1	0.6		0.0	0.0	0.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				24.9								
HCM 2010 LOS				C								

Intersection	
Intersection Delay, s/veh	273
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	900	270	160	100	130	410
Future Vol, veh/h	900	270	160	100	130	410
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	1034	310	184	115	149	471
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	437.3	21.4	38.2
HCM LOS	F	C	E

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	62%	0%	0%
Vol Right, %	0%	0%	38%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	900	270	260	130	410
LT Vol	900	0	0	130	0
Through Vol	0	270	160	0	0
RT Vol	0	0	100	0	410
Lane Flow Rate	1034	310	299	149	471
Geometry Grp	7	7	4	7	7
Degree of Util (X)	2.196	0.615	0.589	0.328	0.878
Departure Headway (Hd)	7.643	7.131	7.801	9.098	7.861
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	486	506	466	397	467
Service Time	5.381	4.869	5.801	6.798	5.561
HCM Lane V/C Ratio	2.128	0.613	0.642	0.375	1.009
HCM Control Delay	562.3	20.6	21.4	16.2	45.2
HCM Lane LOS	F	C	C	C	E
HCM 95th-tile Q	75.2	4.1	3.7	1.4	9.3

HCM 2010 Signalized Intersection Summary
 26: East Garrison Road & Reservation Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1510	130	230	760	0	110	0	150	0	0	0
Future Volume (veh/h)	0	1510	130	230	760	0	110	0	150	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	0	1557	132	237	784	0	113	0	126			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	2	1972	166	271	2815	0	178	0	159			
Arrive On Green	0.00	0.60	0.60	0.15	0.79	0.00	0.10	0.00	0.10			
Sat Flow, veh/h	1774	3305	278	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	0	828	861	237	784	0	113	0	126			
Grp Sat Flow(s),veh/h/ln	1774	1770	1814	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	32.3	33.2	11.8	5.4	0.0	5.6	0.0	7.1			
Cycle Q Clear(g_c), s	0.0	32.3	33.2	11.8	5.4	0.0	5.6	0.0	7.1			
Prop In Lane	1.00		0.15	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	1056	1082	271	2815	0	178	0	159			
V/C Ratio(X)	0.00	0.78	0.80	0.87	0.28	0.00	0.63	0.00	0.79			
Avail Cap(c_a), veh/h	390	1166	1195	394	2815	0	521	0	465			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	13.9	14.1	37.8	2.6	0.0	39.3	0.0	40.0			
Incr Delay (d2), s/veh	0.0	3.9	4.1	10.4	0.1	0.0	1.4	0.0	3.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	16.8	17.7	6.6	2.6	0.0	2.8	0.0	3.3			
LnGrp Delay(d),s/veh	0.0	17.8	18.2	48.1	2.7	0.0	40.7	0.0	43.3			
LnGrp LOS		B	B	D	A		D		D			
Approach Vol, veh/h		1689			1021			239				
Approach Delay, s/veh		18.0			13.2			42.0				
Approach LOS		B			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	7.4	59.7			0.0	77.1		13.9				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+113), s	113	35.2			0.0	7.4		9.1				
Green Ext Time (p_c), s	0.0	19.1			0.0	7.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				18.3								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
27: Reservation Road & Watkins Gate Road

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	220	210	1190	2120	60		
Future Volume (veh/h)	10	220	210	1190	2120	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1881	1881	1863	1900		
Adj Flow Rate, veh/h	11	32	228	1293	2304	62		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	1	1	2	2		
Cap, veh/h	53	47	243	3117	2486	67		
Arrive On Green	0.03	0.03	0.14	0.87	0.71	0.71		
Sat Flow, veh/h	1774	1583	1792	3668	3615	94		
Grp Volume(v), veh/h	11	32	228	1293	1153	1213		
Grp Sat Flow(s),veh/h/ln	1774	1583	1792	1787	1770	1846		
Q Serve(g_s), s	0.8	2.7	16.7	9.6	72.8	74.7		
Cycle Q Clear(g_c), s	0.8	2.7	16.7	9.6	72.8	74.7		
Prop In Lane	1.00	1.00	1.00			0.05		
Lane Grp Cap(c), veh/h	53	47	243	3117	1249	1303		
V/C Ratio(X)	0.21	0.67	0.94	0.41	0.92	0.93		
Avail Cap(c_a), veh/h	274	245	243	3140	1261	1316		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	62.8	63.7	56.7	1.7	16.4	16.7		
Incr Delay (d2), s/veh	0.7	6.0	40.3	0.1	11.5	12.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	1.2	11.0	4.7	38.9	41.8		
LnGrp Delay(d),s/veh	63.5	69.7	97.1	1.8	27.9	28.7		
LnGrp LOS	E	E	F	A	C	C		
Approach Vol, veh/h	43			1521	2366			
Approach Delay, s/veh	68.1			16.1	28.3			
Approach LOS	E			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.5	22.0	100.1				122.1
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		20.5	18.0	94.5				116.5
Max Q Clear Time (g_c+11), s		4.7	18.7	76.7				11.6
Green Ext Time (p_c), s		0.0	0.0	16.9				22.1
Intersection Summary								
HCM 2010 Ctrl Delay			24.0					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1260	510	10	10	350	100	10	10	10	120	10	720
Future Volume (veh/h)	1260	510	10	10	350	100	10	10	10	120	10	720
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1835	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	1340	543	11	11	372	106	11	11	9	128	11	631
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	453	1970	40	18	427	122	17	17	14	423	36	816
Arrive On Green	0.26	0.56	0.56	0.01	0.31	0.31	0.03	0.03	0.03	0.26	0.26	0.26
Sat Flow, veh/h	1774	3548	72	1740	1374	392	631	631	516	1656	142	1599
Grp Volume(v), veh/h	1340	271	283	11	0	478	31	0	0	139	0	631
Grp Sat Flow(s),veh/h/ln	1774	1770	1850	1740	0	1766	1777	0	0	1798	0	1599
Q Serve(g_s), s	30.0	9.4	9.5	0.7	0.0	30.1	2.0	0.0	0.0	7.3	0.0	30.0
Cycle Q Clear(g_c), s	30.0	9.4	9.5	0.7	0.0	30.1	2.0	0.0	0.0	7.3	0.0	30.0
Prop In Lane	1.00		0.04	1.00		0.22	0.35		0.29	0.92		1.00
Lane Grp Cap(c), veh/h	453	982	1027	18	0	549	48	0	0	459	0	816
V/C Ratio(X)	2.96	0.28	0.28	0.62	0.00	0.87	0.64	0.00	0.00	0.30	0.00	0.77
Avail Cap(c_a), veh/h	453	982	1027	444	0	901	454	0	0	459	0	816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	13.7	13.7	57.9	0.0	38.3	56.6	0.0	0.0	35.3	0.0	23.3
Incr Delay (d2), s/veh	887.8	0.2	0.2	12.1	0.0	7.5	5.2	0.0	0.0	0.1	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	26.2	4.7	4.9	0.4	0.0	15.7	1.1	0.0	0.0	3.6	0.0	17.3
LnGrp Delay(d),s/veh	931.6	14.0	14.0	70.0	0.0	45.7	61.9	0.0	0.0	35.5	0.0	27.5
LnGrp LOS	F	B	B	E		D	E			D		C
Approach Vol, veh/h		1894			489			31			770	
Approach Delay, s/veh		663.2			46.3			61.9			28.9	
Approach LOS		F			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	70.3		35.0	33.8	41.6		7.2				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1/2), s	11.5	11.5		32.0	32.0	32.1		4.0				
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0	4.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				409.2								
HCM 2010 LOS				F								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	200	10	80	80	10	20	40	640	60	20	460	100
Future Volume (veh/h)	200	10	80	80	10	20	40	640	60	20	460	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1881	1881	1900
Adj Flow Rate, veh/h	213	11	85	85	11	21	43	681	64	21	489	106
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	415	42	119	547	62	510	85	1136	107	46	934	201
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.05	0.34	0.34	0.03	0.32	0.32
Sat Flow, veh/h	858	131	375	1224	195	1607	1810	3334	313	1792	2923	630
Grp Volume(v), veh/h	309	0	0	96	0	21	43	368	377	21	298	297
Grp Sat Flow(s),veh/h/ln	1365	0	0	1419	0	1607	1810	1805	1843	1792	1787	1765
Q Serve(g_s), s	6.9	0.0	0.0	0.0	0.0	0.4	1.0	7.2	7.2	0.5	5.8	5.9
Cycle Q Clear(g_c), s	8.9	0.0	0.0	2.0	0.0	0.4	1.0	7.2	7.2	0.5	5.8	5.9
Prop In Lane	0.69		0.28	0.89		1.00	1.00		0.17	1.00		0.36
Lane Grp Cap(c), veh/h	576	0	0	609	0	510	85	615	628	46	571	564
V/C Ratio(X)	0.54	0.00	0.00	0.16	0.00	0.04	0.51	0.60	0.60	0.45	0.52	0.53
Avail Cap(c_a), veh/h	1309	0	0	1294	0	1317	487	1690	1725	482	1464	1446
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	0.0	10.6	0.0	10.1	19.9	11.7	11.7	20.5	11.9	11.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.1	0.0	0.0	4.6	0.9	0.9	6.8	0.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.8	0.0	0.2	0.6	3.7	3.8	0.3	2.9	2.9
LnGrp Delay(d),s/veh	14.1	0.0	0.0	10.7	0.0	10.1	24.5	12.6	12.6	27.3	12.6	12.6
LnGrp LOS	B			B		B	C	B	B	C	B	B
Approach Vol, veh/h		309			117			788			616	
Approach Delay, s/veh		14.1			10.6			13.3			13.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.6	5.5	18.7		18.6	4.6	19.6				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	35.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		10.9	3.0	7.9		4.0	2.5	9.2				
Green Ext Time (p_c), s		1.9	0.0	3.7		0.6	0.0	4.9				
Intersection Summary												
HCM 2010 Ctrl Delay				13.2								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	10.6											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	20	10	30	30	10	10	20	200	60	10	210	20
Future Vol, veh/h	20	10	30	30	10	10	20	200	60	10	210	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	24	12	35	35	12	12	24	235	71	12	247	24
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.9	9.1	11	10.9
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	33%	60%	100%	0%
Vol Thru, %	0%	77%	17%	20%	0%	91%
Vol Right, %	0%	23%	50%	20%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	260	60	50	10	230
LT Vol	20	0	20	30	10	0
Through Vol	0	200	10	10	0	210
RT Vol	0	60	30	10	0	20
Lane Flow Rate	24	306	71	59	12	271
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.037	0.419	0.102	0.089	0.018	0.382
Departure Headway (Hd)	5.595	4.93	5.204	5.472	5.649	5.085
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	728	684	650	631	704
Service Time	3.346	2.68	3.274	3.545	3.404	2.839
HCM Lane V/C Ratio	0.038	0.42	0.104	0.091	0.019	0.385
HCM Control Delay	8.6	11.2	8.9	9.1	8.5	11
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.1	2.1	0.3	0.3	0.1	1.8

HCM 2010 Signalized Intersection Summary
 31: 1st Avenue & Lightfighter Drive

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1140	110	20	1430	0	200	0	30	60	50	80
Future Volume (veh/h)	0	1140	110	20	1430	0	200	0	30	60	50	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1200	0	21	1505	0	211	0	14	63	53	64
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2194	982	23	2527	0	0	0	0	142	149	127
Arrive On Green	0.00	0.61	0.00	0.01	0.71	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1200	0	21	1505	0		0.0		63	53	64
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	8.5	0.0	0.5	9.3	0.0				1.5	1.2	1.7
Cycle Q Clear(g_c), s	0.0	8.5	0.0	0.5	9.3	0.0				1.5	1.2	1.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2194	982	23	2527	0				142	149	127
V/C Ratio(X)	0.00	0.55	0.00	0.90	0.60	0.00				0.44	0.36	0.50
Avail Cap(c_a), veh/h	0	3681	1647	820	3681	0				986	1035	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.9	0.0	21.5	3.2	0.0				19.1	18.9	19.2
Incr Delay (d2), s/veh	0.0	0.3	0.0	32.9	0.3	0.0				0.8	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.1	0.0	0.5	4.5	0.0				0.7	0.6	0.8
LnGrp Delay(d),s/veh	0.0	5.2	0.0	54.5	3.6	0.0				19.9	19.5	20.3
LnGrp LOS		A		D	A					B	B	C
Approach Vol, veh/h		1200			1526						180	
Approach Delay, s/veh		5.2			4.3						19.9	
Approach LOS		A			A						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.1	31.4		8.2		35.5				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.5	10.5		3.7		11.3				
Green Ext Time (p_c), s			0.0	15.8		0.3		19.6				
Intersection Summary												
HCM 2010 Ctrl Delay			5.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
32: 2nd Avenue & Lightfighter Drive

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	940	10	80	1150	220	20	20	50	220	30	330
Future Volume (veh/h)	290	940	10	80	1150	220	20	20	50	220	30	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	305	989	11	84	1211	227	21	21	47	232	32	244
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2215	25	108	1648	307	93	97	163	340	362	306
Arrive On Green	0.12	0.61	0.61	0.06	0.55	0.55	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3621	40	1792	3009	560	246	497	831	1308	1845	1558
Grp Volume(v), veh/h	305	488	512	84	716	722	89	0	0	232	32	244
Grp Sat Flow(s),veh/h/ln	1792	1787	1874	1792	1787	1782	1574	0	0	1308	1845	1558
Q Serve(g_s), s	12.4	14.6	14.6	4.6	30.2	30.8	0.0	0.0	0.0	12.0	1.4	14.9
Cycle Q Clear(g_c), s	12.4	14.6	14.6	4.6	30.2	30.8	4.4	0.0	0.0	16.3	1.4	14.9
Prop In Lane	1.00		0.02	1.00		0.31	0.24		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	222	1093	1146	108	979	976	354	0	0	340	362	306
V/C Ratio(X)	1.37	0.45	0.45	0.78	0.73	0.74	0.25	0.00	0.00	0.68	0.09	0.80
Avail Cap(c_a), veh/h	222	1093	1146	222	979	976	666	0	0	611	745	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	0.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	43.8	10.4	10.4	46.4	17.1	17.2	34.0	0.0	0.0	38.6	32.9	38.3
Incr Delay (d2), s/veh	187.8	1.0	0.9	0.4	0.4	0.5	0.1	0.0	0.0	0.8	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	7.5	7.8	2.3	14.8	15.2	2.1	0.0	0.0	6.3	0.7	6.5
LnGrp Delay(d),s/veh	231.6	11.4	11.3	46.8	17.5	17.7	34.2	0.0	0.0	39.3	32.9	39.9
LnGrp LOS	F	B	B	D	B	B	C			D	C	D
Approach Vol, veh/h		1305			1522			89			508	
Approach Delay, s/veh		62.8			19.2			34.2			39.2	
Approach LOS		E			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	65.8		24.2	16.4	59.4		24.2				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+10), s	16.6	16.6		18.3	14.4	32.8		6.4				
Green Ext Time (p_c), s	0.0	3.6		0.9	0.0	0.0		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				39.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	270	740	40	270	50	630	80	20	60	100	70
Future Volume (veh/h)	130	270	740	40	270	50	630	80	20	60	100	70
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	281	0	42	281	51	656	83	19	62	104	-39
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	179	590	502	63	389	71	666	387	89	82	415	0
Arrive On Green	0.10	0.31	0.00	0.03	0.25	0.25	0.19	0.26	0.26	0.05	0.11	0.00
Sat Flow, veh/h	1792	1881	1599	1810	1566	284	3476	1482	339	1810	3705	0
Grp Volume(v), veh/h	135	281	0	42	0	332	656	0	102	62	65	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1850	1738	0	1821	1810	1805	0
Q Serve(g_s), s	3.8	6.3	0.0	1.2	0.0	8.6	9.8	0.0	2.3	1.8	0.8	0.0
Cycle Q Clear(g_c), s	3.8	6.3	0.0	1.2	0.0	8.6	9.8	0.0	2.3	1.8	0.8	0.0
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	179	590	502	63	0	460	666	0	475	82	415	0
V/C Ratio(X)	0.75	0.48	0.00	0.66	0.00	0.72	0.99	0.00	0.21	0.75	0.16	0.00
Avail Cap(c_a), veh/h	686	1081	919	693	0	1063	666	0	1047	520	2075	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.9	14.5	0.0	24.9	0.0	18.0	21.0	0.0	15.1	24.6	20.8	0.0
Incr Delay (d2), s/veh	6.2	0.7	0.0	4.4	0.0	2.6	31.0	0.0	0.5	5.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.4	0.0	0.7	0.0	4.7	7.5	0.0	1.2	1.0	0.4	0.0
LnGrp Delay(d),s/veh	29.1	15.2	0.0	29.3	0.0	20.6	52.1	0.0	15.6	29.8	21.0	0.0
LnGrp LOS	C	B		C		C	D		B	C	C	
Approach Vol, veh/h		416			374			758			127	
Approach Delay, s/veh		19.7			21.5			47.2			25.3	
Approach LOS		B			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	9.7	17.5	6.9	18.1	6.3	20.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+I1), s	2.8	5.8	5.8	10.6	3.8	4.3	3.2	8.3				
Green Ext Time (p_c), s	0.0	0.4	0.3	2.4	0.0	0.9	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				33.0								
HCM 2010 LOS				C								

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	290	60	20	300	50
Future Vol, veh/h	10	290	60	20	300	50
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	11	330	68	23	341	57
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11	9	14.1
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	86%
Vol Thru, %	75%	0%	14%
Vol Right, %	25%	97%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	80	300	350
LT Vol	0	10	300
Through Vol	60	0	50
RT Vol	20	290	0
Lane Flow Rate	91	341	398
Geometry Grp	1	1	1
Degree of Util (X)	0.131	0.43	0.551
Departure Headway (Hd)	5.19	4.538	4.984
Convergence, Y/N	Yes	Yes	Yes
Cap	695	788	716
Service Time	3.19	2.603	3.071
HCM Lane V/C Ratio	0.131	0.433	0.556
HCM Control Delay	9	11	14.1
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.4	2.2	3.4

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	280	40	30	270	30	30
Future Vol, veh/h	280	40	30	270	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	329	47	35	318	35	35

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	376	0	741
Stage 1	-	-	-	-	353
Stage 2	-	-	-	-	388
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1194	-	387
Stage 1	-	-	-	-	716
Stage 2	-	-	-	-	690
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1194	-	373
Mov Cap-2 Maneuver	-	-	-	-	373
Stage 1	-	-	-	-	690
Stage 2	-	-	-	-	690

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	13.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	485	-	-	1194	-
HCM Lane V/C Ratio	0.146	-	-	0.03	-
HCM Control Delay (s)	13.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	13.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	240	60	30	230	10	50	60	20	10	80	20
Future Vol, veh/h	10	240	60	30	230	10	50	60	20	10	80	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	12	293	73	37	280	12	61	73	24	12	98	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.4	13.5	11.3	10.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	3%	11%	9%
Vol Thru, %	46%	77%	85%	73%
Vol Right, %	15%	19%	4%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	310	270	110
LT Vol	50	10	30	10
Through Vol	60	240	230	80
RT Vol	20	60	10	20
Lane Flow Rate	159	378	329	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.266	0.546	0.491	0.223
Departure Headway (Hd)	6.042	5.195	5.366	5.994
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	591	692	668	596
Service Time	4.11	3.248	3.42	4.065
HCM Lane V/C Ratio	0.269	0.546	0.493	0.225
HCM Control Delay	11.3	14.4	13.5	10.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.1	3.3	2.7	0.8

Intersection												
Int Delay, s/veh	22											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	160	50	30	130	10	90	60	20	10	20	30
Future Vol, veh/h	60	160	50	30	130	10	90	60	20	10	20	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	81	216	68	41	176	14	122	81	27	14	27	41

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	510	428	48	557	435	95	68	0	0	108	0	0
Stage 1	76	76	-	339	339	-	-	-	-	-	-	-
Stage 2	434	352	-	218	96	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	472	518	1018	441	514	962	1527	-	-	1446	-	-
Stage 1	931	830	-	676	640	-	-	-	-	-	-	-
Stage 2	598	630	-	784	815	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	307	469	1018	246	466	962	1527	-	-	1446	-	-
Mov Cap-2 Maneuver	307	469	-	246	466	-	-	-	-	-	-	-
Stage 1	852	822	-	619	586	-	-	-	-	-	-	-
Stage 2	378	576	-	534	807	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	36.5		24.1		4		1.3	
HCM LOS	E		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1527	-	-	461	413	1446	-
HCM Lane V/C Ratio	0.08	-	-	0.791	0.556	0.009	-
HCM Control Delay (s)	7.6	0	-	36.5	24.1	7.5	0
HCM Lane LOS	A	A	-	E	C	A	A
HCM 95th %tile Q(veh)	0.3	-	-	7.1	3.3	0	-

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	180	10	10	250	190	160
Future Vol, veh/h	180	10	10	250	190	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	205	11	11	284	216	182
























Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	613	307	398	0	0
Stage 1	307	-	-	-	-
Stage 2	306	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	459	738	1161	-	-
Stage 1	751	-	-	-	-
Stage 2	751	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	454	738	1161	-	-
Mov Cap-2 Maneuver	454	-	-	-	-
Stage 1	743	-	-	-	-
Stage 2	751	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.4	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1161	-	463	-	-
HCM Lane V/C Ratio	0.01	-	0.466	-	-
HCM Control Delay (s)	8.1	0	19.4	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	2.4	-	-

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cumulative with Eastside Parkway, PM
 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	220	50	410	60	270	390	540	260	50
Future Volume (veh/h)	20	20	30	220	50	410	60	270	390	540	260	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	247	56	0	67	303	0	607	292	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	268	36	303	831	372	110	494	221	393	1060	474
Arrive On Green	0.03	0.09	0.09	0.17	0.23	0.00	0.06	0.14	0.00	0.22	0.30	0.00
Sat Flow, veh/h	1691	2991	399	1792	3574	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	12	13	247	56	0	67	303	0	607	292	0
Grp Sat Flow(s),veh/h/ln	1691	1687	1703	1792	1787	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.3	0.3	6.3	0.6	0.0	1.7	3.8	0.0	10.5	3.0	0.0
Cycle Q Clear(g_c), s	0.6	0.3	0.3	6.3	0.6	0.0	1.7	3.8	0.0	10.5	3.0	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	151	153	303	831	372	110	494	221	393	1060	474
V/C Ratio(X)	0.49	0.08	0.08	0.81	0.07	0.00	0.61	0.61	0.00	1.54	0.28	0.00
Avail Cap(c_a), veh/h	732	1086	1096	775	2300	1029	393	1904	852	393	1904	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.8	19.8	19.8	19.0	14.2	0.0	21.7	19.2	0.0	18.4	12.7	0.0
Incr Delay (d2), s/veh	3.0	0.1	0.1	2.0	0.0	0.0	2.0	0.5	0.0	257.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.2	3.3	0.3	0.0	0.9	1.9	0.0	33.1	1.5	0.0
LnGrp Delay(d),s/veh	25.8	19.9	19.9	21.0	14.2	0.0	23.7	19.6	0.0	275.7	12.7	0.0
LnGrp LOS	C	B	B	C	B		C	B		F	B	
Approach Vol, veh/h		47			303			370			899	
Approach Delay, s/veh		22.6			19.7			20.4			190.3	
Approach LOS		C			B			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	18.7	5.8	15.5	15.0	11.1	12.5	8.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.7	5.0	2.6	2.6	12.5	5.8	8.3	2.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.1	0.0	0.4	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	114.7											
HCM 2010 LOS	F											
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary
40: Malmedy Road & Gigling Road

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	20	920	10	30	650	10	30	60	50	10	40	10
Future Volume (veh/h)	20	920	10	30	650	10	30	60	50	10	40	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1810	1900
Adj Flow Rate, veh/h	22	1011	11	33	714	11	33	66	55	11	44	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	5	5	5
Cap, veh/h	189	1386	15	205	1283	20	256	136	103	232	210	49
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	30	3438	37	50	3182	50	290	792	601	193	1222	283
Grp Volume(v), veh/h	544	0	500	386	0	372	154	0	0	66	0	0
Grp Sat Flow(s),veh/h/ln	1816	0	1688	1580	0	1703	1683	0	0	1699	0	0
Q Serve(g_s), s	0.3	0.0	5.3	0.3	0.0	3.5	1.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	5.3	5.6	0.0	3.5	1.7	0.0	0.0	0.7	0.0	0.0
Prop In Lane	0.04		0.02	0.09		0.03	0.21		0.36	0.17		0.17
Lane Grp Cap(c), veh/h	909	0	681	822	0	686	495	0	0	490	0	0
V/C Ratio(X)	0.60	0.00	0.74	0.47	0.00	0.54	0.31	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	4384	0	4030	3920	0	4065	2601	0	0	2564	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	0.0	5.4	4.8	0.0	4.8	8.0	0.0	0.0	7.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.6	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	2.5	1.6	0.0	1.6	0.8	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	5.6	0.0	5.9	4.9	0.0	5.1	8.1	0.0	0.0	7.6	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		1044			758			154			66	
Approach Delay, s/veh		5.7			5.0			8.1			7.6	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.1		13.0		8.1		13.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.7		7.3		2.7		7.6				
Green Ext Time (p_c), s		0.2		1.0		0.1		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 41: Parker Flatts Cut Off Road & Gigling Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	10	940	30	50	600	10	90	20	90	10	20	10
Future Volume (veh/h)	10	940	30	50	600	10	90	20	90	10	20	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	1056	34	56	674	11	101	22	101	11	22	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	0	0	0
Cap, veh/h	163	1439	46	213	1241	21	497	69	302	241	193	80
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	11	3401	109	79	2933	50	1139	368	1611	249	1029	426
Grp Volume(v), veh/h	578	0	523	364	0	377	123	0	101	44	0	0
Grp Sat Flow(s),veh/h/ln	1846	0	1675	1359	0	1703	1507	0	1611	1704	0	0
Q Serve(g_s), s	0.0	0.0	6.0	0.6	0.0	3.8	1.1	0.0	1.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	6.0	6.7	0.0	3.8	1.6	0.0	1.3	0.5	0.0	0.0
Prop In Lane	0.02		0.07	0.15		0.03	0.82		1.00	0.25		0.25
Lane Grp Cap(c), veh/h	940	0	709	754	0	720	566	0	302	514	0	0
V/C Ratio(X)	0.62	0.00	0.74	0.48	0.00	0.52	0.22	0.00	0.33	0.09	0.00	0.00
Avail Cap(c_a), veh/h	4131	0	3660	3118	0	3720	2222	0	2125	2361	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	5.6	4.9	0.0	4.9	8.2	0.0	8.1	7.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.6	0.2	0.0	0.2	0.1	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	2.9	1.7	0.0	1.7	0.7	0.0	0.6	0.2	0.0	0.0
LnGrp Delay(d),s/veh	5.8	0.0	6.2	5.0	0.0	5.2	8.3	0.0	8.4	7.8	0.0	0.0
LnGrp LOS	A		A	A		A	A		A	A		
Approach Vol, veh/h		1101			741			224			44	
Approach Delay, s/veh		6.0			5.1			8.3			7.8	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.8		14.3		8.8		14.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.6		8.0		2.5		8.7				
Green Ext Time (p_c), s		0.1		1.1		0.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				6.0								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
42: 6th Avenue & Gigling Road

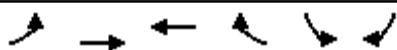
Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	140	900	10	10	520	10	10	10	20	10	10	140
Future Volume (veh/h)	140	900	10	10	520	10	10	10	20	10	10	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	947	11	11	547	11	11	11	0	11	11	147
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	331	1287	15	174	1514	30	327	187	258	181	22	225
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.16	0.16	0.00	0.16	0.16	0.16
Sat Flow, veh/h	291	2902	33	20	3412	68	557	1175	1615	74	138	1412
Grp Volume(v), veh/h	544	0	561	297	0	272	22	0	0	169	0	0
Grp Sat Flow(s),veh/h/ln	1520	0	1706	1818	0	1683	1733	0	1615	1624	0	0
Q Serve(g_s), s	4.3	0.0	6.2	0.0	0.0	2.4	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	6.2	2.4	0.0	2.4	0.2	0.0	0.0	2.2	0.0	0.0
Prop In Lane	0.27		0.02	0.04		0.04	0.50		1.00	0.07		0.87
Lane Grp Cap(c), veh/h	876	0	757	971	0	747	514	0	258	428	0	0
V/C Ratio(X)	0.62	0.00	0.74	0.31	0.00	0.36	0.04	0.00	0.00	0.39	0.00	0.00
Avail Cap(c_a), veh/h	3411	0	3799	4043	0	3748	2299	0	2172	2342	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	5.2	4.2	0.0	4.2	8.1	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.9	1.2	0.0	1.1	0.1	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	5.5	0.0	5.8	4.2	0.0	4.3	8.1	0.0	0.0	9.2	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		1105			569			22			169	
Approach Delay, s/veh		5.6			4.3			8.1			9.2	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.1		14.6		8.1		14.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.2		8.7		4.2		4.4				
Green Ext Time (p_c), s		0.0		1.4		0.2		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				5.6								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
43: Gigling Road & 7th Avenue

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	140	790	450	10	10	90		
Future Volume (veh/h)	140	790	450	10	10	90		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1863	1881	1900	1827	1900		
Adj Flow Rate, veh/h	146	823	469	10	10	94		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	1	1	0	0		
Cap, veh/h	376	1192	1515	32	17	160		
Arrive On Green	0.42	0.42	0.42	0.42	0.11	0.11		
Sat Flow, veh/h	322	2901	3673	76	149	1405		
Grp Volume(v), veh/h	497	472	234	245	105	0		
Grp Sat Flow(s),veh/h/ln	1527	1610	1787	1868	1570	0		
Q Serve(g_s), s	3.2	4.7	1.7	1.7	1.2	0.0		
Cycle Q Clear(g_c), s	5.1	4.7	1.7	1.7	1.2	0.0		
Prop In Lane	0.29			0.04	0.10	0.90		
Lane Grp Cap(c), veh/h	886	682	757	791	179	0		
V/C Ratio(X)	0.56	0.69	0.31	0.31	0.59	0.00		
Avail Cap(c_a), veh/h	4349	4593	5098	5327	2057	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.6	4.6	3.7	3.7	8.2	0.0		
Incr Delay (d2), s/veh	0.2	0.5	0.1	0.1	1.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	2.1	0.8	0.8	0.6	0.0		
LnGrp Delay(d),s/veh	4.8	5.1	3.8	3.8	9.3	0.0		
LnGrp LOS	A	A	A	A	A			
Approach Vol, veh/h		969	479		105			
Approach Delay, s/veh		4.9	3.8		9.3			
Approach LOS		A	A		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				12.7		6.7		12.7
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				7.1		3.2		3.7
Green Ext Time (p_c), s				1.1		0.0		0.4
Intersection Summary								
HCM 2010 Ctrl Delay			4.9					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary
44: 8th Avenue & Gigling Road

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	250	550	10	10	280	10	10	10	10	10	10	180
Future Volume (veh/h)	250	550	10	10	280	10	10	10	10	10	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	275	604	11	11	308	11	11	11	11	11	11	110
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	572	996	19	188	1507	53	278	101	82	190	24	193
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	685	2206	42	35	3338	117	433	705	569	103	165	1341
Grp Volume(v), veh/h	443	0	447	173	0	157	33	0	0	132	0	0
Grp Sat Flow(s),veh/h/ln	1245	0	1688	1817	0	1674	1708	0	0	1609	0	0
Q Serve(g_s), s	5.5	0.0	4.4	0.0	0.0	1.3	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	4.4	1.3	0.0	1.3	0.4	0.0	0.0	1.7	0.0	0.0
Prop In Lane	0.62		0.02	0.06		0.07	0.33		0.33	0.08		0.83
Lane Grp Cap(c), veh/h	825	0	762	993	0	756	461	0	0	407	0	0
V/C Ratio(X)	0.54	0.00	0.59	0.17	0.00	0.21	0.07	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	2837	0	3453	3733	0	3425	2731	0	0	2731	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	4.6	3.7	0.0	3.7	8.3	0.0	0.0	8.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.0	0.6	0.0	0.6	0.2	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	5.4	0.0	4.8	3.7	0.0	3.7	8.3	0.0	0.0	9.0	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		890			330			33			132	
Approach Delay, s/veh		5.1			3.7			8.3			9.0	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		7.7		14.5		7.7		14.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		35.5		45.5		35.5		45.5				
Max Q Clear Time (g_c+I1), s		2.4		8.8		3.7		3.3				
Green Ext Time (p_c), s		0.0		1.1		0.2		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				5.2								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
45: Eastside Parkway & Gigling Road

Cumulative with Eastside Parkway, PM
06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	540	10	10	10	10	10	10	350	10	10	190	270
Future Volume (veh/h)	540	10	10	10	10	10	10	350	10	10	190	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	587	11	11	11	11	11	11	380	11	11	207	206
Adj No. of Lanes	1	2	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	640	651	561	21	21	21	25	451	13	25	467	397
Arrive On Green	0.36	0.36	0.36	0.04	0.04	0.04	0.01	0.25	0.25	0.01	0.25	0.25
Sat Flow, veh/h	1774	1803	1555	577	577	577	1774	1801	52	1774	1863	1583
Grp Volume(v), veh/h	587	11	11	33	0	0	11	0	391	11	207	206
Grp Sat Flow(s),veh/h/ln	1774	1770	1588	1732	0	0	1774	0	1854	1774	1863	1583
Q Serve(g_s), s	15.0	0.2	0.2	0.9	0.0	0.0	0.3	0.0	9.5	0.3	4.4	5.3
Cycle Q Clear(g_c), s	15.0	0.2	0.2	0.9	0.0	0.0	0.3	0.0	9.5	0.3	4.4	5.3
Prop In Lane	1.00		0.98	0.33		0.33	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	640	639	573	64	0	0	25	0	464	25	467	397
V/C Ratio(X)	0.92	0.02	0.02	0.51	0.00	0.00	0.44	0.00	0.84	0.44	0.44	0.52
Avail Cap(c_a), veh/h	1877	1872	1681	821	0	0	209	0	1008	206	1009	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	9.7	9.8	22.4	0.0	0.0	23.2	0.0	16.9	23.2	15.0	15.3
Incr Delay (d2), s/veh	2.3	0.0	0.0	2.3	0.0	0.0	11.4	0.0	1.6	11.4	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.1	0.1	0.5	0.0	0.0	0.2	0.0	5.0	0.2	2.3	2.3
LnGrp Delay(d),s/veh	16.8	9.8	9.8	24.7	0.0	0.0	34.6	0.0	18.5	34.6	15.2	15.7
LnGrp LOS	B	A	A	C			C		B	C	B	B
Approach Vol, veh/h		609			33			402			424	
Approach Delay, s/veh		16.6			24.7			19.0			16.0	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	15.9		21.1	4.7	15.9		5.8				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.5	25.8		50.2	5.6	25.7		22.5				
Max Q Clear Time (g_c+1/2), s	12.3	11.5		17.0	2.3	7.3		2.9				
Green Ext Time (p_c), s	0.0	0.4		0.1	0.0	0.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	150	40	100	300	50	10	90	730	310	30	430	80
Future Volume (veh/h)	150	40	100	300	50	10	90	730	310	30	430	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	43	84	326	54	8	98	793	314	33	467	28
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	389	112	158	512	63	9	395	901	356	67	637	284
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.22	0.36	0.36	0.04	0.18	0.18
Sat Flow, veh/h	832	339	477	1145	190	28	1792	2502	990	1810	3610	1610
Grp Volume(v), veh/h	290	0	0	388	0	0	98	566	541	33	467	28
Grp Sat Flow(s),veh/h/ln	1648	0	0	1362	0	0	1792	1787	1705	1810	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	2.2	14.7	14.7	0.9	6.1	0.7
Cycle Q Clear(g_c), s	6.8	0.0	0.0	13.1	0.0	0.0	2.2	14.7	14.7	0.9	6.1	0.7
Prop In Lane	0.56		0.29	0.84		0.02	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	659	0	0	584	0	0	395	643	614	67	637	284
V/C Ratio(X)	0.44	0.00	0.00	0.66	0.00	0.00	0.25	0.88	0.88	0.50	0.73	0.10
Avail Cap(c_a), veh/h	1148	0	0	1031	0	0	395	919	877	292	1857	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	0.0	15.4	0.0	0.0	15.9	14.9	14.9	23.4	19.3	17.1
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.5	0.0	0.0	0.1	5.5	5.8	2.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	4.9	0.0	0.0	1.1	8.2	7.9	0.5	3.0	0.3
LnGrp Delay(d),s/veh	13.5	0.0	0.0	15.9	0.0	0.0	16.1	20.3	20.7	25.5	19.9	17.2
LnGrp LOS	B			B			B	C	C	C	B	B
Approach Vol, veh/h		290			388			1205			528	
Approach Delay, s/veh		13.5			15.9			20.1			20.1	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	13.2		20.9	6.3	22.3		20.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+14), s	14.2	8.1		15.1	2.9	16.7		8.8				
Green Ext Time (p_c), s	0.0	0.6		0.6	0.0	1.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue

Cumulative with Eastside Parkway, PM
 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	60	10	100	300	10	10	150	1030	490	10	490	60
Future Volume (veh/h)	60	10	100	300	10	10	150	1030	490	10	490	60
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1881	1863	1863	1863	1881	1881	1863	1863	1881	1881
Adj Flow Rate, veh/h	67	11	11	337	11	11	169	1157	524	11	551	31
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	2	1	2	2	2	1	1	2	2	1	1
Cap, veh/h	574	570	486	567	570	485	208	1410	621	25	1046	464
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.12	0.39	0.39	0.01	0.29	0.29
Sat Flow, veh/h	1398	1863	1586	1374	1863	1583	1792	3574	1573	1774	3574	1585
Grp Volume(v), veh/h	67	11	11	337	11	11	169	1157	524	11	551	31
Grp Sat Flow(s),veh/h/ln	1398	1863	1586	1374	1863	1583	1792	1787	1573	1774	1787	1585
Q Serve(g_s), s	1.7	0.2	0.2	10.7	0.2	0.2	4.4	13.7	14.3	0.3	6.1	0.7
Cycle Q Clear(g_c), s	1.9	0.2	0.2	10.9	0.2	0.2	4.4	13.7	14.3	0.3	6.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	574	570	486	567	570	485	208	1410	621	25	1046	464
V/C Ratio(X)	0.12	0.02	0.02	0.59	0.02	0.02	0.81	0.82	0.84	0.44	0.53	0.07
Avail Cap(c_a), veh/h	1489	1790	1524	1466	1790	1521	208	2680	1180	206	2680	1189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	11.5	11.5	15.3	11.5	11.5	20.4	12.8	13.0	23.2	14.0	12.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	19.8	0.5	1.2	4.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.1	4.1	0.1	0.1	3.3	6.7	6.3	0.2	3.0	0.3
LnGrp Delay(d),s/veh	12.1	11.5	11.5	15.7	11.5	11.5	40.2	13.3	14.3	27.5	14.2	12.1
LnGrp LOS	B	B	B	B	B	B	D	B	B	C	B	B
Approach Vol, veh/h		89			359			1850			593	
Approach Delay, s/veh		12.0			15.4			16.0			14.3	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	18.4		19.0	5.2	23.2		19.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	35.5		45.5	5.5	35.5		45.5				
Max Q Clear Time (g_c+10), s	10.4	8.1		12.9	2.3	16.3		3.9				
Green Ext Time (p_c), s	0.0	0.6		0.1	0.0	1.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				15.5								
HCM 2010 LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	170	70	90	100	70	110	1180	230	40	700	170
Future Volume (veh/h)	220	170	70	90	100	70	110	1180	230	40	700	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	201	211	25	93	103	66	113	1216	225	41	722	103
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	265	278	231	105	117	75	597	1512	278	53	671	297
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.33	0.50	0.50	0.03	0.19	0.19
Sat Flow, veh/h	1792	1881	1565	634	702	450	1792	3013	553	1774	3539	1568
Grp Volume(v), veh/h	201	211	25	262	0	0	113	717	724	41	722	103
Grp Sat Flow(s),veh/h/ln	1792	1881	1565	1785	0	0	1792	1787	1780	1774	1770	1568
Q Serve(g_s), s	13.5	13.5	1.7	17.9	0.0	0.0	5.6	41.8	42.7	2.9	23.7	7.1
Cycle Q Clear(g_c), s	13.5	13.5	1.7	17.9	0.0	0.0	5.6	41.8	42.7	2.9	23.7	7.1
Prop In Lane	1.00		1.00	0.35		0.25	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	265	278	231	297	0	0	597	897	893	53	671	297
V/C Ratio(X)	0.76	0.76	0.11	0.88	0.00	0.00	0.19	0.80	0.81	0.78	1.08	0.35
Avail Cap(c_a), veh/h	573	602	501	357	0	0	597	897	893	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.1	51.1	46.1	50.9	0.0	0.0	29.7	25.9	26.1	60.2	50.7	43.9
Incr Delay (d2), s/veh	3.1	3.0	0.1	20.8	0.0	0.0	0.1	7.4	7.9	8.8	57.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	7.2	0.8	10.6	0.0	0.0	2.8	22.4	22.9	1.5	16.9	3.4
LnGrp Delay(d),s/veh	54.2	54.1	46.3	71.7	0.0	0.0	29.7	33.3	34.0	69.1	107.6	47.1
LnGrp LOS	D	D	D	E			C	C	C	E	F	D
Approach Vol, veh/h		437			262			1554			866	
Approach Delay, s/veh		53.7			71.7			33.4			98.6	
Approach LOS		D			E			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	68.0		23.2	46.9	29.0		25.9				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	13	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+14), s	14.5	44.7		15.5	7.6	25.7		19.9				
Green Ext Time (p_c), s	0.0	0.0		1.9	0.1	0.0		0.8				

Intersection Summary

HCM 2010 Ctrl Delay	57.6
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway, PM
 49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp 06/12/10 Monterey Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗	↖		↗		↕	↗		↕	
Traffic Volume (veh/h)	10	150	120	280	0	130	0	120	300	10	10	0
Future Volume (veh/h)	10	150	120	280	0	130	0	120	300	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	11	165	14	308	0	69	0	132	51	11	11	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	181	2850	1323	0	0	0	0	164	139	57	43	0
Arrive On Green	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.00
Sat Flow, veh/h	216	3406	1580				0	1881	1599	155	496	0
Grp Volume(v), veh/h	94	82	14		0.0		0	132	51	22	0	0
Grp Sat Flow(s),veh/h/ln	1852	1770	1580				0	1881	1599	651	0	0
Q Serve(g_s), s	1.1	1.0	0.2				0.0	8.6	3.8	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.1	1.0	0.2				0.0	8.6	3.8	8.7	0.0	0.0
Prop In Lane	0.12		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1550	1481	1323				0	164	139	100	0	0
V/C Ratio(X)	0.06	0.06	0.01				0.00	0.81	0.37	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1550	1481	1323				0	271	230	125	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.8	1.7	1.7				0.0	56.0	53.8	52.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.5	0.6	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.1				0.0	4.6	1.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.8	1.7	1.7				0.0	59.5	54.4	53.3	0.0	0.0
LnGrp LOS	A	A	A					E	D	D		
Approach Vol, veh/h		190						183			22	
Approach Delay, s/veh		1.7						58.1			53.3	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				15.1		109.9		15.1				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.6		3.1		10.7				
Green Ext Time (p_c), s				0.3		0.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			30.7									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	410	10	250	130	240	0	0	520	170
Future Volume (veh/h)	0	0	0	410	10	250	130	240	0	0	520	170
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				436	11	84	138	255	0	0	553	171
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				485	12	443	172	1091	0	0	606	187
Arrive On Green				0.28	0.28	0.28	0.03	0.20	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1732	44	1581	1757	1845	0	0	1340	414
Grp Volume(v), veh/h				447	0	84	138	255	0	0	0	724
Grp Sat Flow(s),veh/h/ln				1776	0	1581	1757	1845	0	0	0	1754
Q Serve(g_s), s				20.6	0.0	3.4	6.6	9.9	0.0	0.0	0.0	32.7
Cycle Q Clear(g_c), s				20.6	0.0	3.4	6.6	9.9	0.0	0.0	0.0	32.7
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				498	0	443	172	1091	0	0	0	793
V/C Ratio(X)				0.90	0.00	0.19	0.80	0.23	0.00	0.00	0.00	0.91
Avail Cap(c_a), veh/h				564	0	502	248	1091	0	0	0	793
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.4	0.0	23.3	40.3	18.0	0.0	0.0	0.0	21.7
Incr Delay (d2), s/veh				15.9	0.0	0.2	6.8	0.5	0.0	0.0	0.0	16.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	1.5	3.6	5.2	0.0	0.0	0.0	19.4
LnGrp Delay(d),s/veh				45.4	0.0	23.5	47.1	18.4	0.0	0.0	0.0	38.4
LnGrp LOS				D		C	D	B				D
Approach Vol, veh/h					531			393			724	
Approach Delay, s/veh					41.9			28.5			38.4	
Approach LOS					D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.8	44.4		28.7		56.3						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+1.0), s	1.6	34.7		22.6		11.9						
Green Ext Time (p_c), s	0.0	0.0		1.2		1.3						
Intersection Summary												
HCM 2010 Ctrl Delay				37.2								
HCM 2010 LOS				D								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↖	↑	
Traffic Volume (veh/h)	100	10	180	0	0	0	0	300	320	260	670	0
Future Volume (veh/h)	100	10	180	0	0	0	0	300	320	260	670	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	106	11	12				0	319	201	277	713	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	144	15	141				0	1038	882	307	1430	0
Arrive On Green	0.09	0.09	0.09				0.00	0.56	0.56	0.35	1.00	0.00
Sat Flow, veh/h	1614	168	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	117	0	12				0	319	201	277	713	0
Grp Sat Flow(s),veh/h/ln	1782	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	5.4	0.0	0.6				0.0	7.8	5.5	12.8	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	0.6				0.0	7.8	5.5	12.8	0.0	0.0
Prop In Lane	0.91		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	159	0	141				0	1038	882	307	1430	0
V/C Ratio(X)	0.74	0.00	0.08				0.00	0.31	0.23	0.90	0.50	0.00
Avail Cap(c_a), veh/h	524	0	466				0	1038	882	348	1430	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.15	0.15	0.00
Uniform Delay (d), s/veh	37.7	0.0	35.5				0.0	9.8	9.3	26.8	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	0.3				0.0	0.8	0.6	5.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.3				0.0	4.1	2.5	6.5	0.1	0.0
LnGrp Delay(d),s/veh	44.2	0.0	35.8				0.0	10.6	9.9	31.8	0.2	0.0
LnGrp LOS	D		D					B	A	C	A	
Approach Vol, veh/h		129						520			990	
Approach Delay, s/veh		43.4						10.3			9.0	
Approach LOS		D						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.5			18.7	53.8		12.5				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			14.8	9.8		7.4				
Green Ext Time (p_c), s		4.9			0.2	2.1		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			12.1									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	220	30	70	40	30	90
Future Vol, veh/h	220	30	70	40	30	90
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	239	33	76	43	33	98
Number of Lanes	1	1	1	1	1	1




















Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.8	8.8	8.4
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	90	220	30	70	40
LT Vol	30	0	0	0	70	0
Through Vol	0	0	220	0	0	40
RT Vol	0	90	0	30	0	0
Lane Flow Rate	33	98	239	33	76	43
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.054	0.13	0.331	0.039	0.119	0.062
Departure Headway (Hd)	5.992	4.786	4.982	4.279	5.607	5.104
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	598	748	722	836	640	702
Service Time	3.725	2.519	2.71	2.007	3.339	2.836
HCM Lane V/C Ratio	0.055	0.131	0.331	0.039	0.119	0.061
HCM Control Delay	9.1	8.2	10.2	7.2	9.1	8.2
HCM Lane LOS	A	A	B	A	A	A
HCM 95th-tile Q	0.2	0.4	1.4	0.1	0.4	0.2

Intersection				
Intersection Delay, s/veh	6.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	295	228	66	141
Demand Flow Rate, veh/h	304	230	66	144
Vehicles Circulating, veh/h	129	293	373	74
Vehicles Exiting, veh/h	89	146	60	449
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.9	7.3	5.5	4.8
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	304	230	66	144
Cap Entry Lane, veh/h	993	843	778	1049
Entry HV Adj Factor	0.970	0.990	1.000	0.976
Flow Entry, veh/h	295	228	66	141
Cap Entry, veh/h	964	834	778	1025
V/C Ratio	0.306	0.273	0.085	0.137
Control Delay, s/veh	6.9	7.3	5.5	4.8
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	0

Intersection			
Intersection Delay, s/veh	14.7		
Intersection LOS	B		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	515	567	526
Demand Flow Rate, veh/h	525	578	526
Vehicles Circulating, veh/h	368	62	378
Vehicles Exiting, veh/h	272	842	515
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	17.1	10.2	17.3
Approach LOS	C	B	C
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	525	578	526
Cap Entry Lane, veh/h	782	1062	774
Entry HV Adj Factor	0.980	0.981	1.000
Flow Entry, veh/h	515	567	526
Cap Entry, veh/h	767	1042	774
V/C Ratio	0.671	0.544	0.679
Control Delay, s/veh	17.1	10.2	17.3
LOS	C	B	C
95th %tile Queue, veh	5	3	5

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 1: Del Monte Boulevard & Reindollar Avenue 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	450	0	420	10	650	120	410	1180	0
Future Volume (veh/h)	0	0	0	450	0	420	10	650	120	410	1180	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1863	1863	1845	1845	0
Adj Flow Rate, veh/h				468	54	429	11	730	68	461	1326	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				0	0	0	2	2	2	3	3	0
Cap, veh/h				573	58	459	24	900	401	498	1839	0
Arrive On Green				0.32	0.32	0.32	0.01	0.25	0.25	0.28	0.52	0.00
Sat Flow, veh/h				1810	183	1451	1774	3539	1577	1757	3597	0
Grp Volume(v), veh/h				468	0	483	11	730	68	461	1326	0
Grp Sat Flow(s),veh/h/ln				1810	0	1634	1774	1770	1577	1757	1752	0
Q Serve(g_s), s				22.1	0.0	26.6	0.6	18.0	3.1	23.6	26.8	0.0
Cycle Q Clear(g_c), s				22.1	0.0	26.6	0.6	18.0	3.1	23.6	26.8	0.0
Prop In Lane				1.00		0.89	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				573	0	517	24	900	401	498	1839	0
V/C Ratio(X)				0.82	0.00	0.93	0.47	0.81	0.17	0.92	0.72	0.00
Avail Cap(c_a), veh/h				585	0	529	574	1145	510	568	1839	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				29.2	0.0	30.8	45.4	32.5	27.0	32.3	16.9	0.0
Incr Delay (d2), s/veh				8.7	0.0	23.7	13.6	3.6	0.2	19.8	1.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.4	0.0	15.3	0.4	9.2	1.4	14.1	13.3	0.0
LnGrp Delay(d),s/veh				37.9	0.0	54.4	59.0	36.1	27.2	52.0	18.3	0.0
LnGrp LOS				D		D	E	D	C	D	B	
Approach Vol, veh/h					951			809			1787	
Approach Delay, s/veh					46.3			35.6			27.0	
Approach LOS					D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.7	53.7			29.8	28.6		34.4				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.6	28.8			25.6	20.0		28.6				
Green Ext Time (p_c), s	0.0	0.9			0.7	3.6		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				34.1								
HCM 2010 LOS				C								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 2: 2nd Avenue & Patton Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Future Volume (veh/h)	50	90	60	30	90	100	70	220	100	90	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	98	65	33	98	109	76	239	109	98	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	247	164	67	177	197	121	330	151	139	407	101
Arrive On Green	0.05	0.24	0.24	0.04	0.22	0.22	0.07	0.27	0.27	0.08	0.28	0.28
Sat Flow, veh/h	1774	1046	694	1774	807	897	1774	1212	553	1774	1441	359
Grp Volume(v), veh/h	54	0	163	33	0	207	76	0	348	98	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1740	1774	0	1704	1774	0	1765	1774	0	1799
Q Serve(g_s), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Cycle Q Clear(g_c), s	1.3	0.0	3.6	0.8	0.0	4.9	1.9	0.0	8.1	2.4	0.0	5.8
Prop In Lane	1.00		0.40	1.00		0.53	1.00		0.31	1.00		0.20
Lane Grp Cap(c), veh/h	97	0	411	67	0	374	121	0	481	139	0	509
V/C Ratio(X)	0.56	0.00	0.40	0.50	0.00	0.55	0.63	0.00	0.72	0.71	0.00	0.53
Avail Cap(c_a), veh/h	235	0	1364	235	0	1336	235	0	1384	235	0	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	14.6	21.4	0.0	15.7	20.5	0.0	14.9	20.4	0.0	13.7
Incr Delay (d2), s/veh	5.0	0.0	0.6	5.6	0.0	1.3	5.3	0.0	2.1	6.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.8	0.5	0.0	2.4	1.1	0.0	4.1	1.4	0.0	3.0
LnGrp Delay(d),s/veh	25.9	0.0	15.2	27.0	0.0	17.0	25.9	0.0	17.0	26.8	0.0	14.6
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		217			240			424			369	
Approach Delay, s/veh		17.8			18.4			18.6			17.8	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.8	5.7	15.2	7.1	17.3	6.5	14.4				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	6.0	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	14.4	10.1	2.8	5.6	3.9	7.8	3.3	6.9				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.0	0.0	1.7	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				18.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1040	0	0	0	0	0	1000	10	0
Future Volume (veh/h)	0	0	0	1040	0	0	0	0	0	1000	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1845	0				1900	1845	0
Adj Flow Rate, veh/h				1143	0	0				1099	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				3	3	0				3	3	0
Cap, veh/h				996	0	0				658	7	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1757	0	0				1740	17	0
Grp Volume(v), veh/h				1143	0	0				1110	0	0
Grp Sat Flow(s),veh/h/ln				1757	0	0				1758	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				996	0	0				664	0	0
V/C Ratio(X)				1.15	0.00	0.00				1.67	0.00	0.00
Avail Cap(c_a), veh/h				996	0	0				664	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				78.5	0.0	0.0				308.7	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				65.1	0.0	0.0				85.9	0.0	0.0
LnGrp Delay(d),s/veh				112.9	0.0	0.0				358.1	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1143						1110	
Approach Delay, s/veh					112.9						358.1	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				233.7								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↑	↗		↕	↗			
Traffic Vol, veh/h	10	1010	0	0	990	470	10	10	960	0	0	0
Future Vol, veh/h	10	1010	0	0	990	470	10	10	960	0	0	0
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	10	1041	0	0	1021	485	10	10	990	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1021	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.227	-	-
Pot Cap-1 Maneuver	676	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	676	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.1	0	102.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	56	-	676	-	-
HCM Lane V/C Ratio	0.368	-	0.015	-	-
HCM Control Delay (s)	102.8	0	10.4	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.3	-	0	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 5: 2nd Avenue & Imjin Parkway 06/11/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1050	910	460	860	120	420	90	200	50	100	210
Future Volume (veh/h)	180	1050	910	460	860	120	420	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	1071	710	469	878	122	429	92	82	51	102	209
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	220	1202	538	537	1160	161	497	455	386	91	276	246
Arrive On Green	0.12	0.34	0.34	0.16	0.37	0.37	0.15	0.25	0.25	0.05	0.15	0.15
Sat Flow, veh/h	1774	3539	1583	3442	3122	434	3343	1810	1536	1810	1805	1612
Grp Volume(v), veh/h	184	1071	710	469	498	502	429	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1721	1770	1786	1672	1810	1536	1810	1805	1612
Q Serve(g_s), s	8.9	25.3	30.0	11.8	21.7	21.7	11.1	3.5	3.7	2.4	4.5	11.1
Cycle Q Clear(g_c), s	8.9	25.3	30.0	11.8	21.7	21.7	11.1	3.5	3.7	2.4	4.5	11.1
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1202	538	537	658	664	497	455	386	91	276	246
V/C Ratio(X)	0.83	0.89	1.32	0.87	0.76	0.76	0.86	0.20	0.21	0.56	0.37	0.85
Avail Cap(c_a), veh/h	301	1202	538	585	658	664	757	455	386	205	429	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	27.6	29.2	36.4	24.3	24.3	36.7	26.1	26.1	41.0	33.6	36.4
Incr Delay (d2), s/veh	10.3	8.3	156.7	12.1	4.5	4.5	4.3	0.1	0.1	2.0	0.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	13.7	36.5	6.5	11.3	11.4	5.4	1.8	1.6	1.3	2.3	5.4
LnGrp Delay(d),s/veh	48.1	35.9	185.8	48.5	28.8	28.7	41.0	26.2	26.2	43.0	33.9	42.5
LnGrp LOS	D	D	F	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		1965			1469			603			362	
Approach Delay, s/veh		91.2			35.1			36.8			40.2	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.3	35.3	16.6	18.1	15.5	38.1	7.9	26.8				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	13.8	32.0	13.1	13.1	10.9	23.7	4.4	5.7				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.3	0.0	0.9	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			60.8									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 6: 3rd Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	900	220	340	1300	30	130	10	60	10	10	40
Future Volume (veh/h)	50	900	220	340	1300	30	130	10	60	10	10	40
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1810	1810	1900	1863	1863	1900
Adj Flow Rate, veh/h	52	938	200	354	1354	30	135	10	8	10	10	7
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	2	2	2
Cap, veh/h	63	1066	227	398	1969	44	324	135	108	328	147	103
Arrive On Green	0.04	0.37	0.37	0.22	0.56	0.56	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	2904	618	1774	3540	78	1345	930	744	1384	1020	714
Grp Volume(v), veh/h	52	571	567	354	676	708	135	0	18	10	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1753	1774	1770	1849	1345	0	1675	1384	0	1733
Q Serve(g_s), s	1.5	15.4	15.5	9.9	14.1	14.1	4.9	0.0	0.5	0.3	0.0	0.4
Cycle Q Clear(g_c), s	1.5	15.4	15.5	9.9	14.1	14.1	5.4	0.0	0.5	0.8	0.0	0.4
Prop In Lane	1.00		0.35	1.00		0.04	1.00		0.44	1.00		0.41
Lane Grp Cap(c), veh/h	63	650	644	398	984	1028	324	0	242	328	0	251
V/C Ratio(X)	0.82	0.88	0.88	0.89	0.69	0.69	0.42	0.00	0.07	0.03	0.00	0.07
Avail Cap(c_a), veh/h	398	1123	1112	398	1123	1173	852	0	899	871	0	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	15.1	15.2	19.2	8.2	8.2	21.2	0.0	18.9	19.3	0.0	18.9
Incr Delay (d2), s/veh	9.4	1.9	1.9	20.4	1.1	1.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.8	7.7	7.1	7.1	7.4	1.9	0.0	0.2	0.1	0.0	0.2
LnGrp Delay(d),s/veh	33.9	17.0	17.1	39.6	9.2	9.2	21.6	0.0	19.0	19.3	0.0	19.0
LnGrp LOS	C	B	B	D	A	A	C		B	B		B
Approach Vol, veh/h		1190			1738			153			27	
Approach Delay, s/veh		17.8			15.4			21.3			19.1	
Approach LOS		B			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	24.3		11.9	5.3	34.0		11.9				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	1.5	17.5		2.8	3.5	16.1		7.4				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	1.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				16.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 7: 4th Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	990	20	10	1590	10	10	10	10	10	10	10
Future Volume (veh/h)	10	990	20	10	1590	10	10	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1267	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1031	20	10	1656	9	10	10	9	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	50	50	50	0	0	0
Cap, veh/h	14	1831	36	14	1861	10	172	20	18	181	30	30
Arrive On Green	0.01	0.52	0.52	0.01	0.52	0.52	0.05	0.05	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1774	3551	69	1774	3609	20	390	390	351	579	579	579
Grp Volume(v), veh/h	10	514	537	10	812	853	29	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1770	1859	1130	0	0	1736	0	0
Q Serve(g_s), s	0.2	6.3	6.3	0.2	13.0	13.0	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	6.3	6.3	0.2	13.0	13.0	0.8	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.34		0.31	0.33		0.33
Lane Grp Cap(c), veh/h	14	912	954	14	912	959	210	0	0	240	0	0
V/C Ratio(X)	0.71	0.56	0.56	0.71	0.89	0.89	0.14	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	643	1812	1895	643	1812	1904	1090	0	0	1560	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.7	5.2	5.2	15.7	6.9	6.9	14.6	0.0	0.0	14.5	0.0	0.0
Incr Delay (d2), s/veh	21.1	0.2	0.2	21.1	1.2	1.2	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.0	3.2	0.2	6.4	6.7	0.2	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	36.8	5.5	5.4	36.8	8.1	8.1	14.7	0.0	0.0	14.6	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	B			B		
Approach Vol, veh/h		1061			1675			29			30	
Approach Delay, s/veh		5.7			8.3			14.7			14.6	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	21.9		6.1	3.8	21.9		6.1				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+1), s	1.2	8.3		2.5	2.2	15.0		2.8				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	1.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.4								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 8: 5th Avenue/California Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	890	20	10	1000	80	20	20	10	100	160	460
Future Volume (veh/h)	140	890	20	10	1000	80	20	20	10	100	160	460
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1900	1624	1900	1900	1881	1900
Adj Flow Rate, veh/h	147	937	19	11	1053	78	21	21	10	105	168	410
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	17	17	17	1	1	1
Cap, veh/h	186	1583	32	15	1158	86	174	152	58	135	149	323
Arrive On Green	0.10	0.44	0.44	0.01	0.35	0.35	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1792	3581	73	1774	3341	247	275	461	175	201	452	981
Grp Volume(v), veh/h	147	468	488	11	558	573	52	0	0	683	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1867	1774	1770	1819	912	0	0	1634	0	0
Q Serve(g_s), s	4.9	12.0	12.0	0.4	18.3	18.3	0.0	0.0	0.0	16.2	0.0	0.0
Cycle Q Clear(g_c), s	4.9	12.0	12.0	0.4	18.3	18.3	1.4	0.0	0.0	20.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.14	0.40		0.19	0.15		0.60
Lane Grp Cap(c), veh/h	186	790	825	15	613	630	383	0	0	606	0	0
V/C Ratio(X)	0.79	0.59	0.59	0.74	0.91	0.91	0.14	0.00	0.00	1.13	0.00	0.00
Avail Cap(c_a), veh/h	442	882	921	438	873	898	383	0	0	606	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.6	12.8	12.8	30.1	18.9	18.9	14.2	0.0	0.0	21.5	0.0	0.0
Incr Delay (d2), s/veh	2.8	0.4	0.4	23.2	8.2	8.0	0.1	0.0	0.0	76.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.9	6.2	0.3	10.2	10.5	0.6	0.0	0.0	22.9	0.0	0.0
LnGrp Delay(d),s/veh	29.4	13.3	13.2	53.2	27.1	27.0	14.2	0.0	0.0	98.3	0.0	0.0
LnGrp LOS	C	B	B	D	C	C	B			F		
Approach Vol, veh/h		1103			1142			52			683	
Approach Delay, s/veh		15.4			27.3			14.2			98.3	
Approach LOS		B			C			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	32.2		24.6	9.8	26.4		24.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	30.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1), s	12.4	14.0		22.0	6.9	20.3		3.4				
Green Ext Time (p_c), s	0.0	0.7		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			38.9									
HCM 2010 LOS			D									

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑	
Traffic Vol, veh/h	30	30	30	230	630	80
Future Vol, veh/h	30	30	30	230	630	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	33	33	250	685	87

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1045	729	772	0	-	0
Stage 1	729	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	253	423	843	-	-	-
Stage 1	477	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	423	843	-	-	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	458	-	-	-	-	-
Stage 2	739	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.7	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	843	-	309	-	-
HCM Lane V/C Ratio	0.039	-	0.211	-	-
HCM Control Delay (s)	9.4	-	19.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 10: Imjin Road & Imjin Parkway 06/11/2019

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↙	↑↑	↙↘	↗		
Traffic Volume (veh/h)	790	230	420	990	110	120		
Future Volume (veh/h)	790	230	420	990	110	120		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	832	229	442	1042	158	81		
Adj No. of Lanes	2	0	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	938	258	495	2554	302	135		
Arrive On Green	0.34	0.34	0.28	0.73	0.09	0.09		
Sat Flow, veh/h	2837	755	1757	3597	3447	1538		
Grp Volume(v), veh/h	536	525	442	1042	158	81		
Grp Sat Flow(s),veh/h/ln	1770	1730	1757	1752	1723	1538		
Q Serve(g_s), s	14.5	14.5	12.2	5.8	2.2	2.6		
Cycle Q Clear(g_c), s	14.5	14.5	12.2	5.8	2.2	2.6		
Prop In Lane		0.44	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	605	591	495	2554	302	135		
V/C Ratio(X)	0.89	0.89	0.89	0.41	0.52	0.60		
Avail Cap(c_a), veh/h	1049	1025	694	2554	1498	668		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.7	15.7	17.4	2.7	22.1	22.2		
Incr Delay (d2), s/veh	2.2	2.3	8.5	0.0	0.5	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.4	7.2	7.1	2.8	1.1	1.1		
LnGrp Delay(d),s/veh	18.0	18.1	25.9	2.7	22.6	23.8		
LnGrp LOS	B	B	C	A	C	C		
Approach Vol, veh/h	1061			1484	239			
Approach Delay, s/veh	18.0			9.6	23.0			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.6	22.6				42.2		8.4
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	14.2	16.5				7.8		4.6
Green Ext Time (p_c), s	0.1	0.8				1.2		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			14.0					
HCM 2010 LOS			B					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 11: Abrams Drive & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖↗	↖↗		↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	50	630	70	80	970	70	290	30	160	90	50	250
Future Volume (veh/h)	50	630	70	80	970	70	290	30	160	90	50	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1863	1863	1900	1845	1845	1845	1863	1863	1863
Adj Flow Rate, veh/h	54	677	63	86	1043	70	312	32	0	97	54	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	3	3	3	2	2	2
Cap, veh/h	183	1721	160	146	1696	114	429	509	433	451	514	437
Arrive On Green	0.05	0.52	0.52	0.04	0.50	0.50	0.28	0.28	0.00	0.28	0.28	0.00
Sat Flow, veh/h	3476	3306	307	3442	3366	226	1330	1845	1568	1370	1863	1583
Grp Volume(v), veh/h	54	366	374	86	548	565	312	32	0	97	54	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1827	1721	1770	1823	1330	1845	1568	1370	1863	1583
Q Serve(g_s), s	1.2	9.8	9.8	1.9	17.7	17.7	18.1	1.0	0.0	4.5	1.7	0.0
Cycle Q Clear(g_c), s	1.2	9.8	9.8	1.9	17.7	17.7	19.9	1.0	0.0	5.5	1.7	0.0
Prop In Lane	1.00		0.17	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	930	951	146	892	918	429	509	433	451	514	437
V/C Ratio(X)	0.30	0.39	0.39	0.59	0.61	0.62	0.73	0.06	0.00	0.21	0.11	0.00
Avail Cap(c_a), veh/h	876	1125	1150	867	1114	1148	565	697	592	591	704	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.2	11.5	11.5	37.3	14.2	14.2	28.8	21.2	0.0	23.2	21.4	0.0
Incr Delay (d2), s/veh	0.3	0.1	0.1	1.4	0.3	0.3	1.9	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	4.9	1.0	8.6	8.9	6.9	0.5	0.0	1.7	0.9	0.0
LnGrp Delay(d),s/veh	36.5	11.6	11.6	38.7	14.4	14.4	30.8	21.2	0.0	23.3	21.5	0.0
LnGrp LOS	D	B	B	D	B	B	C	C		C	C	
Approach Vol, veh/h		794			1199			344			151	
Approach Delay, s/veh		13.3			16.2			29.9			22.6	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	46.6		25.9	8.2	45.3		25.9				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+13), s	13.5	11.8		7.5	3.2	19.7		21.9				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			17.5									
HCM 2010 LOS			B									

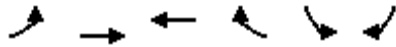
HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 12: Reservation Road & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	50	670	10	20	30	950	880	20	60	590	90
Future Volume (veh/h)	190	50	670	10	20	30	950	880	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	204	54	306	11	22	19	1022	946	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	378	205	1200	57	60	51	1105	2057	919	124	1048	462
Arrive On Green	0.11	0.11	0.11	0.04	0.04	0.04	0.32	0.58	0.58	0.04	0.30	0.30
Sat Flow, veh/h	3442	1863	2774	1560	1638	1383	3442	3539	1581	3442	3539	1558
Grp Volume(v), veh/h	204	54	306	11	22	19	1022	946	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1387	1560	1638	1383	1721	1770	1581	1721	1770	1558
Q Serve(g_s), s	4.9	2.3	6.2	0.6	1.2	1.2	25.3	13.5	0.4	1.6	13.5	1.4
Cycle Q Clear(g_c), s	4.9	2.3	6.2	0.6	1.2	1.2	25.3	13.5	0.4	1.6	13.5	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	378	205	1200	57	60	51	1105	2057	919	124	1048	462
V/C Ratio(X)	0.54	0.26	0.26	0.19	0.37	0.37	0.92	0.46	0.02	0.52	0.60	0.07
Avail Cap(c_a), veh/h	1367	740	1997	549	576	486	1367	2057	919	781	2409	1061
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	36.0	16.0	41.2	41.5	41.5	28.9	10.5	7.8	41.7	26.6	22.3
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.6	1.4	1.7	8.5	0.4	0.0	1.3	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.2	2.4	0.3	0.5	0.5	13.2	6.7	0.2	0.8	6.8	0.6
LnGrp Delay(d),s/veh	37.6	36.2	16.1	41.8	42.8	43.2	37.4	11.0	7.8	43.0	28.1	22.5
LnGrp LOS	D	D	B	D	D	D	D	B	A	D	C	C
Approach Vol, veh/h		564			52			1984			733	
Approach Delay, s/veh		25.8			42.7			24.6			29.2	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.4	32.3		8.2	7.3	57.4		15.2				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Y), s	27.3	15.5		3.2	3.6	15.5		8.2				
Green Ext Time (p_c), s	1.0	10.6		0.1	0.0	15.5		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			26.1									
HCM 2010 LOS			C									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 13: Reservation Road & Blanco Road 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖↖	↑↑	↑	↑	↘↘	↘↘		
Traffic Volume (veh/h)	990	300	500	40	40	1340		
Future Volume (veh/h)	990	300	500	40	40	1340		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1845	1845		
Adj Flow Rate, veh/h	1065	323	538	24	43	0		
Adj No. of Lanes	2	2	1	1	2	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	3	3	3	3		
Cap, veh/h	1182	2811	645	548	120	97		
Arrive On Green	0.34	0.79	0.35	0.35	0.04	0.00		
Sat Flow, veh/h	3442	3632	1845	1568	3408	2760		
Grp Volume(v), veh/h	1065	323	538	24	43	0		
Grp Sat Flow(s),veh/h/ln	1721	1770	1845	1568	1704	1380		
Q Serve(g_s), s	16.0	1.1	14.6	0.6	0.7	0.0		
Cycle Q Clear(g_c), s	16.0	1.1	14.6	0.6	0.7	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	1182	2811	645	548	120	97		
V/C Ratio(X)	0.90	0.11	0.83	0.04	0.36	0.00		
Avail Cap(c_a), veh/h	2527	3899	2032	1727	1689	1368		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	17.0	1.3	16.3	11.7	25.7	0.0		
Incr Delay (d2), s/veh	1.1	0.0	2.2	0.0	0.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.7	0.5	7.7	0.2	0.3	0.0		
LnGrp Delay(d),s/veh	18.1	1.3	18.4	11.7	26.4	0.0		
LnGrp LOS	B	A	B	B	C			
Approach Vol, veh/h		1388	562		43			
Approach Delay, s/veh		14.2	18.1		26.4			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		49.1		5.4	24.2	24.9		
Change Period (Y+Rc), s		5.8		3.5	5.5	5.8		
Max Green Setting (Gmax), s		60.0		27.0	40.0	60.0		
Max Q Clear Time (g_c+I1), s		3.1		2.7	18.0	16.6		
Green Ext Time (p_c), s		1.5		0.0	0.7	2.5		
Intersection Summary								
HCM 2010 Ctrl Delay			15.6					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 14: Reservation Road & Inter-Garrison Road 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	610	900	460	260	160		
Future Volume (veh/h)	110	610	900	460	260	160		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	117	610	957	489	277	154		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	550	913	478	1912	456	247		
Arrive On Green	0.31	0.31	0.27	0.54	0.21	0.21		
Sat Flow, veh/h	1757	1568	1774	3632	2291	1188		
Grp Volume(v), veh/h	117	610	957	489	219	212		
Grp Sat Flow(s),veh/h/ln	1757	1568	1774	1770	1752	1635		
Q Serve(g_s), s	3.6	19.7	20.0	5.5	8.4	8.8		
Cycle Q Clear(g_c), s	3.6	19.7	20.0	5.5	8.4	8.8		
Prop In Lane	1.00	1.00	1.00			0.73		
Lane Grp Cap(c), veh/h	550	913	478	1912	364	339		
V/C Ratio(X)	0.21	0.67	2.00	0.26	0.60	0.62		
Avail Cap(c_a), veh/h	639	993	478	2861	1416	1322		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.8	10.6	27.1	9.1	26.6	26.8		
Incr Delay (d2), s/veh	0.2	1.6	458.4	0.1	3.0	3.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.8	8.9	70.6	2.7	4.4	4.3		
LnGrp Delay(d),s/veh	19.0	12.2	485.5	9.2	29.6	30.3		
LnGrp LOS	B	B	F	A	C	C		
Approach Vol, veh/h	727			1446	431			
Approach Delay, s/veh	13.2			324.4	29.9			
Approach LOS	B			F	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	24.7	21.8				46.5		27.7
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Y), s	22.6	10.8				7.5		21.7
Green Ext Time (p_c), s	0.0	4.6				5.8		1.5
Intersection Summary								
HCM 2010 Ctrl Delay			188.8					
HCM 2010 LOS			F					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 15: 2nd Avenue & 9th Street 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	10	10	10	260	10	20	20	400	30	40	880	10
Future Volume (veh/h)	10	10	10	260	10	20	20	400	30	40	880	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	11	-24	277	11	20	21	426	27	43	936	4
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	322	286	453	520	15	27	46	1303	82	81	1453	6
Arrive On Green	0.28	0.28	0.00	0.28	0.28	0.28	0.03	0.38	0.38	0.05	0.40	0.40
Sat Flow, veh/h	728	1009	1599	1318	52	95	1792	3413	216	1774	3614	15
Grp Volume(v), veh/h	22	0	-24	308	0	0	21	222	231	43	458	482
Grp Sat Flow(s),veh/h/ln	1737	0	1599	1466	0	0	1792	1787	1841	1774	1770	1860
Q Serve(g_s), s	0.0	0.0	0.0	8.5	0.0	0.0	0.5	4.1	4.1	1.1	9.8	9.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	8.9	0.0	0.0	0.5	4.1	4.1	1.1	9.8	9.8
Prop In Lane	0.50		1.00	0.90		0.06	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	607	0	453	561	0	0	46	682	703	81	712	748
V/C Ratio(X)	0.04	0.00	-0.05	0.55	0.00	0.00	0.46	0.33	0.33	0.53	0.64	0.64
Avail Cap(c_a), veh/h	1180	0	1028	1085	0	0	441	1723	1775	437	1706	1793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	0.0	15.1	0.0	0.0	22.4	10.2	10.2	21.8	11.3	11.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.8	0.0	0.0	7.0	0.3	0.3	5.3	1.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	3.7	0.0	0.0	0.4	2.0	2.1	0.7	4.9	5.1
LnGrp Delay(d),s/veh	12.2	0.0	0.0	16.0	0.0	0.0	29.4	10.5	10.5	27.0	12.2	12.2
LnGrp LOS	B			B			C	B	B	C	B	B
Approach Vol, veh/h		-2			308			474			983	
Approach Delay, s/veh		-133.8			16.0			11.3			12.9	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.2	4.7	23.8		18.2	5.6	22.8				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		30.0	11.5	45.0		30.0	11.5	45.0				
Max Q Clear Time (g_c+I1), s		2.4	2.5	11.8		10.9	3.1	6.1				
Green Ext Time (p_c), s		0.1	0.0	6.7		1.6	0.0	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay			13.2									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 16: 2nd Avenue & 8th Street 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	230	40	480	130	80	920		
Future Volume (veh/h)	230	40	480	130	80	920		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1583	1583	1863	1900	1881	1881		
Adj Flow Rate, veh/h	242	26	505	121	84	968		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	20	20	2	2	1	1		
Cap, veh/h	321	286	917	219	143	1796		
Arrive On Green	0.21	0.21	0.32	0.32	0.08	0.50		
Sat Flow, veh/h	1508	1346	2930	676	1792	3668		
Grp Volume(v), veh/h	242	26	314	312	84	968		
Grp Sat Flow(s),veh/h/ln	1508	1346	1770	1743	1792	1787		
Q Serve(g_s), s	5.3	0.5	5.1	5.2	1.6	6.5		
Cycle Q Clear(g_c), s	5.3	0.5	5.1	5.2	1.6	6.5		
Prop In Lane	1.00	1.00		0.39	1.00			
Lane Grp Cap(c), veh/h	321	286	572	563	143	1796		
V/C Ratio(X)	0.75	0.09	0.55	0.55	0.59	0.54		
Avail Cap(c_a), veh/h	1288	1150	2268	2234	587	6107		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.0	11.1	9.8	9.8	15.6	6.0		
Incr Delay (d2), s/veh	3.6	0.1	0.8	0.9	3.8	0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.5	0.5	2.6	2.6	0.9	3.2		
LnGrp Delay(d),s/veh	16.6	11.2	10.6	10.6	19.4	6.2		
LnGrp LOS	B	B	B	B	B	A		
Approach Vol, veh/h	268		626			1052		
Approach Delay, s/veh	16.0		10.6			7.3		
Approach LOS	B		B			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.6		12.5	6.3	16.3
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				8.5		7.3	3.6	7.2
Green Ext Time (p_c), s				8.5		0.8	0.1	4.2
Intersection Summary								
HCM 2010 Ctrl Delay			9.6					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 19: 2nd Avenue & Inter-Garrison Road 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	30	30	620	60	30	1140		
Future Volume (veh/h)	30	30	620	60	30	1140		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1881	1881		
Adj Flow Rate, veh/h	32	8	667	57	32	1226		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	1	1	1	1		
Cap, veh/h	167	149	1573	134	69	2192		
Arrive On Green	0.09	0.09	0.47	0.47	0.04	0.61		
Sat Flow, veh/h	1810	1615	3428	285	1792	3668		
Grp Volume(v), veh/h	32	8	357	367	32	1226		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1831	1792	1787		
Q Serve(g_s), s	0.6	0.2	4.5	4.5	0.6	6.9		
Cycle Q Clear(g_c), s	0.6	0.2	4.5	4.5	0.6	6.9		
Prop In Lane	1.00	1.00		0.16	1.00			
Lane Grp Cap(c), veh/h	167	149	843	864	69	2192		
V/C Ratio(X)	0.19	0.05	0.42	0.42	0.47	0.56		
Avail Cap(c_a), veh/h	1863	1663	2103	2155	606	5783		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.2	14.1	5.9	5.9	16.0	3.9		
Incr Delay (d2), s/veh	0.5	0.1	0.3	0.3	4.8	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.1	2.3	2.3	0.4	3.3		
LnGrp Delay(d),s/veh	14.8	14.2	6.3	6.3	20.8	4.1		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	40		724			1258		
Approach Delay, s/veh	14.7		6.3			4.5		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.8		8.1	4.8	21.0
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				8.9		2.6	2.6	6.5
Green Ext Time (p_c), s				12.0		0.1	0.0	4.8
Intersection Summary								
HCM 2010 Ctrl Delay			5.3					
HCM 2010 LOS			A					

Intersection

Intersection Delay, s/veh 10.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	20	10	70	10	30	20	180	100	30	160	10
Future Vol, veh/h	10	20	10	70	10	30	20	180	100	30	160	10
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	6	6	6	2	2	2	4	4	4	0	0	0
Mvmt Flow	12	24	12	82	12	35	24	212	118	35	188	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.6	11.2	10
HCM LOS	A	A	B	A

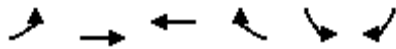
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	25%	64%	15%
Vol Thru, %	60%	50%	9%	80%
Vol Right, %	33%	25%	27%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	40	110	200
LT Vol	20	10	70	30
Through Vol	180	20	10	160
RT Vol	100	10	30	10
Lane Flow Rate	353	47	129	235
Geometry Grp	1	1	1	1
Degree of Util (X)	0.444	0.071	0.19	0.312
Departure Headway (Hd)	4.527	5.436	5.292	4.766
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	791	651	672	748
Service Time	2.582	3.534	3.376	2.828
HCM Lane V/C Ratio	0.446	0.072	0.192	0.314
HCM Control Delay	11.2	9	9.6	10
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.3	0.2	0.7	1.3

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 21: 7th Avenue/8th Street & Inter-Garrison Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	110	0	0	240	40	50	150	70	290	0	10
Future Volume (veh/h)	10	110	0	0	240	40	50	150	70	290	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	0	0	1845	1845	1900	1597	1900	1900	1776	1776
Adj Flow Rate, veh/h	12	136	0	0	296	34	62	185	53	358	0	5
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	8	8	0	0	3	3	19	19	19	7	7	7
Cap, veh/h	20	519	0	0	417	344	75	224	64	433	0	387
Arrive On Green	0.01	0.30	0.00	0.00	0.23	0.23	0.24	0.24	0.24	0.26	0.00	0.26
Sat Flow, veh/h	1675	1759	0	0	1845	1524	317	945	271	1691	0	1509
Grp Volume(v), veh/h	12	136	0	0	296	34	300	0	0	358	0	5
Grp Sat Flow(s),veh/h/ln	1675	1759	0	0	1845	1524	1533	0	0	1691	0	1509
Q Serve(g_s), s	0.4	3.6	0.0	0.0	9.1	1.1	11.4	0.0	0.0	12.3	0.0	0.2
Cycle Q Clear(g_c), s	0.4	3.6	0.0	0.0	9.1	1.1	11.4	0.0	0.0	12.3	0.0	0.2
Prop In Lane	1.00		0.00	0.00		1.00	0.21		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	20	519	0	0	417	344	363	0	0	433	0	387
V/C Ratio(X)	0.59	0.26	0.00	0.00	0.71	0.10	0.83	0.00	0.00	0.83	0.00	0.01
Avail Cap(c_a), veh/h	109	1148	0	0	978	808	575	0	0	662	0	591
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.1	16.5	0.0	0.0	21.9	18.8	22.2	0.0	0.0	21.5	0.0	17.0
Incr Delay (d2), s/veh	24.8	0.3	0.0	0.0	2.2	0.1	5.5	0.0	0.0	5.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.8	0.0	0.0	4.9	0.5	5.3	0.0	0.0	6.3	0.0	0.1
LnGrp Delay(d),s/veh	54.9	16.8	0.0	0.0	24.1	18.9	27.7	0.0	0.0	26.7	0.0	17.0
LnGrp LOS	D	B			C	B	C			C		B
Approach Vol, veh/h		148			330			300			363	
Approach Delay, s/veh		19.9			23.6			27.7			26.6	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		23.1		19.7	4.2	18.9		18.5				
Change Period (Y+Rc), s		5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s		40.0		24.0	4.0	32.5		23.0				
Max Q Clear Time (g_c+I1), s		5.6		14.3	2.4	11.1		13.4				
Green Ext Time (p_c), s		0.7		1.5	0.0	1.8		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay					25.1							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 23: Inter-Garrison Road & Abrams Drive 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	170	340	700	70	100	350		
Future Volume (veh/h)	170	340	700	70	100	350		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	200	400	824	76	118	194		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	245	1200	881	749	536	247		
Arrive On Green	0.15	0.68	0.47	0.47	0.15	0.15		
Sat Flow, veh/h	1675	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	200	400	824	76	118	194		
Grp Sat Flow(s),veh/h/ln	1675	1759	1881	1599	1738	1599		
Q Serve(g_s), s	6.0	4.9	21.5	1.4	1.5	6.1		
Cycle Q Clear(g_c), s	6.0	4.9	21.5	1.4	1.5	6.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	245	1200	881	749	536	247		
V/C Ratio(X)	0.82	0.33	0.93	0.10	0.22	0.79		
Avail Cap(c_a), veh/h	371	2033	1630	1386	2108	970		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	21.5	3.4	13.0	7.7	19.2	21.1		
Incr Delay (d2), s/veh	4.7	0.1	2.4	0.0	0.1	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.1	2.4	11.6	0.6	0.7	5.3		
LnGrp Delay(d),s/veh	26.2	3.5	15.5	7.7	19.3	23.2		
LnGrp LOS	C	A	B	A	B	C		
Approach Vol, veh/h		600	900		312			
Approach Delay, s/veh		11.0	14.8		21.7			
Approach LOS		B	B		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		40.4		11.5	11.1	29.3		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		6.9		8.1	8.0	23.5		
Green Ext Time (p_c), s		0.4		0.0	0.0	0.8		
Intersection Summary								
HCM 2010 Ctrl Delay			14.8					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 24: Inter-Garrison Road & Schoonover Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	330	60	640	540	10	60	20	380	60	100	160
Future Volume (veh/h)	70	330	60	640	540	10	60	20	380	60	100	160
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1818	1900	1863	1881	1881	1863	1863	1863	1900	1856	1845
Adj Flow Rate, veh/h	89	418	51	810	684	9	76	25	0	76	127	140
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	0	1	1
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	5	5	5	2	1	1	2	2	2	2	2	3
Cap, veh/h	112	481	58	797	1928	862	159	167	142	90	150	205
Arrive On Green	0.06	0.16	0.16	0.45	0.54	0.54	0.09	0.09	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1723	3101	376	1774	3574	1599	1774	1863	1583	682	1140	1564
Grp Volume(v), veh/h	89	232	237	810	684	9	76	25	0	203	0	140
Grp Sat Flow(s),veh/h/ln	1723	1727	1751	1774	1787	1599	1774	1863	1583	1822	0	1564
Q Serve(g_s), s	5.4	13.9	14.0	47.5	11.5	0.3	4.3	1.3	0.0	11.5	0.0	9.0
Cycle Q Clear(g_c), s	5.4	13.9	14.0	47.5	11.5	0.3	4.3	1.3	0.0	11.5	0.0	9.0
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	0.37		1.00
Lane Grp Cap(c), veh/h	112	268	272	797	1928	862	159	167	142	239	0	205
V/C Ratio(X)	0.80	0.87	0.87	1.02	0.35	0.01	0.48	0.15	0.00	0.85	0.00	0.68
Avail Cap(c_a), veh/h	252	490	497	797	2095	937	453	475	404	465	0	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.8	43.6	43.7	29.1	13.9	11.3	45.8	44.4	0.0	44.9	0.0	43.8
Incr Delay (d2), s/veh	4.8	3.3	3.5	36.2	0.0	0.0	0.8	0.2	0.0	3.2	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.9	7.1	31.0	5.7	0.1	2.1	0.7	0.0	6.0	0.0	4.0
LnGrp Delay(d),s/veh	53.6	46.9	47.1	65.3	13.9	11.3	46.6	44.6	0.0	48.1	0.0	45.3
LnGrp LOS	D	D	D	F	B	B	D	D		D		D
Approach Vol, veh/h		558			1503			101			343	
Approach Delay, s/veh		48.1			41.6			46.1			47.0	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	51.0	21.4		18.9	10.4	62.1		14.5				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	47.5	30.0		27.0	15.5	62.0		27.0				
Max Q Clear Time (g_c+1.5), s	19.5	16.0		13.5	7.4	13.5		6.3				
Green Ext Time (p_c), s	0.0	0.4		0.2	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				44.0								
HCM 2010 LOS				D								

Intersection	
Intersection Delay, s/veh	296.6
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	600	130	310	130	90	820
Future Vol, veh/h	600	130	310	130	90	820
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	5	5	1	1	0	0
Mvmt Flow	732	159	378	159	110	1000
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	282	101.2	402.8
HCM LOS	F	F	F

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	70%	0%	0%
Vol Right, %	0%	0%	30%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	600	130	440	90	820
LT Vol	600	0	0	90	0
Through Vol	0	130	310	0	0
RT Vol	0	0	130	0	820
Lane Flow Rate	732	159	537	110	1000
Geometry Grp	7	7	4	7	7
Degree of Util (X)	1.671	0.34	1.077	0.249	1.932
Departure Headway (Hd)	10.487	9.96	9.811	9.013	7.762
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	351	363	376	401	480
Service Time	8.187	7.66	7.811	6.713	5.462
HCM Lane V/C Ratio	2.085	0.438	1.428	0.274	2.083
HCM Control Delay	339.3	17.7	101.2	14.7	445.4
HCM Lane LOS	F	C	F	B	F
HCM 95th-tile Q	34.9	1.5	14.1	1	59.7

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 26: East Garrison Road & Reservation Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖		↗			
Traffic Volume (veh/h)	0	730	80	150	1210	0	130	0	260	0	0	0
Future Volume (veh/h)	0	730	80	150	1210	0	130	0	260	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	0	1881	0	1881			
Adj Flow Rate, veh/h	0	820	88	169	1360	0	146	0	220			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	4	2	2	0	1	0	1			
Cap, veh/h	3	1425	153	213	2259	0	309	0	275			
Arrive On Green	0.00	0.45	0.45	0.12	0.64	0.00	0.17	0.00	0.17			
Sat Flow, veh/h	1740	3163	339	1774	3632	0	1792	0	1599			
Grp Volume(v), veh/h	0	450	458	169	1360	0	146	0	220			
Grp Sat Flow(s),veh/h/ln	1740	1736	1767	1774	1770	0	1792	0	1599			
Q Serve(g_s), s	0.0	10.3	10.3	4.9	12.0	0.0	3.9	0.0	7.0			
Cycle Q Clear(g_c), s	0.0	10.3	10.3	4.9	12.0	0.0	3.9	0.0	7.0			
Prop In Lane	1.00		0.19	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	3	782	796	213	2259	0	309	0	275			
V/C Ratio(X)	0.00	0.58	0.58	0.79	0.60	0.00	0.47	0.00	0.80			
Avail Cap(c_a), veh/h	653	1953	1988	665	3982	0	907	0	810			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.9	10.9	22.8	5.7	0.0	19.9	0.0	21.2			
Incr Delay (d2), s/veh	0.0	1.2	1.2	2.5	0.3	0.0	0.4	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	5.1	5.2	2.5	5.8	0.0	2.0	0.0	3.2			
LnGrp Delay(d),s/veh	0.0	12.1	12.1	25.3	6.0	0.0	20.3	0.0	23.2			
LnGrp LOS		B	B	C	A		C		C			
Approach Vol, veh/h		908			1529			366				
Approach Delay, s/veh		12.1			8.1			22.1				
Approach LOS		B			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	0.0	29.4			0.0	39.4		13.9				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+10), s	12.3				0.0	14.0		9.0				
Green Ext Time (p_c), s	0.0	11.8			0.0	15.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				11.2								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 27: Reservation Road & Watkins Gate Road 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	250	160	1600	1100	60		
Future Volume (veh/h)	10	250	160	1600	1100	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	11	44	174	1739	1196	58		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	86	77	216	2651	1942	94		
Arrive On Green	0.05	0.05	0.12	0.75	0.57	0.57		
Sat Flow, veh/h	1774	1583	1774	3632	3530	167		
Grp Volume(v), veh/h	11	44	174	1739	615	639		
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1833		
Q Serve(g_s), s	0.4	1.7	6.1	15.6	14.9	14.9		
Cycle Q Clear(g_c), s	0.4	1.7	6.1	15.6	14.9	14.9		
Prop In Lane	1.00	1.00	1.00			0.09		
Lane Grp Cap(c), veh/h	86	77	216	2651	1000	1036		
V/C Ratio(X)	0.13	0.57	0.81	0.66	0.62	0.62		
Avail Cap(c_a), veh/h	511	456	497	3773	1281	1327		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	29.3	29.9	27.5	4.0	9.3	9.3		
Incr Delay (d2), s/veh	0.2	2.5	2.7	0.4	1.0	1.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.8	3.2	7.4	7.5	7.7		
LnGrp Delay(d),s/veh	29.5	32.4	30.2	4.4	10.3	10.3		
LnGrp LOS	C	C	C	A	B	B		
Approach Vol, veh/h	55			1913	1254			
Approach Delay, s/veh	31.8			6.8	10.3			
Approach LOS	C			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.6	11.8	42.8				54.6
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		18.5	18.0	46.5				68.5
Max Q Clear Time (g_c+I1), s		3.7	8.1	16.9				17.6
Green Ext Time (p_c), s		0.0	0.0	13.8				30.6
Intersection Summary								
HCM 2010 Ctrl Delay			8.6					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 28: Davis Road & Reservation Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Traffic Volume (veh/h)	750	320	10	10	570	90	10	10	10	150	10	850
Future Volume (veh/h)	750	320	10	10	570	90	10	10	10	150	10	850
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	872	372	12	12	663	105	12	12	9	174	12	746
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	376	2187	70	19	666	105	17	17	12	350	24	665
Arrive On Green	0.21	0.63	0.63	0.01	0.42	0.42	0.03	0.03	0.03	0.21	0.21	0.21
Sat Flow, veh/h	1774	3500	113	1774	1570	249	648	648	486	1649	114	1568
Grp Volume(v), veh/h	872	188	196	12	0	768	33	0	0	186	0	746
Grp Sat Flow(s),veh/h/ln	1774	1770	1843	1774	0	1819	1782	0	0	1762	0	1568
Q Serve(g_s), s	30.0	6.3	6.3	1.0	0.0	59.5	2.6	0.0	0.0	13.1	0.0	30.0
Cycle Q Clear(g_c), s	30.0	6.3	6.3	1.0	0.0	59.5	2.6	0.0	0.0	13.1	0.0	30.0
Prop In Lane	1.00		0.06	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	376	1106	1152	19	0	772	46	0	0	374	0	665
V/C Ratio(X)	2.32	0.17	0.17	0.64	0.00	1.00	0.72	0.00	0.00	0.50	0.00	1.12
Avail Cap(c_a), veh/h	376	1106	1152	376	0	772	378	0	0	374	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	11.1	11.1	69.7	0.0	40.6	68.4	0.0	0.0	49.1	0.0	40.7
Incr Delay (d2), s/veh	601.1	0.1	0.1	12.4	0.0	31.2	7.7	0.0	0.0	0.4	0.0	73.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.5	3.1	3.3	0.5	0.0	36.6	1.4	0.0	0.0	6.4	0.0	39.5
LnGrp Delay(d),s/veh	656.8	11.2	11.2	82.1	0.0	71.8	76.1	0.0	0.0	49.5	0.0	114.0
LnGrp LOS	F	B	B	F		E	E			D		F
Approach Vol, veh/h		1256			780			33			932	
Approach Delay, s/veh		459.4			71.9			76.1			101.1	
Approach LOS		F			E			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	93.4		35.0	33.8	65.0		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1/3), s	13.0	8.3		32.0	32.0	61.5		4.6				
Green Ext Time (p_c), s	0.0	3.4		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			243.2									
HCM 2010 LOS			F									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 29: 2nd Avenue & Divarty Street 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↕↔	
Traffic Volume (veh/h)	80	10	40	70	20	20	130	580	130	20	900	250
Future Volume (veh/h)	80	10	40	70	20	20	130	580	130	20	900	250
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	88	11	44	77	22	22	143	637	143	22	989	275
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	202	36	62	308	75	298	184	1603	359	46	1327	367
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.10	0.56	0.56	0.03	0.48	0.48
Sat Flow, veh/h	555	196	334	1073	407	1612	1774	2873	644	1792	2766	766
Grp Volume(v), veh/h	143	0	0	99	0	22	143	392	388	22	638	626
Grp Sat Flow(s),veh/h/ln	1084	0	0	1480	0	1612	1774	1770	1748	1792	1787	1744
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.7	4.6	7.3	7.4	0.7	16.8	17.0
Cycle Q Clear(g_c), s	7.9	0.0	0.0	3.3	0.0	0.7	4.6	7.3	7.4	0.7	16.8	17.0
Prop In Lane	0.62		0.31	0.78		1.00	1.00		0.37	1.00		0.44
Lane Grp Cap(c), veh/h	300	0	0	383	0	298	184	987	975	46	857	837
V/C Ratio(X)	0.48	0.00	0.00	0.26	0.00	0.07	0.78	0.40	0.40	0.48	0.74	0.75
Avail Cap(c_a), veh/h	839	0	0	991	0	969	350	1215	1200	354	1227	1198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	0.0	20.6	0.0	19.6	25.4	7.3	7.3	28.0	12.3	12.3
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.4	0.0	0.1	6.8	0.3	0.3	7.5	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.4	0.0	0.3	2.6	3.6	3.5	0.4	8.5	8.4
LnGrp Delay(d),s/veh	24.1	0.0	0.0	21.0	0.0	19.7	32.3	7.6	7.6	35.5	13.7	13.9
LnGrp LOS	C			C		B	C	A	A	D	B	B
Approach Vol, veh/h		143			121			923			1286	
Approach Delay, s/veh		24.1			20.8			11.4			14.2	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.8	9.6	32.9		15.8	5.0	37.5				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		9.9	6.6	19.0		5.3	2.7	9.4				
Green Ext Time (p_c), s		0.8	0.1	9.0		0.6	0.0	5.3				
Intersection Summary												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Vol, veh/h	10	10	20	10	10	20	30	260	10	20	200	20
Future Vol, veh/h	10	10	20	10	10	20	30	260	10	20	200	20
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	0	0	1	1	1	2	2	2	1	1	1
Mvmt Flow	11	11	22	11	11	22	33	286	11	22	220	22
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.5	8.5	10.8	10.1
HCM LOS	A	A	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	25%	25%	100%	0%
Vol Thru, %	0%	96%	25%	25%	0%	91%
Vol Right, %	0%	4%	50%	50%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	270	40	40	20	220
LT Vol	30	0	10	10	20	0
Through Vol	0	260	10	10	0	200
RT Vol	0	10	20	20	0	20
Lane Flow Rate	33	297	44	44	22	242
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.05	0.408	0.062	0.063	0.034	0.333
Departure Headway (Hd)	5.481	4.953	5.103	5.121	5.524	4.958
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	653	727	699	697	648	725
Service Time	3.214	2.685	3.153	3.169	3.258	2.691
HCM Lane V/C Ratio	0.051	0.409	0.063	0.063	0.034	0.334
HCM Control Delay	8.5	11.1	8.5	8.5	8.5	10.2
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.2	2	0.2	0.2	0.1	1.5

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 31: 1st Avenue & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1310	130	20	1300	0	160	0	20	120	30	100
Future Volume (veh/h)	0	1310	130	20	1300	0	160	0	20	120	30	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0	1863	0	1863	1792	1792	1792
Adj Flow Rate, veh/h	0	1560	0	24	1548	0	190	0	10	143	36	100
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	2	2	2	2	0	2	0	2	6	6	6
Cap, veh/h	0	2268	1015	27	2540	0	0	0	0	207	218	185
Arrive On Green	0.00	0.64	0.00	0.02	0.72	0.00	0.00	0.00	0.00	0.12	0.12	0.12
Sat Flow, veh/h	0	3632	1583	1774	3632	0		0		1707	1792	1524
Grp Volume(v), veh/h	0	1560	0	24	1548	0		0.0		143	36	100
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1774	1770	0				1707	1792	1524
Q Serve(g_s), s	0.0	16.2	0.0	0.8	12.5	0.0				4.6	1.0	3.5
Cycle Q Clear(g_c), s	0.0	16.2	0.0	0.8	12.5	0.0				4.6	1.0	3.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2268	1015	27	2540	0				207	218	185
V/C Ratio(X)	0.00	0.69	0.00	0.88	0.61	0.00				0.69	0.17	0.54
Avail Cap(c_a), veh/h	0	2787	1247	621	2787	0				747	784	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	6.6	0.0	28.1	4.1	0.0				24.1	22.5	23.6
Incr Delay (d2), s/veh	0.0	0.7	0.0	25.7	0.4	0.0				1.5	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.0	0.0	0.6	6.2	0.0				2.2	0.5	1.5
LnGrp Delay(d),s/veh	0.0	7.3	0.0	53.7	4.5	0.0				25.6	22.6	24.5
LnGrp LOS		A		D	A					C	C	C
Approach Vol, veh/h		1560			1572						279	
Approach Delay, s/veh		7.3			5.2						24.8	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.4	41.2		11.5		45.6				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.8	18.2		6.6		14.5				
Green Ext Time (p_c), s			0.0	18.5		0.4		19.0				
Intersection Summary												
HCM 2010 Ctrl Delay			7.8									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 32: 2nd Avenue & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	1100	10	40	870	190	20	20	50	350	10	490
Future Volume (veh/h)	330	1100	10	40	870	190	20	20	50	350	10	490
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1900	1900	1900	1881	1881	1881
Adj Flow Rate, veh/h	367	1222	11	44	967	202	22	22	55	389	11	268
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	220	1912	17	56	1258	262	123	132	264	489	572	486
Arrive On Green	0.12	0.53	0.53	0.03	0.44	0.44	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1774	3594	32	1740	2861	597	261	434	869	1330	1881	1599
Grp Volume(v), veh/h	367	602	631	44	586	583	99	0	0	389	11	268
Grp Sat Flow(s),veh/h/ln	1774	1770	1857	1740	1736	1722	1564	0	0	1330	1881	1599
Q Serve(g_s), s	12.4	24.1	24.1	2.5	28.6	28.7	0.0	0.0	0.0	23.2	0.4	14.0
Cycle Q Clear(g_c), s	12.4	24.1	24.1	2.5	28.6	28.7	4.2	0.0	0.0	27.4	0.4	14.0
Prop In Lane	1.00		0.02	1.00		0.35	0.22		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	220	941	988	56	763	757	520	0	0	489	572	486
V/C Ratio(X)	1.67	0.64	0.64	0.79	0.77	0.77	0.19	0.00	0.00	0.79	0.02	0.55
Avail Cap(c_a), veh/h	220	941	988	216	763	757	671	0	0	622	760	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	0.09	0.09	0.09	1.00	0.00	0.00	0.56	0.56	0.56
Uniform Delay (d), s/veh	43.8	16.6	16.6	48.1	23.7	23.7	25.7	0.0	0.0	33.4	24.4	29.1
Incr Delay (d2), s/veh	309.4	1.5	1.4	0.9	0.7	0.7	0.1	0.0	0.0	2.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.0	12.1	12.7	1.2	13.8	13.7	2.0	0.0	0.0	10.7	0.2	6.2
LnGrp Delay(d),s/veh	353.2	18.0	18.0	49.0	24.4	24.4	25.7	0.0	0.0	35.8	24.4	29.3
LnGrp LOS	F	B	B	D	C	C	C			D	C	C
Approach Vol, veh/h		1600			1213			99			668	
Approach Delay, s/veh		94.9			25.3			25.7			33.0	
Approach LOS		F			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	57.8		35.0	16.4	48.6		35.0				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	2.4	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+1), s	14.5	26.1		29.4	14.4	30.7		6.2				
Green Ext Time (p_c), s	0.0	3.3		1.0	0.0	0.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			57.8									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 33: General Jim Moore Boulevard & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑		↖	↑		↖	↑	↗
Traffic Volume (veh/h)	50	280	830	20	170	70	960	60	10	40	50	20
Future Volume (veh/h)	50	280	830	20	170	70	960	60	10	40	50	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	56	315	0	22	191	77	1079	67	10	45	56	22
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	78	467	397	36	277	111	735	495	74	67	343	127
Arrive On Green	0.04	0.25	0.00	0.02	0.23	0.23	0.21	0.31	0.31	0.04	0.14	0.14
Sat Flow, veh/h	1774	1863	1583	1707	1214	489	3476	1600	239	1774	2524	938
Grp Volume(v), veh/h	56	315	0	22	0	268	1079	0	77	45	38	40
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1707	0	1704	1738	0	1839	1774	1770	1692
Q Serve(g_s), s	1.5	7.2	0.0	0.6	0.0	6.8	10.0	0.0	1.4	1.2	0.9	1.0
Cycle Q Clear(g_c), s	1.5	7.2	0.0	0.6	0.0	6.8	10.0	0.0	1.4	1.2	0.9	1.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.13	1.00		0.55
Lane Grp Cap(c), veh/h	78	467	397	36	0	388	735	0	569	67	240	230
V/C Ratio(X)	0.72	0.67	0.00	0.61	0.00	0.69	1.47	0.00	0.14	0.67	0.16	0.17
Avail Cap(c_a), veh/h	751	1182	1005	722	0	1081	735	0	1167	563	1123	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	16.0	0.0	22.9	0.0	16.7	18.6	0.0	11.8	22.5	18.0	18.1
Incr Delay (d2), s/veh	11.5	2.1	0.0	5.9	0.0	2.7	217.8	0.0	0.2	4.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.9	0.0	0.3	0.0	3.5	26.9	0.0	0.8	0.7	0.5	0.5
LnGrp Delay(d),s/veh	33.8	18.0	0.0	28.9	0.0	19.4	236.4	0.0	12.0	26.7	18.4	18.5
LnGrp LOS	C	B		C		B	F		B	C	B	B
Approach Vol, veh/h		371			290			1156			123	
Approach Delay, s/veh		20.4			20.1			221.5			21.5	
Approach LOS		C			C			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.9	6.6	15.3	6.3	19.1	5.5	16.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	3.0	3.5	8.8	3.2	3.4	2.6	9.2					
Green Ext Time (p_c), s	0.0	0.4	0.1	2.0	0.0	0.6	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			140.2									
HCM 2010 LOS			F									

Intersection

Intersection Delay, s/veh 12.5
 Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	200	60	10	260	70
Future Vol, veh/h	20	200	60	10	260	70
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	4	4	3	3	2	2
Mvmt Flow	26	260	78	13	338	91
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10.6	8.9	14.6
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	9%	79%
Vol Thru, %	86%	0%	21%
Vol Right, %	14%	91%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	70	220	330
LT Vol	0	20	260
Through Vol	60	0	70
RT Vol	10	200	0
Lane Flow Rate	91	286	429
Geometry Grp	1	1	1
Degree of Util (X)	0.128	0.374	0.582
Departure Headway (Hd)	5.086	4.709	4.886
Convergence, Y/N	Yes	Yes	Yes
Cap	696	760	733
Service Time	3.18	2.771	2.958
HCM Lane V/C Ratio	0.131	0.376	0.585
HCM Control Delay	8.9	10.6	14.6
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.4	1.7	3.8

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	240	30	20	190	30	30
Future Vol, veh/h	240	30	20	190	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	5	5	4	4	0	0
Mvmt Flow	308	38	26	244	38	38

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	346	0	623
Stage 1	-	-	-	-	327
Stage 2	-	-	-	-	296
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	1202	-	453
Stage 1	-	-	-	-	735
Stage 2	-	-	-	-	759
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1202	-	442
Mov Cap-2 Maneuver	-	-	-	-	442
Stage 1	-	-	-	-	717
Stage 2	-	-	-	-	759

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	547	-	-	1202	-
HCM Lane V/C Ratio	0.141	-	-	0.021	-
HCM Control Delay (s)	12.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	230	30	10	120	10	50	100	20	10	80	40
Future Vol, veh/h	10	230	30	10	120	10	50	100	20	10	80	40
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	6	6	6	4	4	4	20	20	20	2	2	2
Mvmt Flow	13	291	38	13	152	13	63	127	25	13	101	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.9	10.8	12.3	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	4%	7%	8%
Vol Thru, %	59%	85%	86%	62%
Vol Right, %	12%	11%	7%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	270	140	130
LT Vol	50	10	10	10
Through Vol	100	230	120	80
RT Vol	20	30	10	40
Lane Flow Rate	215	342	177	165
Geometry Grp	1	1	1	1
Degree of Util (X)	0.356	0.509	0.277	0.257
Departure Headway (Hd)	5.958	5.363	5.626	5.614
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	670	636	637
Service Time	4.014	3.411	3.683	3.672
HCM Lane V/C Ratio	0.357	0.51	0.278	0.259
HCM Control Delay	12.3	13.9	10.8	10.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	2.9	1.1	1

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	80	90	10	70	20	50	120	20	0	0	0
Future Vol, veh/h	80	80	90	10	70	20	50	120	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	12	12	12	0	0	0	10	10	10	10	10	10
Mvmt Flow	98	98	110	12	85	24	61	146	24	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	336	294	1	386	282	159	1	0	0	171	0	0
Stage 1	1	1	-	281	281	-	-	-	-	-	-	-
Stage 2	335	293	-	105	1	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.62	6.32	7.1	6.5	6.2	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.62	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.108	3.408	3.5	4	3.3	2.29	-	-	2.29	-	-
Pot Cap-1 Maneuver	599	601	1055	576	630	892	1571	-	-	1359	-	-
Stage 1	997	875	-	730	682	-	-	-	-	-	-	-
Stage 2	658	653	-	906	899	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	503	575	1055	434	602	891	1571	-	-	1358	-	-
Mov Cap-2 Maneuver	503	575	-	434	602	-	-	-	-	-	-	-
Stage 1	954	875	-	698	652	-	-	-	-	-	-	-
Stage 2	532	624	-	721	899	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.3		12.3		1.9		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1571	-	-	652	618	1358	-
HCM Lane V/C Ratio	0.039	-	-	0.468	0.197	-	-
HCM Control Delay (s)	7.4	0	-	15.3	12.3	0	-
HCM Lane LOS	A	A	-	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.5	0.7	0	-
























Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	100	10	10	230	510	100
Future Vol, veh/h	100	10	10	230	510	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	13	13	2	2	0	0
Mvmt Flow	112	11	11	258	573	112

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	909	629	685	0	-	0
Stage 1	629	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	292	463	908	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	288	463	908	-	-	-
Mov Cap-2 Maneuver	288	-	-	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	908	-	298	-	-
HCM Lane V/C Ratio	0.012	-	0.415	-	-
HCM Control Delay (s)	9	0	25.4	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	2	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 39: General Jim Moore Boulevard & Gigling Road 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	460	40	630	50	340	300	430	470	50
Future Volume (veh/h)	30	100	80	460	40	630	50	340	300	430	470	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	529	46	0	57	391	0	494	540	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	60	194	95	520	1223	547	86	503	225	393	1113	498
Arrive On Green	0.03	0.09	0.09	0.29	0.35	0.00	0.05	0.14	0.00	0.22	0.31	0.00
Sat Flow, veh/h	1723	2232	1098	1774	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	87	88	529	46	0	57	391	0	494	540	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1611	1774	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.4	3.4	3.7	20.5	0.6	0.0	2.2	7.4	0.0	15.5	8.6	0.0
Cycle Q Clear(g_c), s	1.4	3.4	3.7	20.5	0.6	0.0	2.2	7.4	0.0	15.5	8.6	0.0
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	149	140	520	1223	547	86	503	225	393	1113	498
V/C Ratio(X)	0.57	0.58	0.63	1.02	0.04	0.00	0.66	0.78	0.00	1.26	0.49	0.00
Avail Cap(c_a), veh/h	259	762	715	520	2076	929	141	1278	572	393	1772	793
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	33.2	30.7	30.8	24.7	15.2	0.0	32.7	29.0	0.0	27.2	19.4	0.0
Incr Delay (d2), s/veh	3.2	1.3	1.7	43.7	0.0	0.0	3.3	1.0	0.0	134.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	1.7	16.1	0.3	0.0	1.2	3.7	0.0	22.1	4.2	0.0
LnGrp Delay(d),s/veh	36.4	32.0	32.6	68.4	15.2	0.0	36.0	30.0	0.0	161.5	19.5	0.0
LnGrp LOS	D	C	C	F	B		D	C		F	B	
Approach Vol, veh/h		209			575			448			1034	
Approach Delay, s/veh		33.0			64.2			30.7			87.4	
Approach LOS		C			E			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	26.5	6.9	28.6	20.0	14.3	25.0	10.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+I1), s	4.2	10.6	3.4	2.6	17.5	9.4	22.5	5.7				
Green Ext Time (p_c), s	0.0	0.7	0.0	0.1	0.0	0.5	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				65.3								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 40: Malmedy Road & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Volume (veh/h)	10	740	30	50	1080	20	20	30	30	20	60	20
Future Volume (veh/h)	10	740	30	50	1080	20	20	30	30	20	60	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1845	1900	1900	1863	1900	1900	1827	1900
Adj Flow Rate, veh/h	11	841	34	57	1227	23	23	34	34	23	68	23
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	3	3	3	3	3	3	2	2	2	4	4	4
Cap, veh/h	158	1572	63	195	1537	29	235	112	96	218	167	52
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	12	3315	133	72	3241	60	317	723	621	256	1083	338
Grp Volume(v), veh/h	463	0	423	669	0	638	91	0	0	114	0	0
Grp Sat Flow(s),veh/h/ln	1805	0	1655	1704	0	1668	1661	0	0	1677	0	0
Q Serve(g_s), s	0.0	0.0	4.4	2.4	0.0	7.9	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	4.3	0.0	4.4	7.8	0.0	7.9	1.1	0.0	0.0	1.4	0.0	0.0
Prop In Lane	0.02		0.08	0.09		0.04	0.25		0.37	0.20		0.20
Lane Grp Cap(c), veh/h	1008	0	785	970	0	791	443	0	0	437	0	0
V/C Ratio(X)	0.46	0.00	0.54	0.69	0.00	0.81	0.21	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	3766	0	3448	3514	0	3475	2192	0	0	2243	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.5	0.0	4.5	5.3	0.0	5.4	9.1	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.8	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.9	3.6	0.0	3.7	0.5	0.0	0.0	0.7	0.0	0.0
LnGrp Delay(d),s/veh	4.6	0.0	4.7	5.6	0.0	6.2	9.2	0.0	0.0	9.4	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		886			1307			91			114	
Approach Delay, s/veh		4.7			5.9			9.2			9.4	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.2		16.0		8.2		16.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.1		6.4		3.4		9.9				
Green Ext Time (p_c), s		0.1		0.9		0.1		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 41: Parker Flatts Cut Off Road & Gigling Road 06/11/2019



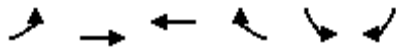
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕	↕		↕↕	
Traffic Volume (veh/h)	10	700	80	110	1090	10	40	10	50	10	30	10
Future Volume (veh/h)	10	700	80	110	1090	10	40	10	50	10	30	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	12	833	95	131	1298	12	48	12	60	12	36	12
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	3	3	3	2	2	2	2	2	2	0	0	0
Cap, veh/h	136	1685	191	246	1611	15	367	64	211	184	154	46
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	11	3065	346	173	2929	27	1040	478	1583	240	1153	348
Grp Volume(v), veh/h	496	0	444	698	0	743	60	0	60	60	0	0
Grp Sat Flow(s),veh/h/ln	1805	0	1617	1439	0	1690	1518	0	1583	1741	0	0
Q Serve(g_s), s	0.0	0.0	4.8	6.6	0.0	10.0	0.0	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	4.8	11.5	0.0	10.0	0.8	0.0	1.0	0.8	0.0	0.0
Prop In Lane	0.02		0.21	0.19		0.02	0.80		1.00	0.20		0.20
Lane Grp Cap(c), veh/h	1122	0	889	942	0	929	431	0	211	384	0	0
V/C Ratio(X)	0.44	0.00	0.50	0.74	0.00	0.80	0.14	0.00	0.28	0.16	0.00	0.00
Avail Cap(c_a), veh/h	3511	0	3159	2816	0	3301	1523	0	1421	1684	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.9	0.0	4.0	5.1	0.0	5.1	11.0	0.0	11.1	11.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.4	0.0	0.6	0.1	0.0	0.3	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.1	4.6	0.0	4.7	0.4	0.0	0.4	0.4	0.0	0.0
LnGrp Delay(d),s/veh	4.0	0.0	4.1	5.5	0.0	5.7	11.1	0.0	11.4	11.1	0.0	0.0
LnGrp LOS	A		A	A		A	B		B	B		
Approach Vol, veh/h		940			1441			120			60	
Approach Delay, s/veh		4.1			5.6			11.2			11.1	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.3		20.1		8.3		20.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		25.5		55.5		25.5		55.5				
Max Q Clear Time (g_c+11), s		3.0		6.8		2.8		13.5				
Green Ext Time (p_c), s		0.0		1.0		0.0		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				5.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 42: 6th Avenue & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	120	640	10	30	1060	10	10	10	10	10	10	150
Future Volume (veh/h)	120	640	10	30	1060	10	10	10	10	10	10	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1900	1429	1429	1900	1863	1900
Adj Flow Rate, veh/h	135	719	11	34	1191	11	11	11	0	11	11	169
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	3	3	3	2	2	2	33	33	33	2	2	2
Cap, veh/h	255	1192	19	154	1759	16	260	151	203	144	22	235
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	157	2319	37	39	3421	31	414	902	1214	54	129	1407
Grp Volume(v), veh/h	365	0	500	641	0	595	22	0	0	191	0	0
Grp Sat Flow(s),veh/h/ln	840	0	1672	1801	0	1690	1316	0	1214	1591	0	0
Q Serve(g_s), s	3.3	0.0	5.9	0.0	0.0	7.5	0.0	0.0	0.0	1.3	0.0	0.0
Cycle Q Clear(g_c), s	10.8	0.0	5.9	7.2	0.0	7.5	0.4	0.0	0.0	3.2	0.0	0.0
Prop In Lane	0.37		0.02	0.05		0.02	0.50		1.00	0.06		0.88
Lane Grp Cap(c), veh/h	607	0	860	1060	0	869	411	0	203	401	0	0
V/C Ratio(X)	0.60	0.00	0.58	0.60	0.00	0.69	0.05	0.00	0.00	0.48	0.00	0.00
Avail Cap(c_a), veh/h	1716	0	2990	3250	0	3021	1432	0	1311	1843	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	0.0	4.8	5.1	0.0	5.1	9.9	0.0	0.0	11.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.2	0.2	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	2.7	3.6	0.0	3.4	0.1	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	5.1	0.0	5.0	5.3	0.0	5.5	10.0	0.0	0.0	11.4	0.0	0.0
LnGrp LOS	A		A	A		A	A			B		
Approach Vol, veh/h		865			1236			22			191	
Approach Delay, s/veh		5.1			5.4			10.0			11.4	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.2		19.0		9.2		19.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.4		12.8		5.2		9.5				
Green Ext Time (p_c), s		0.0		1.8		0.3		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				5.8								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 43: Gigling Road & 7th Avenue 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	160	500	1020	10	10	70		
Future Volume (veh/h)	160	500	1020	10	10	70		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1759	1900		
Adj Flow Rate, veh/h	186	581	1186	12	12	81		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	3	3	0	0	0	0		
Cap, veh/h	374	1126	2250	23	17	118		
Arrive On Green	0.61	0.61	0.61	0.61	0.09	0.09		
Sat Flow, veh/h	287	1916	3756	37	194	1309		
Grp Volume(v), veh/h	277	490	585	613	94	0		
Grp Sat Flow(s),veh/h/ln	525	1595	1805	1893	1519	0		
Q Serve(g_s), s	9.0	5.2	5.6	5.6	1.8	0.0		
Cycle Q Clear(g_c), s	14.6	5.2	5.6	5.6	1.8	0.0		
Prop In Lane	0.67			0.02	0.13	0.86		
Lane Grp Cap(c), veh/h	520	980	1109	1164	137	0		
V/C Ratio(X)	0.53	0.50	0.53	0.53	0.69	0.00		
Avail Cap(c_a), veh/h	1258	2905	3288	3449	1271	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	5.4	3.3	3.3	3.3	13.4	0.0		
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.1	2.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.0	2.2	2.6	2.8	0.8	0.0		
LnGrp Delay(d),s/veh	5.8	3.4	3.5	3.5	15.7	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h		767	1198		94			
Approach Delay, s/veh		4.3	3.5		15.7			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				23.2		7.2		23.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				16.6		3.8		7.6
Green Ext Time (p_c), s				2.1		0.0		1.2
Intersection Summary								
HCM 2010 Ctrl Delay				4.3				
HCM 2010 LOS				A				
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 44: 8th Avenue & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	220	290	10	10	530	10	10	10	10	10	10	510
Future Volume (veh/h)	220	290	10	10	530	10	10	10	10	10	10	510
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	259	341	12	12	624	12	12	12	12	12	12	247
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	0	0	0
Cap, veh/h	531	829	29	125	1742	33	217	180	124	124	24	319
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	611	1640	58	18	3447	66	316	838	577	34	110	1482
Grp Volume(v), veh/h	263	0	349	340	0	308	36	0	0	271	0	0
Grp Sat Flow(s),veh/h/ln	625	0	1685	1848	0	1684	1731	0	0	1626	0	0
Q Serve(g_s), s	9.5	0.0	4.2	0.0	0.0	3.6	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	13.1	0.0	4.2	3.6	0.0	3.6	0.5	0.0	0.0	5.0	0.0	0.0
Prop In Lane	0.98		0.03	0.04		0.04	0.33		0.33	0.04		0.91
Lane Grp Cap(c), veh/h	538	0	851	1049	0	851	522	0	0	467	0	0
V/C Ratio(X)	0.49	0.00	0.41	0.32	0.00	0.36	0.07	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	1013	0	1858	2131	0	1856	2297	0	0	2402	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.7	0.0	5.0	4.8	0.0	4.8	10.1	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.9	1.8	0.0	1.6	0.3	0.0	0.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	9.0	0.0	5.1	4.9	0.0	4.9	10.1	0.0	0.0	12.3	0.0	0.0
LnGrp LOS	A		A	A		A	B			B		
Approach Vol, veh/h		612			648			36			271	
Approach Delay, s/veh		6.8			4.9			10.1			12.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.4		20.8		11.4		20.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		45.5		35.5		45.5		35.5				
Max Q Clear Time (g_c+I1), s		2.5		15.1		7.0		5.6				
Green Ext Time (p_c), s		0.0		1.2		0.4		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				7.0								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 45: Eastside Parkway & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	10	10	10	10	10	20	180	10	10	280	520
Future Volume (veh/h)	280	10	10	10	10	10	20	180	10	10	280	520
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	11	11	11	11	11	22	196	11	11	304	402
Adj No. of Lanes	1	2	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	374	381	328	22	22	22	48	542	30	26	553	470
Arrive On Green	0.21	0.21	0.21	0.04	0.04	0.04	0.03	0.31	0.31	0.01	0.30	0.30
Sat Flow, veh/h	1774	1803	1555	577	577	577	1774	1747	98	1774	1863	1583
Grp Volume(v), veh/h	304	11	11	33	0	0	22	0	207	11	304	402
Grp Sat Flow(s),veh/h/ln	1774	1770	1588	1732	0	0	1774	0	1845	1774	1863	1583
Q Serve(g_s), s	6.1	0.2	0.2	0.7	0.0	0.0	0.5	0.0	3.3	0.2	5.2	9.0
Cycle Q Clear(g_c), s	6.1	0.2	0.2	0.7	0.0	0.0	0.5	0.0	3.3	0.2	5.2	9.0
Prop In Lane	1.00		0.98	0.33		0.33	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	374	373	335	67	0	0	48	0	572	26	553	470
V/C Ratio(X)	0.81	0.03	0.03	0.49	0.00	0.00	0.45	0.00	0.36	0.43	0.55	0.85
Avail Cap(c_a), veh/h	1133	1130	1014	853	0	0	260	0	1277	260	1289	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	11.8	11.8	17.7	0.0	0.0	18.0	0.0	10.1	18.4	11.1	12.4
Incr Delay (d2), s/veh	1.6	0.0	0.0	2.1	0.0	0.0	6.5	0.0	0.1	11.0	0.3	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.1	0.1	0.4	0.0	0.0	0.3	0.0	1.7	0.2	2.7	4.1
LnGrp Delay(d),s/veh	15.7	11.8	11.8	19.8	0.0	0.0	24.5	0.0	10.2	29.3	11.4	14.2
LnGrp LOS	B	B	B	B			C		B	C	B	B
Approach Vol, veh/h		326			33			229			717	
Approach Delay, s/veh		15.5			19.8			11.6			13.2	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	15.6		11.9	5.0	15.2		5.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.5	26.0		24.0	5.5	26.0		18.5				
Max Q Clear Time (g_c+1/2), s	12.2	5.3		8.1	2.5	11.0		2.7				
Green Ext Time (p_c), s	0.0	0.1		0.1	0.0	0.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			13.7									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 46: General Jim Moore Boulevard & Normandy Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	90	110	150	380	80	40	200	420	310	80	760	250
Future Volume (veh/h)	90	110	150	380	80	40	200	420	310	80	760	250
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	115	141	163	487	103	47	256	538	370	103	974	252
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	229	279	286	412	70	32	184	588	404	197	1061	469
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.10	0.29	0.29	0.11	0.30	0.30
Sat Flow, veh/h	400	658	674	779	165	75	1792	2017	1387	1774	3539	1565
Grp Volume(v), veh/h	419	0	0	637	0	0	256	477	431	103	974	252
Grp Sat Flow(s),veh/h/ln	1732	0	0	1019	0	0	1792	1787	1617	1774	1770	1565
Q Serve(g_s), s	0.0	0.0	0.0	18.7	0.0	0.0	8.0	20.1	20.1	4.3	20.7	10.5
Cycle Q Clear(g_c), s	14.3	0.0	0.0	33.0	0.0	0.0	8.0	20.1	20.1	4.3	20.7	10.5
Prop In Lane	0.27		0.39	0.76		0.07	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	793	0	0	514	0	0	184	521	471	197	1061	469
V/C Ratio(X)	0.53	0.00	0.00	1.24	0.00	0.00	1.39	0.92	0.92	0.52	0.92	0.54
Avail Cap(c_a), veh/h	793	0	0	514	0	0	184	586	530	197	1160	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	0.0	26.2	0.0	0.0	34.9	26.6	26.7	32.6	26.3	22.7
Incr Delay (d2), s/veh	0.3	0.0	0.0	123.9	0.0	0.0	205.4	17.0	18.4	1.2	10.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	0.0	28.5	0.0	0.0	14.4	12.3	11.3	2.2	11.5	4.5
LnGrp Delay(d),s/veh	17.3	0.0	0.0	150.1	0.0	0.0	240.3	43.6	45.1	33.8	36.8	23.1
LnGrp LOS	B			F			F	D	D	C	D	C
Approach Vol, veh/h		419		637			1164			1329		
Approach Delay, s/veh		17.3		150.1			87.4			34.0		
Approach LOS		B		F			F			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.5	27.8		37.5	13.2	27.2		37.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	25.5	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+110), s	22.7	22.7		35.0	6.3	22.1		16.3				
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	0.5		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				70.4								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 47: General Jim Moore Boulevard & Coe Avenue 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	100	10	430	380	10	10	230	480	260	10	1060	90
Future Volume (veh/h)	100	10	430	380	10	10	230	480	260	10	1060	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1881	1863	1863	1863	1881	1881	1863	1863	1863	1863
Adj Flow Rate, veh/h	111	11	367	422	11	11	256	533	255	11	1178	39
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	1	2	1	2	2	2	1	1	2	2	2	2
Cap, veh/h	625	750	644	466	750	638	257	1641	727	23	1163	520
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.14	0.46	0.46	0.01	0.33	0.33
Sat Flow, veh/h	1398	1863	1598	1000	1863	1583	1792	3574	1583	1774	3539	1583
Grp Volume(v), veh/h	111	11	367	422	11	11	256	533	255	11	1178	39
Grp Sat Flow(s),veh/h/ln	1398	1863	1598	1000	1863	1583	1792	1787	1583	1774	1770	1583
Q Serve(g_s), s	5.6	0.4	19.2	43.1	0.4	0.5	15.4	10.2	11.2	0.7	35.5	1.8
Cycle Q Clear(g_c), s	6.0	0.4	19.2	43.5	0.4	0.5	15.4	10.2	11.2	0.7	35.5	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	625	750	644	466	750	638	257	1641	727	23	1163	520
V/C Ratio(X)	0.18	0.01	0.57	0.91	0.01	0.02	1.00	0.32	0.35	0.48	1.01	0.07
Avail Cap(c_a), veh/h	625	750	644	466	750	638	257	1641	727	90	1163	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	19.4	25.0	33.6	19.4	19.4	46.2	18.6	18.8	52.9	36.3	24.9
Incr Delay (d2), s/veh	0.0	0.0	0.8	20.6	0.0	0.0	54.8	0.0	0.1	5.5	29.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.2	8.5	15.2	0.2	0.2	11.5	5.0	4.9	0.4	22.1	0.8
LnGrp Delay(d),s/veh	21.2	19.4	25.8	54.2	19.4	19.4	101.0	18.6	18.9	58.5	65.8	25.0
LnGrp LOS	C	B	C	D	B	B	F	B	B	E	F	C
Approach Vol, veh/h		489			444			1044			1228	
Approach Delay, s/veh		24.6			52.5			38.9			64.4	
Approach LOS		C			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.0	40.0		48.0	5.9	54.1		48.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	35.5		43.5	5.5	45.5		43.5				
Max Q Clear Time (g_c+11), s	11.4	37.5		45.5	2.7	13.2		21.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			48.4									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 48: Fremont Boulevard/Hwy 1 SB Off-Ramp/ NB On-Ramp & Monterey Road 06/11/2019






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	100	140	120	210	30	230	690	140	10	1020	70
Future Volume (veh/h)	80	100	140	120	210	30	230	690	140	10	1020	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1900	1881	1900	1827	1827	1900	1827	1827	1827
Adj Flow Rate, veh/h	88	110	65	132	231	31	253	758	139	11	1121	10
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	1	1	1	4	4	4	4	4	4
Cap, veh/h	202	212	172	137	239	32	425	1452	266	18	880	388
Arrive On Green	0.11	0.11	0.11	0.22	0.22	0.22	0.24	0.50	0.50	0.01	0.25	0.25
Sat Flow, veh/h	1757	1845	1494	610	1067	143	1740	2924	536	1740	3471	1529
Grp Volume(v), veh/h	88	110	65	394	0	0	253	450	447	11	1121	10
Grp Sat Flow(s),veh/h/ln	1757	1845	1494	1820	0	0	1740	1736	1724	1740	1736	1529
Q Serve(g_s), s	5.8	7.0	5.0	26.8	0.0	0.0	16.1	22.0	22.0	0.8	31.7	0.6
Cycle Q Clear(g_c), s	5.8	7.0	5.0	26.8	0.0	0.0	16.1	22.0	22.0	0.8	31.7	0.6
Prop In Lane	1.00		1.00	0.34		0.08	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	202	212	172	408	0	0	425	862	856	18	880	388
V/C Ratio(X)	0.44	0.52	0.38	0.97	0.00	0.00	0.59	0.52	0.52	0.62	1.27	0.03
Avail Cap(c_a), veh/h	436	457	371	408	0	0	425	862	856	209	880	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	52.1	51.2	48.0	0.0	0.0	41.8	21.4	21.4	61.6	46.7	35.0
Incr Delay (d2), s/veh	1.1	1.5	1.1	35.9	0.0	0.0	1.6	2.3	2.3	12.5	131.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	3.7	2.1	17.5	0.0	0.0	7.9	11.0	11.0	0.4	31.3	0.3
LnGrp Delay(d),s/veh	52.7	53.6	52.3	83.9	0.0	0.0	43.3	23.6	23.7	74.2	178.6	35.2
LnGrp LOS	D	D	D	F			D	C	C	E	F	D
Approach Vol, veh/h		263			394			1150			1142	
Approach Delay, s/veh		53.0			83.9			28.0			176.3	
Approach LOS		D			F			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	67.4		19.0	35.9	37.0		33.1				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	15	31.7		* 31	15.0	* 32		28.0				
Max Q Clear Time (g_c+1/2), s	12.8	24.0		9.0	18.1	33.7		28.8				
Green Ext Time (p_c), s	0.0	2.9		1.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				95.1								
HCM 2010 LOS				F								
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp Monterey Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	200	100	240	0	370	0	50	120	10	10	0
Future Volume (veh/h)	10	200	100	240	0	370	0	50	120	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1845	1863	0	1863	0	1845	1845	1900	1900	0
Adj Flow Rate, veh/h	10	206	9	247	0	242	0	52	21	10	10	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	2	0	2	0	3	3	0	0	0
Cap, veh/h	136	2942	1343	0	0	0	0	122	104	74	60	0
Arrive On Green	0.86	0.86	0.86	0.00	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.00
Sat Flow, veh/h	159	3430	1566				0	1845	1568	466	899	0
Grp Volume(v), veh/h	116	100	9		0.0		0	52	21	20	0	0
Grp Sat Flow(s),veh/h/ln	1837	1752	1566				0	1845	1568	1365	0	0
Q Serve(g_s), s	1.2	1.1	0.1				0.0	3.4	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	1.1	0.1				0.0	3.4	1.6	3.4	0.0	0.0
Prop In Lane	0.09		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1575	1503	1343				0	122	104	134	0	0
V/C Ratio(X)	0.07	0.07	0.01				0.00	0.43	0.20	0.15	0.00	0.00
Avail Cap(c_a), veh/h	1575	1503	1343				0	148	125	155	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.4	1.3	1.3				0.0	56.1	55.2	55.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	0.9	0.4	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	0.0				0.0	1.8	0.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.4	1.3	1.3				0.0	56.9	55.6	55.3	0.0	0.0
LnGrp LOS	A	A	A					E	E	E		
Approach Vol, veh/h		225						73			20	
Approach Delay, s/veh		1.4						56.5			55.3	
Approach LOS		A						E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				12.5		112.5		12.5				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 10		21.0		* 10				
Max Q Clear Time (g_c+I1), s				5.4		3.2		5.4				
Green Ext Time (p_c), s				0.1		0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.4								
HCM 2010 LOS				B								
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	260	10	310	120	410	0	0	360	130
Future Volume (veh/h)	0	0	0	260	10	310	120	410	0	0	360	130
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1827	1863	1863	0	0	1827	1900
Adj Flow Rate, veh/h				274	11	74	126	432	0	0	379	128
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				4	4	4	2	2	0	0	4	4
Cap, veh/h				386	15	357	208	1021	0	0	470	159
Arrive On Green				0.23	0.23	0.23	0.12	0.55	0.00	0.00	0.36	0.36
Sat Flow, veh/h				1676	67	1553	1774	1863	0	0	1307	442
Grp Volume(v), veh/h				285	0	74	126	432	0	0	0	507
Grp Sat Flow(s),veh/h/ln				1743	0	1553	1774	1863	0	0	0	1749
Q Serve(g_s), s				7.4	0.0	1.9	3.3	6.7	0.0	0.0	0.0	12.8
Cycle Q Clear(g_c), s				7.4	0.0	1.9	3.3	6.7	0.0	0.0	0.0	12.8
Prop In Lane				0.96		1.00	1.00		0.00	0.00		0.25
Lane Grp Cap(c), veh/h				401	0	357	208	1021	0	0	0	629
V/C Ratio(X)				0.71	0.00	0.21	0.61	0.42	0.00	0.00	0.00	0.81
Avail Cap(c_a), veh/h				1420	0	1265	939	1442	0	0	0	1354
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				17.4	0.0	15.3	20.6	6.5	0.0	0.0	0.0	14.2
Incr Delay (d2), s/veh				2.3	0.0	0.3	1.1	0.3	0.0	0.0	0.0	2.5
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				3.7	0.0	0.8	1.7	3.4	0.0	0.0	0.0	6.5
LnGrp Delay(d),s/veh				19.7	0.0	15.6	21.7	6.8	0.0	0.0	0.0	16.7
LnGrp LOS				B		B	C	A				B
Approach Vol, veh/h					359			558			507	
Approach Delay, s/veh					18.9			10.2			16.7	
Approach LOS					B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.2	23.7		16.2		32.9						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	26.0	38.0		40.0		38.0						
Max Q Clear Time (g_c+1), s	15.3	14.8		9.4		8.7						
Green Ext Time (p_c), s	0.1	2.8		2.0		2.3						
Intersection Summary												
HCM 2010 Ctrl Delay				14.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, AM
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗					↑	↗	↖	↑	
Traffic Volume (veh/h)	130	10	110	0	0	0	0	390	660	240	370	0
Future Volume (veh/h)	130	10	110	0	0	0	0	390	660	240	370	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1881				0	1881	1881	1827	1827	0
Adj Flow Rate, veh/h	141	11	19				0	424	388	261	402	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1				0	1	1	4	4	0
Cap, veh/h	204	16	196				0	644	547	338	1138	0
Arrive On Green	0.12	0.12	0.12				0.00	0.34	0.34	0.19	0.62	0.00
Sat Flow, veh/h	1668	130	1599				0	1881	1599	1740	1827	0
Grp Volume(v), veh/h	152	0	19				0	424	388	261	402	0
Grp Sat Flow(s),veh/h/ln	1798	0	1599				0	1881	1599	1740	1827	0
Q Serve(g_s), s	3.5	0.0	0.5				0.0	8.2	9.0	6.1	4.6	0.0
Cycle Q Clear(g_c), s	3.5	0.0	0.5				0.0	8.2	9.0	6.1	4.6	0.0
Prop In Lane	0.93		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	220	0	196				0	644	547	338	1138	0
V/C Ratio(X)	0.69	0.00	0.10				0.00	0.66	0.71	0.77	0.35	0.00
Avail Cap(c_a), veh/h	1680	0	1494				0	1626	1382	975	1579	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.0	0.0	16.7				0.0	12.0	12.2	16.4	3.9	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.1				0.0	1.2	1.7	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.2				0.0	4.4	4.1	3.3	2.3	0.0
LnGrp Delay(d),s/veh	19.4	0.0	16.8				0.0	13.1	13.9	20.1	4.1	0.0
LnGrp LOS	B		B					B	B	C	A	
Approach Vol, veh/h		171						812			663	
Approach Delay, s/veh		19.2						13.5			10.4	
Approach LOS		B						B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		32.7			12.0	20.7		10.1				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		37.0			24.0	37.0		40.0				
Max Q Clear Time (g_c+I1), s		6.6			8.1	11.0		5.5				
Green Ext Time (p_c), s		2.2			0.6	3.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			12.8									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	130	80	270	230	40	180
Future Vol, veh/h	130	80	270	230	40	180
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	141	87	293	250	43	196
Number of Lanes	1	1	1	1	1	1





















Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.9	13.3	11
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	180	130	80	270	230
LT Vol	40	0	0	0	270	0
Through Vol	0	0	130	0	0	230
RT Vol	0	180	0	80	0	0
Lane Flow Rate	43	196	141	87	293	250
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.084	0.312	0.234	0.127	0.494	0.385
Departure Headway (Hd)	6.953	5.74	5.965	5.255	6.056	5.551
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	516	626	603	683	596	650
Service Time	4.683	3.47	3.693	2.983	3.777	3.272
HCM Lane V/C Ratio	0.083	0.313	0.234	0.127	0.492	0.385
HCM Control Delay	10.3	11.1	10.5	8.8	14.6	11.7
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.3	1.3	0.9	0.4	2.7	1.8

Intersection				
Intersection Delay, s/veh	10.3			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	197	321	49	605
Demand Flow Rate, veh/h	203	338	49	611
Vehicles Circulating, veh/h	412	126	578	142
Vehicles Exiting, veh/h	341	501	37	322
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.1	7.4	6.5	12.8
Approach LOS	A	A	A	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	203	338	49	611
Cap Entry Lane, veh/h	748	996	634	980
Entry HV Adj Factor	0.971	0.951	1.000	0.990
Flow Entry, veh/h	197	321	49	605
Cap Entry, veh/h	726	947	634	971
V/C Ratio	0.271	0.339	0.077	0.623
Control Delay, s/veh	8.1	7.4	6.5	12.8
LOS	A	A	A	B
95th %tile Queue, veh	1	2	0	5

Intersection			
Intersection Delay, s/veh	135.0		
Intersection LOS	F		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	528	1207	517
Demand Flow Rate, veh/h	660	1219	532
Vehicles Circulating, veh/h	987	106	215
Vehicles Exiting, veh/h	338	641	1432
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	297.7	116.3	12.5
Approach LOS	F	F	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	660	1219	532
Cap Entry Lane, veh/h	421	1016	911
Entry HV Adj Factor	0.800	0.990	0.972
Flow Entry, veh/h	528	1207	517
Cap Entry, veh/h	337	1006	886
V/C Ratio	1.567	1.199	0.584
Control Delay, s/veh	297.7	116.3	12.5
LOS	F	F	B
95th %tile Queue, veh	30	37	4

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 1: Del Monte Boulevard & Reindollar Avenue 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	190	0	450	10	1310	340	400	850	0
Future Volume (veh/h)	0	0	0	190	0	450	10	1310	340	400	850	0
Number				3	8	18	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1881	1900	1881	1881	1881	1881	1881	0
Adj Flow Rate, veh/h				198	0	397	10	1365	271	417	885	0
Adj No. of Lanes				1	1	0	1	2	1	1	2	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	1	1	1	1	1	0
Cap, veh/h				501	0	444	22	1145	512	458	2015	0
Arrive On Green				0.28	0.00	0.28	0.01	0.32	0.32	0.26	0.56	0.00
Sat Flow, veh/h				1792	0	1585	1792	3574	1599	1792	3668	0
Grp Volume(v), veh/h				198	0	397	10	1365	271	417	885	0
Grp Sat Flow(s),veh/h/ln				1792	0	1585	1792	1787	1599	1792	1787	0
Q Serve(g_s), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.4	0.0
Cycle Q Clear(g_c), s				8.4	0.0	22.5	0.5	30.0	13.0	21.1	13.4	0.0
Prop In Lane				1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h				501	0	444	22	1145	512	458	2015	0
V/C Ratio(X)				0.39	0.00	0.89	0.46	1.19	0.53	0.91	0.44	0.00
Avail Cap(c_a), veh/h				574	0	508	574	1145	512	574	2015	0
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh				27.3	0.0	32.4	45.9	31.8	26.0	33.8	11.8	0.0
Incr Delay (d2), s/veh				0.5	0.0	16.8	14.1	95.4	1.0	16.2	0.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	11.9	0.3	29.8	5.9	12.5	6.7	0.0
LnGrp Delay(d),s/veh				27.8	0.0	49.2	60.0	127.2	27.1	50.0	12.0	0.0
LnGrp LOS				C		D	E	F	C	D	B	
Approach Vol, veh/h					595			1646			1302	
Approach Delay, s/veh					42.1			110.3			24.2	
Approach LOS					D			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	4.6	57.8			27.5	35.0		31.2				
Change Period (Y+Rc), s	3.5	5.0			3.5	5.0		5.0				
Max Green Setting (Gmax), s	30.0	30.0			30.0	30.0		30.0				
Max Q Clear Time (g_c+I1), s	2.5	15.4			23.1	32.0		24.5				
Green Ext Time (p_c), s	0.0	5.4			0.8	0.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				67.2								
HCM 2010 LOS				E								
Notes												

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 2: 2nd Avenue & Patton Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Future Volume (veh/h)	50	50	60	90	80	80	70	240	90	80	200	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	54	65	98	87	87	76	261	98	87	217	54
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	163	196	137	201	201	119	356	134	128	405	101
Arrive On Green	0.05	0.21	0.21	0.08	0.23	0.23	0.07	0.28	0.28	0.07	0.28	0.28
Sat Flow, veh/h	1774	771	928	1774	856	856	1774	1292	485	1774	1441	359
Grp Volume(v), veh/h	54	0	119	98	0	174	76	0	359	87	0	271
Grp Sat Flow(s),veh/h/ln	1774	0	1699	1774	0	1712	1774	0	1777	1774	0	1799
Q Serve(g_s), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Cycle Q Clear(g_c), s	1.4	0.0	2.8	2.5	0.0	4.0	2.0	0.0	8.6	2.2	0.0	6.0
Prop In Lane	1.00		0.55	1.00		0.50	1.00		0.27	1.00		0.20
Lane Grp Cap(c), veh/h	96	0	359	137	0	402	119	0	490	128	0	505
V/C Ratio(X)	0.56	0.00	0.33	0.72	0.00	0.43	0.64	0.00	0.73	0.68	0.00	0.54
Avail Cap(c_a), veh/h	228	0	1290	228	0	1300	228	0	1349	228	0	1366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	15.6	21.1	0.0	15.2	21.3	0.0	15.4	21.2	0.0	14.2
Incr Delay (d2), s/veh	5.1	0.0	0.5	6.9	0.0	0.7	5.6	0.0	2.1	6.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.3	1.5	0.0	2.0	1.1	0.0	4.5	1.3	0.0	3.1
LnGrp Delay(d),s/veh	26.7	0.0	16.2	27.9	0.0	16.0	26.8	0.0	17.5	27.3	0.0	15.1
LnGrp LOS	C		B	C		B	C		B	C		B
Approach Vol, veh/h		173			272			435			358	
Approach Delay, s/veh		19.5			20.3			19.1			18.1	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	17.4	7.6	14.4	7.1	17.6	6.5	15.5				
Change Period (Y+Rc), s	4.0	4.5	4.0	4.5	4.0	4.5	4.0	4.5				
Max Green Setting (Gmax), s	35.5	35.5	6.0	35.5	6.0	35.5	6.0	35.5				
Max Q Clear Time (g_c+14), s	10.6	10.6	4.5	4.8	4.0	8.0	3.4	6.0				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.7	0.0	1.7	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			19.1									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 3: SR 1 SB On-Ramp/SR 1 SB Off-Ramp & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕						↕	
Traffic Volume (veh/h)	0	0	0	1170	0	0	0	0	0	720	10	0
Future Volume (veh/h)	0	0	0	1170	0	0	0	0	0	720	10	0
Number				1	6	16				7	4	14
Initial Q (Qb), veh				0	0	0				0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00				1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1881	0				1900	1863	0
Adj Flow Rate, veh/h				1286	0	0				791	11	0
Adj No. of Lanes				0	1	0				0	1	0
Peak Hour Factor				0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %				1	1	0				2	2	0
Cap, veh/h				1015	0	0				662	9	0
Arrive On Green				0.57	0.00	0.00				0.38	0.38	0.00
Sat Flow, veh/h				1792	0	0				1751	24	0
Grp Volume(v), veh/h				1286	0	0				802	0	0
Grp Sat Flow(s),veh/h/ln				1792	0	0				1775	0	0
Q Serve(g_s), s				90.0	0.0	0.0				60.0	0.0	0.0
Cycle Q Clear(g_c), s				90.0	0.0	0.0				60.0	0.0	0.0
Prop In Lane				1.00		0.00				0.99		0.00
Lane Grp Cap(c), veh/h				1015	0	0				671	0	0
V/C Ratio(X)				1.27	0.00	0.00				1.20	0.00	0.00
Avail Cap(c_a), veh/h				1015	0	0				671	0	0
HCM Platoon Ratio				1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh				34.4	0.0	0.0				49.4	0.0	0.0
Incr Delay (d2), s/veh				127.8	0.0	0.0				102.2	0.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				80.3	0.0	0.0				48.3	0.0	0.0
LnGrp Delay(d),s/veh				162.2	0.0	0.0				151.6	0.0	0.0
LnGrp LOS				F						F		
Approach Vol, veh/h					1286						802	
Approach Delay, s/veh					162.2						151.6	
Approach LOS					F						F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6						
Phs Duration (G+Y+Rc), s				64.4		94.4						
Change Period (Y+Rc), s				4.4		4.4						
Max Green Setting (Gmax), s				60.0		90.0						
Max Q Clear Time (g_c+I1), s				62.0		92.0						
Green Ext Time (p_c), s				0.0		0.0						
Intersection Summary												
HCM 2010 Ctrl Delay				158.1								
HCM 2010 LOS				F								

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑	↔		↔	↔			
Traffic Vol, veh/h	10	700	0	0	1150	950	10	10	1210	0	0	0
Future Vol, veh/h	10	700	0	0	1150	950	10	10	1210	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	800	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	1	1	1	1	1	1	2	2	2
Mvmt Flow	11	737	0	0	1211	1000	11	11	1274	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	1211	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	576	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	576	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0	81.6
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT
Capacity (veh/h)	67	-	576	-	-
HCM Lane V/C Ratio	0.314	-	0.018	-	-
HCM Control Delay (s)	81.6	0	11.4	0	-
HCM Lane LOS	F	A	B	A	-
HCM 95th %tile Q(veh)	1.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 5: 2nd Avenue & Imjin Parkway 06/11/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1010	760	330	1060	140	900	110	500	90	100	150
Future Volume (veh/h)	140	1010	760	330	1060	140	900	110	500	90	100	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	1052	592	344	1104	146	938	115	287	94	104	125
Adj No. of Lanes	1	2	1	2	2	0	2	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	184	1213	540	416	1131	149	794	503	425	133	203	178
Arrive On Green	0.10	0.34	0.34	0.12	0.36	0.36	0.23	0.26	0.26	0.07	0.11	0.11
Sat Flow, veh/h	1792	3574	1592	3476	3172	419	3510	1900	1602	1810	1805	1585
Grp Volume(v), veh/h	146	1052	592	344	621	629	938	115	287	94	104	125
Grp Sat Flow(s),veh/h/ln	1792	1787	1592	1738	1787	1804	1755	1900	1602	1810	1805	1585
Q Serve(g_s), s	7.0	24.4	30.0	8.5	30.3	30.4	20.0	4.2	14.2	4.5	4.8	6.7
Cycle Q Clear(g_c), s	7.0	24.4	30.0	8.5	30.3	30.4	20.0	4.2	14.2	4.5	4.8	6.7
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	1213	540	416	637	643	794	503	425	133	203	178
V/C Ratio(X)	0.80	0.87	1.10	0.83	0.97	0.98	1.18	0.23	0.68	0.71	0.51	0.70
Avail Cap(c_a), veh/h	304	1213	540	590	637	643	794	503	425	205	429	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	27.3	29.2	38.0	28.0	28.1	34.2	25.4	29.1	40.0	37.0	37.8
Incr Delay (d2), s/veh	3.0	6.6	67.5	4.5	29.1	29.7	94.3	0.1	3.5	2.6	0.7	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	13.1	23.2	4.4	20.0	20.3	20.0	2.2	6.6	2.3	2.4	3.0
LnGrp Delay(d),s/veh	41.7	33.9	96.7	42.6	57.1	57.8	128.5	25.5	32.6	42.6	37.7	39.7
LnGrp LOS	D	C	F	D	E	E	F	C	C	D	D	D
Approach Vol, veh/h		1790			1594			1340			323	
Approach Delay, s/veh		55.3			54.3			99.1			39.9	
Approach LOS		E			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	35.3	23.5	14.5	13.6	36.8	10.0	28.0				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+I1), s	10.5	32.0	22.0	8.7	9.0	32.4	6.5	16.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			65.6									
HCM 2010 LOS			E									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 6: 3rd Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Traffic Volume (veh/h)	50	1430	160	90	1150	20	220	10	140	10	10	50
Future Volume (veh/h)	50	1430	160	90	1150	20	220	10	140	10	10	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	1459	155	92	1173	19	224	10	31	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	114	1591	168	118	1767	29	401	82	255	381	176	176
Arrive On Green	0.06	0.49	0.49	0.07	0.49	0.49	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3256	343	1792	3600	58	1412	408	1266	1386	872	872
Grp Volume(v), veh/h	51	795	819	92	582	610	224	0	41	10	0	20
Grp Sat Flow(s),veh/h/ln	1792	1787	1811	1792	1787	1871	1412	0	1674	1386	0	1745
Q Serve(g_s), s	1.5	22.6	23.3	2.8	13.6	13.6	8.4	0.0	1.1	0.3	0.0	0.5
Cycle Q Clear(g_c), s	1.5	22.6	23.3	2.8	13.6	13.6	8.9	0.0	1.1	1.4	0.0	0.5
Prop In Lane	1.00		0.19	1.00		0.03	1.00		0.76	1.00		0.50
Lane Grp Cap(c), veh/h	114	873	885	118	877	918	401	0	337	381	0	351
V/C Ratio(X)	0.45	0.91	0.93	0.78	0.66	0.66	0.56	0.00	0.12	0.03	0.00	0.06
Avail Cap(c_a), veh/h	373	1051	1065	373	1051	1100	820	0	833	792	0	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	13.0	13.2	25.4	10.6	10.6	21.4	0.0	18.1	18.7	0.0	17.8
Incr Delay (d2), s/veh	1.0	9.4	10.9	4.2	0.7	0.7	0.5	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.3	14.1	1.5	6.8	7.1	3.3	0.0	0.5	0.1	0.0	0.2
LnGrp Delay(d),s/veh	26.0	22.4	24.1	29.6	11.4	11.3	21.9	0.0	18.1	18.7	0.0	17.9
LnGrp LOS	C	C	C	C	B	B	C		B	B		B
Approach Vol, veh/h		1665			1284			265			30	
Approach Delay, s/veh		23.3			12.6			21.3			18.1	
Approach LOS		C			B			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	32.5		15.6	7.0	32.6		15.6				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+14), s	14.8	25.3		3.4	3.5	15.6		10.9				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.0	0.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				18.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 7: 4th Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1580	10	10	1220	10	20	10	10	10	10	10
Future Volume (veh/h)	10	1580	10	10	1220	10	20	10	10	10	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1629	10	10	1258	10	21	10	8	10	10	10
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	14	1841	11	14	1837	15	227	24	19	185	33	33
Arrive On Green	0.01	0.51	0.51	0.01	0.51	0.51	0.06	0.06	0.06	0.06	0.06	0.06
Sat Flow, veh/h	1792	3642	22	1792	3634	29	880	419	335	571	571	571
Grp Volume(v), veh/h	10	799	840	10	619	649	39	0	0	30	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1877	1792	1787	1875	1634	0	0	1712	0	0
Q Serve(g_s), s	0.2	12.6	12.6	0.2	8.2	8.2	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	12.6	12.6	0.2	8.2	8.2	0.7	0.0	0.0	0.5	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.02	0.54		0.21	0.33		0.33
Lane Grp Cap(c), veh/h	14	903	949	14	903	948	270	0	0	251	0	0
V/C Ratio(X)	0.70	0.88	0.89	0.70	0.68	0.69	0.14	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	655	1846	1939	655	1846	1937	1540	0	0	1574	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.6	7.0	7.0	15.6	5.9	5.9	14.3	0.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	20.4	1.2	1.1	20.4	0.3	0.3	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	6.3	6.6	0.2	4.0	4.2	0.3	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	35.9	8.2	8.1	35.9	6.2	6.2	14.4	0.0	0.0	14.3	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	B			B		
Approach Vol, veh/h		1649			1278			39			30	
Approach Delay, s/veh		8.3			6.5			14.4			14.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.8	21.4		6.3	3.8	21.4		6.3				
Change Period (Y+Rc), s	3.5	5.5		4.5	3.5	5.5		4.5				
Max Green Setting (Gmax), s	1.5	32.5		27.5	11.5	32.5		27.5				
Max Q Clear Time (g_c+12.2), s	1.5	14.6		2.5	2.2	10.2		2.7				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	0.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.7								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 8: 5th Avenue/California Avenue & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	1230	10	10	990	100	20	50	10	70	40	230
Future Volume (veh/h)	300	1230	10	10	990	100	20	50	10	70	40	230
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	309	1268	10	10	1021	97	21	52	7	72	41	68
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	1	1	1
Cap, veh/h	369	2000	16	14	1162	110	141	208	24	189	71	90
Arrive On Green	0.21	0.55	0.55	0.01	0.35	0.35	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1792	3635	29	1792	3298	313	280	1375	159	526	469	599
Grp Volume(v), veh/h	309	623	655	10	553	565	80	0	0	181	0	0
Grp Sat Flow(s),veh/h/ln	1792	1787	1876	1792	1787	1824	1814	0	0	1594	0	0
Q Serve(g_s), s	7.6	11.1	11.1	0.3	13.4	13.4	0.0	0.0	0.0	3.2	0.0	0.0
Cycle Q Clear(g_c), s	7.6	11.1	11.1	0.3	13.4	13.4	1.7	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.17	0.26		0.09	0.40		0.38
Lane Grp Cap(c), veh/h	369	984	1033	14	630	643	373	0	0	350	0	0
V/C Ratio(X)	0.84	0.63	0.63	0.71	0.88	0.88	0.21	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	583	1163	1221	583	1163	1187	846	0	0	783	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.6	7.2	7.2	22.8	14.0	14.0	17.4	0.0	0.0	18.6	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.5	0.4	21.9	1.6	1.6	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	5.5	5.8	0.2	6.7	6.9	0.9	0.0	0.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	20.8	7.6	7.6	44.7	15.6	15.6	17.5	0.0	0.0	19.1	0.0	0.0
LnGrp LOS	C	A	A	D	B	B	B			B		
Approach Vol, veh/h		1587			1128			80			181	
Approach Delay, s/veh		10.2			15.9			17.5			19.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.9	30.7		11.6	13.0	21.5		11.6				
Change Period (Y+Rc), s	3.5	5.3		4.6	3.5	5.3		4.6				
Max Green Setting (Gmax), s	30.0	30.0		20.0	15.0	30.0		20.0				
Max Q Clear Time (g_c+1/3), s	13.1	13.1		6.9	9.6	15.4		3.7				
Green Ext Time (p_c), s	0.0	0.9		0.1	0.0	0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				13.1								
HCM 2010 LOS				B								

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	10	20	420	270	10
Future Vol, veh/h	10	10	20	420	270	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	155	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	11	22	457	293	11

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	800	299	304	0	-	0
Stage 1	299	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	354	741	1257	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	348	741	1257	-	-	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	609	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1257	-	474	-	-
HCM Lane V/C Ratio	0.017	-	0.046	-	-
HCM Control Delay (s)	7.9	-	13	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 10: Imjin Road & Imjin Parkway 06/11/2019

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↙	↑↑	↙↘	↗		
Traffic Volume (veh/h)	1170	130	160	830	270	610		
Future Volume (veh/h)	1170	130	160	830	270	610		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1900	1881	1881	1881	1881		
Adj Flow Rate, veh/h	1232	134	168	874	284	576		
Adj No. of Lanes	2	0	1	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	1341	145	212	2231	378	675		
Arrive On Green	0.41	0.41	0.12	0.62	0.21	0.21		
Sat Flow, veh/h	3347	353	1792	3668	1792	3198		
Grp Volume(v), veh/h	675	691	168	874	284	576		
Grp Sat Flow(s),veh/h/ln	1787	1819	1792	1787	1792	1599		
Q Serve(g_s), s	20.2	20.3	5.2	6.9	8.4	9.8		
Cycle Q Clear(g_c), s	20.2	20.3	5.2	6.9	8.4	9.8		
Prop In Lane		0.19	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	737	750	212	2231	378	675		
V/C Ratio(X)	0.92	0.92	0.79	0.39	0.75	0.85		
Avail Cap(c_a), veh/h	949	966	634	2231	698	1246		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.7	15.7	24.2	5.3	20.9	21.4		
Incr Delay (d2), s/veh	9.9	10.4	2.6	0.0	1.1	1.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	11.8	12.1	2.7	3.3	4.2	4.4		
LnGrp Delay(d),s/veh	25.6	26.1	26.8	5.3	22.0	22.6		
LnGrp LOS	C	C	C	A	C	C		
Approach Vol, veh/h	1366			1042	860			
Approach Delay, s/veh	25.9			8.8	22.4			
Approach LOS	C			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.0	28.6				40.6		15.9
Change Period (Y+Rc), s	5.3	* 5.3				5.3		4.0
Max Green Setting (Gmax), s	20.0	* 30				30.0		22.0
Max Q Clear Time (g_c+I1), s	7.2	22.3				8.9		11.8
Green Ext Time (p_c), s	0.0	0.9				0.9		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			19.5					
HCM 2010 LOS			B					
Notes								

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 11: Abrams Drive & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↗		↔	↗		↖	↑	↖	↖	↑	↗
Traffic Volume (veh/h)	130	1180	250	170	770	120	170	30	200	60	20	130
Future Volume (veh/h)	130	1180	250	170	770	120	170	30	200	60	20	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	140	1269	220	183	828	109	183	32	0	65	22	0
Adj No. of Lanes	2	2	0	2	2	0	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	276	1751	301	270	1795	236	322	315	268	312	312	265
Arrive On Green	0.08	0.57	0.57	0.08	0.57	0.57	0.17	0.17	0.00	0.17	0.17	0.00
Sat Flow, veh/h	3476	3051	525	3476	3176	418	1395	1881	1599	1369	1863	1583
Grp Volume(v), veh/h	140	739	750	183	466	471	183	32	0	65	22	0
Grp Sat Flow(s),veh/h/ln	1738	1787	1789	1738	1787	1807	1395	1881	1599	1369	1863	1583
Q Serve(g_s), s	2.7	21.3	21.8	3.6	10.9	10.9	9.0	1.0	0.0	3.0	0.7	0.0
Cycle Q Clear(g_c), s	2.7	21.3	21.8	3.6	10.9	10.9	9.7	1.0	0.0	4.0	0.7	0.0
Prop In Lane	1.00		0.29	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	1026	1027	270	1010	1021	322	315	268	312	312	265
V/C Ratio(X)	0.51	0.72	0.73	0.68	0.46	0.46	0.57	0.10	0.00	0.21	0.07	0.00
Avail Cap(c_a), veh/h	982	1262	1263	982	1262	1277	679	797	678	662	790	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.3	11.0	11.1	31.8	9.1	9.1	28.9	24.9	0.0	26.6	24.8	0.0
Incr Delay (d2), s/veh	0.5	1.1	1.2	1.1	0.1	0.1	0.6	0.1	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.6	11.0	1.8	5.3	5.4	3.5	0.5	0.0	1.1	0.4	0.0
LnGrp Delay(d),s/veh	31.8	12.0	12.3	32.9	9.2	9.2	29.5	25.0	0.0	26.8	24.8	0.0
LnGrp LOS	C	B	B	C	A	A	C	C		C	C	
Approach Vol, veh/h		1629			1120			215			87	
Approach Delay, s/veh		13.8			13.1			28.8			26.3	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	45.9		15.9	9.6	45.3		15.9				
Change Period (Y+Rc), s	3.5	5.3		4.0	4.0	5.3		4.0				
Max Green Setting (Gmax), s	20.0	50.0		30.0	20.0	50.0		30.0				
Max Q Clear Time (g_c+15), s	15.6	23.8		6.0	4.7	12.9		11.7				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.0	0.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				15.0								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 12: Reservation Road & Imjin Parkway 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	20	1280	10	40	30	820	630	10	20	940	190
Future Volume (veh/h)	110	20	1280	10	40	30	820	630	10	20	940	190
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	124	22	1037	11	45	12	921	708	10	22	1056	79
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	802	434	1296	75	79	66	802	2048	916	55	1281	573
Arrive On Green	0.23	0.23	0.23	0.04	0.04	0.04	0.23	0.57	0.57	0.02	0.36	0.36
Sat Flow, veh/h	3476	1881	2802	1740	1827	1531	3476	3574	1599	3476	3574	1599
Grp Volume(v), veh/h	124	22	1037	11	45	12	921	708	10	22	1056	79
Grp Sat Flow(s),veh/h/ln	1738	1881	1401	1740	1827	1531	1738	1787	1599	1738	1787	1599
Q Serve(g_s), s	4.3	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	40.8	5.1
Cycle Q Clear(g_c), s	4.3	1.4	35.0	0.9	3.7	1.1	35.0	16.0	0.4	1.0	40.8	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	802	434	1296	75	79	66	802	2048	916	55	1281	573
V/C Ratio(X)	0.15	0.05	0.80	0.15	0.57	0.18	1.15	0.35	0.01	0.40	0.82	0.14
Avail Cap(c_a), veh/h	802	434	1296	356	373	313	802	2048	916	458	1414	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	45.4	34.9	69.9	71.2	70.0	58.4	17.2	13.9	73.9	44.3	32.9
Incr Delay (d2), s/veh	0.0	0.0	3.4	0.3	2.4	0.5	81.2	0.3	0.0	1.7	5.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.7	19.1	0.5	1.9	0.5	25.7	7.9	0.2	0.5	21.0	2.3
LnGrp Delay(d),s/veh	46.6	45.4	38.3	70.2	73.6	70.5	139.5	17.5	13.9	75.6	49.3	33.2
LnGrp LOS	D	D	D	E	E	E	F	B	B	E	D	C
Approach Vol, veh/h		1183			68			1639			1157	
Approach Delay, s/veh		39.3			72.5			86.1			48.7	
Approach LOS		D			E			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	60.6		11.6	6.5	93.1		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+Q), s	37.0	42.8		5.7	3.0	18.0		37.0				
Green Ext Time (p_c), s	0.0	11.5		0.2	0.0	10.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			61.5									
HCM 2010 LOS			E									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 14: Reservation Road & Inter-Garrison Road 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	80	960	620	380	940	210		
Future Volume (veh/h)	80	960	620	380	940	210		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	98	1016	756	463	1146	247		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	412	640	299	2374	1368	293		
Arrive On Green	0.23	0.23	0.17	0.68	0.47	0.47		
Sat Flow, veh/h	1792	1599	1757	3597	3024	627		
Grp Volume(v), veh/h	98	1016	756	463	696	697		
Grp Sat Flow(s),veh/h/ln	1792	1599	1757	1752	1787	1770		
Q Serve(g_s), s	5.2	27.0	20.0	5.8	39.9	40.7		
Cycle Q Clear(g_c), s	5.2	27.0	20.0	5.8	39.9	40.7		
Prop In Lane	1.00	1.00	1.00			0.35		
Lane Grp Cap(c), veh/h	412	640	299	2374	835	827		
V/C Ratio(X)	0.24	1.59	2.53	0.20	0.83	0.84		
Avail Cap(c_a), veh/h	412	640	299	2374	913	904		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	36.8	35.2	48.7	7.0	27.3	27.5		
Incr Delay (d2), s/veh	0.3	271.9	697.0	0.1	7.1	7.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.6	69.0	67.6	2.8	21.2	21.5		
LnGrp Delay(d),s/veh	37.1	307.1	745.7	7.1	34.4	35.2		
LnGrp LOS	D	F	F	A	C	D		
Approach Vol, veh/h	1114			1219	1393			
Approach Delay, s/veh	283.4			465.2	34.8			
Approach LOS	F			F	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.7	61.2				85.9		31.5
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	20	60.0				60.0		27.0
Max Q Clear Time (g_c+Yc), s	22.5	42.7				7.8		29.0
Green Ext Time (p_c), s	0.0	12.2				5.4		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			249.9					
HCM 2010 LOS			F					
Notes								

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 15: 2nd Avenue & 9th Street 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↕		↔	↕	
Traffic Volume (veh/h)	10	10	30	40	10	20	20	750	50	40	610	10
Future Volume (veh/h)	10	10	30	40	10	20	20	750	50	40	610	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1881	1881	1900	1827	1827	1900
Adj Flow Rate, veh/h	11	11	23	44	11	3	22	824	51	44	670	-1
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	4	4	4
Cap, veh/h	256	204	297	359	78	15	49	1381	85	85	1481	0
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.03	0.40	0.40	0.05	0.43	0.00
Sat Flow, veh/h	600	1094	1591	1020	416	78	1792	3412	211	1740	3563	0
Grp Volume(v), veh/h	22	0	23	58	0	0	22	432	443	44	669	0
Grp Sat Flow(s),veh/h/ln	1694	0	1591	1514	0	0	1792	1787	1836	1740	1736	0
Q Serve(g_s), s	0.0	0.0	0.4	0.4	0.0	0.0	0.5	7.1	7.1	0.9	5.1	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.4	1.1	0.0	0.0	0.5	7.1	7.1	0.9	5.1	0.0
Prop In Lane	0.50		1.00	0.76		0.05	1.00		0.12	1.00		0.00
Lane Grp Cap(c), veh/h	460	0	297	451	0	0	49	724	743	85	1481	0
V/C Ratio(X)	0.05	0.00	0.08	0.13	0.00	0.00	0.45	0.60	0.60	0.52	0.45	0.00
Avail Cap(c_a), veh/h	1668	0	1482	1552	0	0	548	1903	1955	533	3696	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.6	0.0	12.6	12.8	0.0	0.0	18.0	8.8	8.8	17.4	7.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.0	6.3	0.8	0.8	4.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.5	0.0	0.0	0.3	3.6	3.7	0.6	2.5	0.0
LnGrp Delay(d),s/veh	12.6	0.0	12.7	13.0	0.0	0.0	24.3	9.6	9.5	22.2	7.9	0.0
LnGrp LOS	B		B	B			C	A	A	C	A	
Approach Vol, veh/h		45			58			897			713	
Approach Delay, s/veh		12.7			13.0			9.9			8.8	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.0	4.5	21.0		12.0	5.3	20.2				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	40.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		2.4	2.5	7.1		3.1	2.9	9.1				
Green Ext Time (p_c), s		0.1	0.0	5.0		0.3	0.0	6.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 16: 2nd Avenue & 8th Street 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	40	80	600	220	70	490		
Future Volume (veh/h)	40	80	600	220	70	490		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.97	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1827	1827		
Adj Flow Rate, veh/h	43	51	638	203	74	521		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	0	0	1	1	4	4		
Cap, veh/h	158	141	1148	365	129	2126		
Arrive On Green	0.09	0.09	0.43	0.43	0.07	0.61		
Sat Flow, veh/h	1810	1615	2745	843	1740	3563		
Grp Volume(v), veh/h	43	51	430	411	74	521		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1707	1740	1736		
Q Serve(g_s), s	0.7	1.0	6.0	6.0	1.4	2.3		
Cycle Q Clear(g_c), s	0.7	1.0	6.0	6.0	1.4	2.3		
Prop In Lane	1.00	1.00		0.49	1.00			
Lane Grp Cap(c), veh/h	158	141	774	739	129	2126		
V/C Ratio(X)	0.27	0.36	0.56	0.56	0.57	0.25		
Avail Cap(c_a), veh/h	1630	1455	2415	2306	601	6254		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.2	14.3	7.0	7.1	14.9	2.9		
Incr Delay (d2), s/veh	0.9	1.6	0.6	0.7	3.9	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	1.0	3.0	2.9	0.8	1.1		
LnGrp Delay(d),s/veh	15.1	15.9	7.7	7.7	18.8	3.0		
LnGrp LOS	B	B	A	A	B	A		
Approach Vol, veh/h	94		841			595		
Approach Delay, s/veh	15.5		7.7			5.0		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.4		7.9	6.0	19.4
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				60.0		30.0	11.5	45.0
Max Q Clear Time (g_c+I1), s				4.3		3.0	3.4	8.0
Green Ext Time (p_c), s				3.8		0.2	0.1	6.1
Intersection Summary								
HCM 2010 Ctrl Delay			7.1					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 19: 2nd Avenue & Inter-Garrison Road 06/11/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	70	30	790	50	30	510		
Future Volume (veh/h)	70	30	790	50	30	510		
Number	1	16	8	18	7	4		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1900	1881	1900	1863	1863		
Adj Flow Rate, veh/h	72	7	814	44	31	526		
Adj No. of Lanes	1	1	2	0	1	2		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	1	1	2	2		
Cap, veh/h	279	249	1427	77	66	1958		
Arrive On Green	0.15	0.15	0.41	0.41	0.04	0.55		
Sat Flow, veh/h	1810	1615	3543	186	1774	3632		
Grp Volume(v), veh/h	72	7	422	436	31	526		
Grp Sat Flow(s),veh/h/ln	1810	1615	1787	1848	1774	1770		
Q Serve(g_s), s	1.2	0.1	6.2	6.2	0.6	2.7		
Cycle Q Clear(g_c), s	1.2	0.1	6.2	6.2	0.6	2.7		
Prop In Lane	1.00	1.00		0.10	1.00			
Lane Grp Cap(c), veh/h	279	249	739	764	66	1958		
V/C Ratio(X)	0.26	0.03	0.57	0.57	0.47	0.27		
Avail Cap(c_a), veh/h	1852	1653	2090	2162	597	5692		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.7	12.3	7.7	7.7	16.1	4.0		
Incr Delay (d2), s/veh	0.5	0.0	0.7	0.7	5.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.6	0.1	3.1	3.3	0.4	1.3		
LnGrp Delay(d),s/veh	13.2	12.3	8.4	8.4	21.2	4.1		
LnGrp LOS	B	B	A	A	C	A		
Approach Vol, veh/h	79		858			557		
Approach Delay, s/veh	13.1		8.4			5.0		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.9		10.3	4.8	19.1
Change Period (Y+Rc), s				5.0		5.0	3.5	5.0
Max Green Setting (Gmax), s				55.0		35.0	11.5	40.0
Max Q Clear Time (g_c+I1), s				4.7		3.2	2.6	8.2
Green Ext Time (p_c), s				3.9		0.2	0.0	5.9
Intersection Summary								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					

Intersection

Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	20	30	120	30	20	20	80	100	20	90	10
Future Vol, veh/h	10	20	30	120	30	20	20	80	100	20	90	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	1	1	1	1	1	1	3	3	3	0	0	0
Mvmt Flow	12	24	37	146	37	24	24	98	122	24	110	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	10.1	9.6	9.1
HCM LOS	A	B	A	A

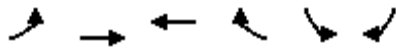
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	17%	71%	17%
Vol Thru, %	40%	33%	18%	75%
Vol Right, %	50%	50%	12%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	60	170	120
LT Vol	20	10	120	20
Through Vol	80	20	30	90
RT Vol	100	30	20	10
Lane Flow Rate	244	73	207	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.308	0.098	0.287	0.198
Departure Headway (Hd)	4.552	4.838	4.982	4.871
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	733	717	732
Service Time	2.608	2.916	3.047	2.935
HCM Lane V/C Ratio	0.311	0.1	0.289	0.199
HCM Control Delay	9.6	8.4	10.1	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	1.3	0.3	1.2	0.7

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 21: 7th Avenue/8th Street & Inter-Garrison Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	250	0	0	160	50	50	180	170	170	0	10
Future Volume (veh/h)	10	250	0	0	160	50	50	180	170	170	0	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	0	0	1827	1827	1900	1810	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	269	0	0	172	39	54	194	111	183	0	2
Adj No. of Lanes	1	1	0	0	1	1	0	1	0	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	0	0	4	4	5	5	5	0	0	0
Cap, veh/h	20	591	0	0	421	355	70	250	143	261	0	232
Arrive On Green	0.01	0.31	0.00	0.00	0.23	0.23	0.27	0.27	0.27	0.14	0.00	0.14
Sat Flow, veh/h	1792	1881	0	0	1827	1539	254	913	523	1810	0	1609
Grp Volume(v), veh/h	11	269	0	0	172	39	359	0	0	183	0	2
Grp Sat Flow(s),veh/h/ln	1792	1881	0	0	1827	1539	1690	0	0	1810	0	1609
Q Serve(g_s), s	0.3	5.5	0.0	0.0	3.9	1.0	9.5	0.0	0.0	4.7	0.0	0.1
Cycle Q Clear(g_c), s	0.3	5.5	0.0	0.0	3.9	1.0	9.5	0.0	0.0	4.7	0.0	0.1
Prop In Lane	1.00		0.00	0.00		1.00	0.15		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	20	591	0	0	421	355	462	0	0	261	0	232
V/C Ratio(X)	0.54	0.46	0.00	0.00	0.41	0.11	0.78	0.00	0.00	0.70	0.00	0.01
Avail Cap(c_a), veh/h	148	1554	0	0	1226	1033	838	0	0	859	0	764
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	13.3	0.0	0.0	15.8	14.7	16.2	0.0	0.0	19.7	0.0	17.8
Incr Delay (d2), s/veh	20.4	0.5	0.0	0.0	0.6	0.1	2.9	0.0	0.0	3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.9	0.0	0.0	2.0	0.4	4.8	0.0	0.0	2.6	0.0	0.0
LnGrp Delay(d),s/veh	44.3	13.8	0.0	0.0	16.5	14.8	19.1	0.0	0.0	23.2	0.0	17.8
LnGrp LOS	D	B			B	B	B			C		B
Approach Vol, veh/h		280			211			359			185	
Approach Delay, s/veh		15.0			16.2			19.1			23.1	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		20.2		11.0	4.1	16.2		17.2				
Change Period (Y+Rc), s		5.0		4.0	3.5	5.0		4.0				
Max Green Setting (Gmax), s		40.0		23.0	4.0	32.5		24.0				
Max Q Clear Time (g_c+11), s		7.5		6.7	2.3	5.9		11.5				
Green Ext Time (p_c), s		1.6		0.8	0.0	1.1		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				18.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 23: Inter-Garrison Road & Abrams Drive 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	390	620	400	140	120	260		
Future Volume (veh/h)	390	620	400	140	120	260		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1792	1792	1827	1827		
Adj Flow Rate, veh/h	411	653	421	121	126	51		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	6	6	4	4		
Cap, veh/h	484	1232	516	429	318	146		
Arrive On Green	0.27	0.66	0.29	0.29	0.09	0.09		
Sat Flow, veh/h	1774	1863	1792	1491	3375	1553		
Grp Volume(v), veh/h	411	653	421	121	126	51		
Grp Sat Flow(s),veh/h/ln	1774	1863	1792	1491	1688	1553		
Q Serve(g_s), s	7.6	6.4	7.6	2.2	1.2	1.1		
Cycle Q Clear(g_c), s	7.6	6.4	7.6	2.2	1.2	1.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	484	1232	516	429	318	146		
V/C Ratio(X)	0.85	0.53	0.82	0.28	0.40	0.35		
Avail Cap(c_a), veh/h	587	3216	2321	1931	3060	1408		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	12.0	3.1	11.5	9.6	14.8	14.7		
Incr Delay (d2), s/veh	8.4	0.1	1.2	0.1	0.3	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.8	3.1	3.9	0.9	0.6	0.9		
LnGrp Delay(d),s/veh	20.4	3.2	12.7	9.7	15.1	15.3		
LnGrp LOS	C	A	B	A	B	B		
Approach Vol, veh/h		1064	542		177			
Approach Delay, s/veh		9.8	12.1		15.1			
Approach LOS		A	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.0		6.8	13.0	15.0		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		60.0		31.5	11.5	45.0		
Max Q Clear Time (g_c+I1), s		8.4		3.2	9.6	9.6		
Green Ext Time (p_c), s		0.6		0.0	0.0	0.4		
Intersection Summary								
HCM 2010 Ctrl Delay			11.0					
HCM 2010 LOS			B					
Notes								

User approved changes to right turn type.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 24: Inter-Garrison Road & Schoonover Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	470	110	380	330	40	120	60	870	20	30	70
Future Volume (veh/h)	200	470	110	380	330	40	120	60	870	20	30	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1878	1900	1863	1810	1810	1863	1863	1863	1900	1760	1624
Adj Flow Rate, veh/h	233	547	93	442	384	33	140	70	0	23	35	57
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	2	5	5	2	2	2	2	2	17
Cap, veh/h	275	639	108	481	1123	502	243	255	217	86	130	173
Arrive On Green	0.15	0.21	0.21	0.27	0.33	0.33	0.14	0.14	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1792	3053	517	1774	3438	1538	1774	1863	1583	684	1041	1380
Grp Volume(v), veh/h	233	319	321	442	384	33	140	70	0	58	0	57
Grp Sat Flow(s),veh/h/ln	1792	1784	1786	1774	1719	1538	1774	1863	1583	1726	0	1380
Q Serve(g_s), s	9.1	12.4	12.5	17.4	6.1	1.1	5.3	2.4	0.0	2.2	0.0	2.7
Cycle Q Clear(g_c), s	9.1	12.4	12.5	17.4	6.1	1.1	5.3	2.4	0.0	2.2	0.0	2.7
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	0.40		1.00
Lane Grp Cap(c), veh/h	275	373	374	481	1123	502	243	255	217	216	0	173
V/C Ratio(X)	0.85	0.85	0.86	0.92	0.34	0.07	0.58	0.27	0.00	0.27	0.00	0.33
Avail Cap(c_a), veh/h	761	745	746	852	1579	707	988	1037	882	649	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	27.4	27.4	25.4	18.3	16.6	29.0	27.8	0.0	28.4	0.0	28.7
Incr Delay (d2), s/veh	2.8	2.2	2.3	4.4	0.1	0.0	0.8	0.2	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	6.3	6.4	9.1	2.9	0.5	2.7	1.3	0.0	1.1	0.0	1.0
LnGrp Delay(d),s/veh	32.4	29.5	29.7	29.8	18.4	16.7	29.8	28.0	0.0	28.7	0.0	29.1
LnGrp LOS	C	C	C	C	B	B	C	C		C		C
Approach Vol, veh/h		873			859			210			115	
Approach Delay, s/veh		30.3			24.2			29.2			28.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	20.0		14.0	14.5	28.5		14.8				
Change Period (Y+Rc), s	3.5	5.0		5.0	3.5	5.0		5.0				
Max Green Setting (Gmax), s	31.5	30.0		27.0	30.5	33.0		40.0				
Max Q Clear Time (g_c+1), s	19.4	14.5		4.7	11.1	8.1		7.3				
Green Ext Time (p_c), s	0.1	0.6		0.0	0.1	0.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			27.6									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	37.1
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↘		↙	↘
Traffic Vol, veh/h	990	270	160	100	120	520
Future Vol, veh/h	990	270	160	100	120	520
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	1	1	6	6	3	3
Mvmt Flow	1138	310	184	115	138	598
Number of Lanes	1	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	527.6	23.2	89.6
HCM LOS	F	C	F

Lane	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	62%	0%	0%
Vol Right, %	0%	0%	38%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	990	270	260	120	520
LT Vol	990	0	0	120	0
Through Vol	0	270	160	0	0
RT Vol	0	0	100	0	520
Lane Flow Rate	1138	310	299	138	598
Geometry Grp	7	7	4	7	7
Degree of Util (X)	2.425	0.618	0.603	0.304	1.119
Departure Headway (Hd)	8.119	7.605	8.349	9.298	8.059
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	455	478	436	389	454
Service Time	5.819	5.305	6.349	6.998	5.759
HCM Lane V/C Ratio	2.501	0.649	0.686	0.355	1.317
HCM Control Delay	665.6	21.8	23.2	16	106.6
HCM Lane LOS	F	C	C	C	F
HCM 95th-tile Q	83.8	4.1	3.9	1.3	17.4

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 26: East Garrison Road & Reservation Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1680	130	230	880	0	110	0	150	0	0	0
Future Volume (veh/h)	0	1680	130	230	880	0	110	0	150	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	1900	1881	1881	0	1845	0	1845			
Adj Flow Rate, veh/h	0	1732	132	237	907	0	113	0	126			
Adj No. of Lanes	1	2	0	1	2	0	1	0	1			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	1	1	0	3	0	3			
Cap, veh/h	2	2021	152	270	2838	0	177	0	158			
Arrive On Green	0.00	0.61	0.61	0.15	0.79	0.00	0.10	0.00	0.10			
Sat Flow, veh/h	1774	3336	252	1792	3668	0	1757	0	1568			
Grp Volume(v), veh/h	0	910	954	237	907	0	113	0	126			
Grp Sat Flow(s),veh/h/ln	1774	1770	1818	1792	1787	0	1757	0	1568			
Q Serve(g_s), s	0.0	39.9	41.7	12.4	6.7	0.0	5.9	0.0	7.5			
Cycle Q Clear(g_c), s	0.0	39.9	41.7	12.4	6.7	0.0	5.9	0.0	7.5			
Prop In Lane	1.00		0.14	1.00		0.00	1.00		1.00			
Lane Grp Cap(c), veh/h	2	1072	1102	270	2838	0	177	0	158			
V/C Ratio(X)	0.00	0.85	0.87	0.88	0.32	0.00	0.64	0.00	0.80			
Avail Cap(c_a), veh/h	371	1109	1139	374	2838	0	495	0	442			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	15.3	15.6	39.8	2.7	0.0	41.4	0.0	42.1			
Incr Delay (d2), s/veh	0.0	6.7	7.6	12.7	0.1	0.0	1.4	0.0	3.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	21.2	23.0	7.1	3.3	0.0	3.0	0.0	3.4			
LnGrp Delay(d),s/veh	0.0	22.0	23.2	52.5	2.8	0.0	42.8	0.0	45.6			
LnGrp LOS		C	C	D	A		D		D			
Approach Vol, veh/h		1864			1144			239				
Approach Delay, s/veh		22.6			13.1			44.3				
Approach LOS		C			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	8.0	63.4			0.0	81.4		14.3				
Change Period (Y+Rc), s	3.6	5.4			3.5	5.4		4.7				
Max Green Setting (Gmax), s	20	60.0			20.0	60.0		27.0				
Max Q Clear Time (g_c+1/4), s	14.4	43.7			0.0	8.7		9.5				
Green Ext Time (p_c), s	0.0	14.4			0.0	8.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay					20.9							
HCM 2010 LOS					C							
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 27: Reservation Road & Watkins Gate Road 06/11/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	10	220	210	1310	2280	60		
Future Volume (veh/h)	10	220	210	1310	2280	60		
Number	5	12	3	8	4	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1881	1881	1863	1900		
Adj Flow Rate, veh/h	11	32	228	1424	2478	62		
Adj No. of Lanes	1	1	1	2	2	0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	1	1	2	2		
Cap, veh/h	53	47	242	3119	2498	62		
Arrive On Green	0.03	0.03	0.13	0.87	0.71	0.71		
Sat Flow, veh/h	1774	1583	1792	3668	3622	88		
Grp Volume(v), veh/h	11	32	228	1424	1237	1303		
Grp Sat Flow(s),veh/h/ln	1774	1583	1792	1787	1770	1847		
Q Serve(g_s), s	0.8	2.7	16.8	11.2	90.6	93.2		
Cycle Q Clear(g_c), s	0.8	2.7	16.8	11.2	90.6	93.2		
Prop In Lane	1.00	1.00	1.00			0.05		
Lane Grp Cap(c), veh/h	53	47	242	3119	1253	1308		
V/C Ratio(X)	0.21	0.68	0.94	0.46	0.99	1.00		
Avail Cap(c_a), veh/h	272	243	242	3119	1253	1308		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	63.2	64.1	57.2	1.8	18.9	19.3		
Incr Delay (d2), s/veh	0.7	6.1	42.1	0.2	22.5	23.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	1.2	11.2	5.4	51.5	55.4		
LnGrp Delay(d),s/veh	63.9	70.2	99.3	2.0	41.4	43.2		
LnGrp LOS	E	E	F	A	D	D		
Approach Vol, veh/h	43			1652	2540			
Approach Delay, s/veh	68.6			15.4	42.3			
Approach LOS	E			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.5	22.0	101.0				123.0
Change Period (Y+Rc), s		6.5	4.0	6.5				6.5
Max Green Setting (Gmax), s		20.5	18.0	94.5				116.5
Max Q Clear Time (g_c+11), s		4.7	18.8	95.2				13.2
Green Ext Time (p_c), s		0.0	0.0	0.0				27.0
Intersection Summary								
HCM 2010 Ctrl Delay			32.1					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 28: Davis Road & Reservation Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1410	520	10	10	370	100	10	10	10	120	10	830
Future Volume (veh/h)	1410	520	10	10	370	100	10	10	10	120	10	830
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1834	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	1500	553	11	11	394	106	11	11	9	128	11	748
Adj No. of Lanes	1	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	445	1996	40	18	450	121	17	17	14	415	36	802
Arrive On Green	0.25	0.56	0.56	0.01	0.32	0.32	0.03	0.03	0.03	0.25	0.25	0.25
Sat Flow, veh/h	1774	3549	71	1740	1393	375	631	631	516	1656	142	1599
Grp Volume(v), veh/h	1500	276	288	11	0	500	31	0	0	139	0	748
Grp Sat Flow(s),veh/h/ln	1774	1770	1850	1740	0	1768	1777	0	0	1798	0	1599
Q Serve(g_s), s	30.0	9.7	9.7	0.8	0.0	31.9	2.1	0.0	0.0	7.5	0.0	30.0
Cycle Q Clear(g_c), s	30.0	9.7	9.7	0.8	0.0	31.9	2.1	0.0	0.0	7.5	0.0	30.0
Prop In Lane	1.00		0.04	1.00		0.21	0.35		0.29	0.92		1.00
Lane Grp Cap(c), veh/h	445	995	1041	18	0	571	48	0	0	451	0	802
V/C Ratio(X)	3.37	0.28	0.28	0.62	0.00	0.88	0.65	0.00	0.00	0.31	0.00	0.93
Avail Cap(c_a), veh/h	445	995	1041	436	0	887	446	0	0	451	0	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.8	13.6	13.6	59.0	0.0	38.2	57.6	0.0	0.0	36.4	0.0	27.9
Incr Delay (d2), s/veh	1072.9	0.2	0.2	12.2	0.0	8.3	5.4	0.0	0.0	0.1	0.0	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.2	4.7	5.0	0.4	0.0	16.9	1.1	0.0	0.0	3.8	0.0	26.8
LnGrp Delay(d),s/veh	1117.7	13.8	13.8	71.2	0.0	46.5	63.0	0.0	0.0	36.5	0.0	45.2
LnGrp LOS	F	B	B	E		D	E			D		D
Approach Vol, veh/h	2064				511		31				887	
Approach Delay, s/veh	816.1				47.1		63.0				43.9	
Approach LOS	F				D		E				D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	5.1	72.3	35.0		33.8	43.6	7.2					
Change Period (Y+Rc), s	3.9	5.0	5.0		* 3.8	5.0	4.0					
Max Green Setting (Gmax)	30	60.0	30.0		* 30	60.0	30.0					
Max Q Clear Time (g_c+11.8)	11.7	11.7	32.0		32.0	33.9	4.1					
Green Ext Time (p_c), s	0.0	5.3	0.0		0.0	4.7	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay			500.8									
HCM 2010 LOS			F									
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 29: 2nd Avenue & Divarty Street 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	200	10	80	150	10	30	40	610	110	30	460	100
Future Volume (veh/h)	200	10	80	150	10	30	40	610	110	30	460	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1881	1881	1900
Adj Flow Rate, veh/h	213	11	85	160	11	32	43	649	117	32	489	106
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	1	1	1
Cap, veh/h	387	38	114	587	36	569	82	1018	183	65	947	204
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.05	0.33	0.33	0.04	0.32	0.32
Sat Flow, veh/h	740	107	321	1255	101	1608	1810	3054	550	1792	2923	630
Grp Volume(v), veh/h	309	0	0	171	0	32	43	383	383	32	298	297
Grp Sat Flow(s),veh/h/ln	1168	0	0	1356	0	1608	1810	1805	1799	1792	1787	1765
Q Serve(g_s), s	8.3	0.0	0.0	0.0	0.0	0.6	1.1	8.8	8.8	0.9	6.6	6.7
Cycle Q Clear(g_c), s	12.8	0.0	0.0	4.5	0.0	0.6	1.1	8.8	8.8	0.9	6.6	6.7
Prop In Lane	0.69		0.28	0.94		1.00	1.00		0.31	1.00		0.36
Lane Grp Cap(c), veh/h	538	0	0	623	0	569	82	601	599	65	579	572
V/C Ratio(X)	0.57	0.00	0.00	0.27	0.00	0.06	0.52	0.64	0.64	0.50	0.51	0.52
Avail Cap(c_a), veh/h	1066	0	0	1112	0	1155	427	1481	1476	423	1283	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.5	0.0	0.0	11.6	0.0	10.4	22.8	13.8	13.8	23.1	13.4	13.4
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.2	0.0	0.0	5.1	1.1	1.1	5.8	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	1.7	0.0	0.3	0.7	4.6	4.5	0.5	3.3	3.3
LnGrp Delay(d),s/veh	16.4	0.0	0.0	11.8	0.0	10.4	27.9	14.9	14.9	28.8	14.1	14.1
LnGrp LOS	B			B		B	C	B	B	C	B	B
Approach Vol, veh/h		309			203			809			627	
Approach Delay, s/veh		16.4			11.6			15.6			14.9	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.3	5.7	20.8		22.3	5.3	21.2				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		35.0	11.5	35.0		35.0	11.5	40.0				
Max Q Clear Time (g_c+I1), s		14.8	3.1	8.7		6.5	2.9	10.8				
Green Ext Time (p_c), s		1.8	0.0	3.7		1.1	0.0	5.1				
Intersection Summary												
HCM 2010 Ctrl Delay				15.1								
HCM 2010 LOS				B								

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Vol, veh/h	20	10	40	10	10	10	30	180	10	10	220	20
Future Vol, veh/h	20	10	40	10	10	10	30	180	10	10	220	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	1	1	1
Mvmt Flow	24	12	47	12	12	12	35	212	12	12	259	24
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.7	8.6	9.8	10.8
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	29%	33%	100%	0%
Vol Thru, %	0%	95%	14%	33%	0%	92%
Vol Right, %	0%	5%	57%	33%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	190	70	30	10	240
LT Vol	30	0	20	10	10	0
Through Vol	0	180	10	10	0	220
RT Vol	0	10	40	10	0	20
Lane Flow Rate	35	224	82	35	12	282
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.054	0.311	0.114	0.051	0.018	0.391
Departure Headway (Hd)	5.554	5.014	4.978	5.223	5.548	4.986
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	644	715	717	682	645	720
Service Time	3.295	2.754	3.027	3.28	3.287	2.725
HCM Lane V/C Ratio	0.054	0.313	0.114	0.051	0.019	0.392
HCM Control Delay	8.6	10	8.7	8.6	8.4	10.9
HCM Lane LOS	A	A	A	A	A	B
HCM 95th-tile Q	0.2	1.3	0.4	0.2	0.1	1.9

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 31: 1st Avenue & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑		↑		↑	↑	↑	↑
Traffic Volume (veh/h)	0	1250	110	20	1560	0	200	0	30	60	50	80
Future Volume (veh/h)	0	1250	110	20	1560	0	200	0	30	60	50	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1881	1881	1881	1881	0	1881	0	1881	1810	1810	1810
Adj Flow Rate, veh/h	0	1316	0	21	1642	0	211	0	14	63	53	64
Adj No. of Lanes	0	2	1	1	2	0	1	0	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	1	1	1	1	0	1	0	1	5	5	5
Cap, veh/h	0	2274	1017	23	2586	0	0	0	0	139	146	124
Arrive On Green	0.00	0.64	0.00	0.01	0.72	0.00	0.00	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	0	3668	1599	1792	3668	0		0		1723	1810	1538
Grp Volume(v), veh/h	0	1316	0	21	1642	0		0.0		63	53	64
Grp Sat Flow(s),veh/h/ln	0	1787	1599	1792	1787	0				1723	1810	1538
Q Serve(g_s), s	0.0	10.0	0.0	0.6	11.0	0.0				1.6	1.3	1.9
Cycle Q Clear(g_c), s	0.0	10.0	0.0	0.6	11.0	0.0				1.6	1.3	1.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2274	1017	23	2586	0				139	146	124
V/C Ratio(X)	0.00	0.58	0.00	0.90	0.63	0.00				0.45	0.36	0.52
Avail Cap(c_a), veh/h	0	3420	1530	762	3420	0				916	962	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	4.9	0.0	23.2	3.3	0.0				20.6	20.5	20.7
Incr Delay (d2), s/veh	0.0	0.3	0.0	31.9	0.4	0.0				0.9	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	0.0	0.5	5.4	0.0				0.8	0.7	0.8
LnGrp Delay(d),s/veh	0.0	5.3	0.0	55.1	3.7	0.0				21.5	21.0	22.0
LnGrp LOS		A		E	A					C	C	C
Approach Vol, veh/h		1316			1663						180	
Approach Delay, s/veh		5.3			4.3						21.5	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			4.1	34.5		8.4		38.6				
Change Period (Y+Rc), s			3.5	4.6		4.6		4.6				
Max Green Setting (Gmax), s			20.0	45.0		25.0		45.0				
Max Q Clear Time (g_c+I1), s			2.6	12.0		3.9		13.0				
Green Ext Time (p_c), s			0.0	17.4		0.3		21.0				
Intersection Summary												
HCM 2010 Ctrl Delay			5.7									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 32: 2nd Avenue & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	1050	10	80	1290	220	20	20	50	220	30	330
Future Volume (veh/h)	290	1050	10	80	1290	220	20	20	50	220	30	330
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1845	1845	1845
Adj Flow Rate, veh/h	305	1105	11	84	1358	227	21	21	47	232	32	244
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	3	3	3
Cap, veh/h	222	2218	22	108	1682	278	93	97	163	340	362	306
Arrive On Green	0.12	0.61	0.61	0.06	0.55	0.55	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1792	3626	36	1792	3070	508	246	497	831	1308	1845	1558
Grp Volume(v), veh/h	305	545	571	84	784	801	89	0	0	232	32	244
Grp Sat Flow(s),veh/h/ln	1792	1787	1875	1792	1787	1791	1574	0	0	1308	1845	1558
Q Serve(g_s), s	12.4	17.0	17.0	4.6	35.4	36.6	0.0	0.0	0.0	12.0	1.4	14.9
Cycle Q Clear(g_c), s	12.4	17.0	17.0	4.6	35.4	36.6	4.4	0.0	0.0	16.3	1.4	14.9
Prop In Lane	1.00		0.02	1.00		0.28	0.24		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	222	1093	1147	108	979	981	354	0	0	340	362	306
V/C Ratio(X)	1.37	0.50	0.50	0.78	0.80	0.82	0.25	0.00	0.00	0.68	0.09	0.80
Avail Cap(c_a), veh/h	222	1093	1147	222	979	981	666	0	0	611	745	630
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.09	0.09	0.09	1.00	0.00	0.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	43.8	10.8	10.8	46.4	18.2	18.5	34.0	0.0	0.0	38.6	32.9	38.3
Incr Delay (d2), s/veh	186.6	1.1	1.1	0.4	0.7	0.7	0.1	0.0	0.0	0.8	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	8.7	9.1	2.3	17.4	18.2	2.1	0.0	0.0	6.3	0.7	6.5
LnGrp Delay(d),s/veh	230.4	12.0	11.9	46.8	18.9	19.2	34.2	0.0	0.0	39.4	32.9	39.9
LnGrp LOS	F	B	B	D	B	B	C			D	C	D
Approach Vol, veh/h		1421			1669			89			508	
Approach Delay, s/veh		58.8			20.5			34.2			39.2	
Approach LOS		E			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.0	65.8		24.2	16.4	59.4		24.2				
Change Period (Y+Rc), s	4.0	4.6		4.6	4.0	4.6		4.6				
Max Green Setting (Gmax), s	4.0	34.0		40.4	12.4	24.4		40.4				
Max Q Clear Time (g_c+10), s	4.0	19.0		18.3	14.4	38.6		6.4				
Green Ext Time (p_c), s	0.0	4.0		0.9	0.0	0.0		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				38.2								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 33: General Jim Moore Boulevard & Lightfighter Drive 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	230	940	40	240	50	750	60	20	60	100	40
Future Volume (veh/h)	50	230	940	40	240	50	750	60	20	60	100	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	240	0	42	250	51	781	62	19	62	104	-70
Adj No. of Lanes	1	1	1	1	1	0	2	1	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	75	458	389	65	364	74	737	404	124	85	459	0
Arrive On Green	0.04	0.24	0.00	0.04	0.24	0.24	0.21	0.29	0.29	0.05	0.13	0.00
Sat Flow, veh/h	1792	1881	1599	1810	1532	313	3476	1383	424	1810	3705	0
Grp Volume(v), veh/h	52	240	0	42	0	301	781	0	81	62	34	0
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1810	0	1845	1738	0	1806	1810	1805	0
Q Serve(g_s), s	1.4	5.2	0.0	1.1	0.0	7.0	10.0	0.0	1.6	1.6	0.4	0.0
Cycle Q Clear(g_c), s	1.4	5.2	0.0	1.1	0.0	7.0	10.0	0.0	1.6	1.6	0.4	0.0
Prop In Lane	1.00		1.00	1.00		0.17	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	75	458	389	65	0	438	737	0	527	85	459	0
V/C Ratio(X)	0.69	0.52	0.00	0.65	0.00	0.69	1.06	0.00	0.15	0.73	0.07	0.00
Avail Cap(c_a), veh/h	759	1196	1017	767	0	1173	737	0	1149	575	2296	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.3	15.5	0.0	22.4	0.0	16.4	18.6	0.0	12.4	22.2	18.1	0.0
Incr Delay (d2), s/veh	10.8	1.1	0.0	4.0	0.0	2.3	50.3	0.0	0.3	4.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.8	0.0	0.6	0.0	3.8	9.8	0.0	0.8	0.9	0.2	0.0
LnGrp Delay(d),s/veh	33.1	16.6	0.0	26.4	0.0	18.7	68.8	0.0	12.7	26.5	18.2	0.0
LnGrp LOS	C	B		C		B	F		B	C	B	
Approach Vol, veh/h		292			343			862			96	
Approach Delay, s/veh		19.5			19.7			63.6			23.6	
Approach LOS		B			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	6.5	15.7	6.7	18.3	6.2	16.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	30.0	30.0	20.0	30.0	15.0	30.0	20.0	30.0				
Max Q Clear Time (g_c+1), s	2.4	3.4	3.4	9.0	3.6	3.6	3.1	7.2				
Green Ext Time (p_c), s	0.0	0.1	0.1	2.2	0.0	0.7	0.0	1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			43.6									
HCM 2010 LOS			D									

Intersection

Intersection Delay, s/veh 10.9
 Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	240	90	10	240	70
Future Vol, veh/h	10	240	90	10	240	70
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	11	273	102	11	273	80
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	9.9	9	12.3
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	77%
Vol Thru, %	90%	0%	23%
Vol Right, %	10%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	100	250	310
LT Vol	0	10	240
Through Vol	90	0	70
RT Vol	10	240	0
Lane Flow Rate	114	284	352
Geometry Grp	1	1	1
Degree of Util (X)	0.157	0.352	0.475
Departure Headway (Hd)	4.959	4.46	4.857
Convergence, Y/N	Yes	Yes	Yes
Cap	717	801	736
Service Time	3.035	2.51	2.922
HCM Lane V/C Ratio	0.159	0.355	0.478
HCM Control Delay	9	9.9	12.3
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.6	1.6	2.6

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	210	40	30	220	30	30
Future Vol, veh/h	210	40	30	220	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	247	47	35	259	35	35

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	294	0	600
Stage 1	-	-	-	-	271
Stage 2	-	-	-	-	329
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1279	-	467
Stage 1	-	-	-	-	779
Stage 2	-	-	-	-	734
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1279	-	452
Mov Cap-2 Maneuver	-	-	-	-	452
Stage 1	-	-	-	-	754
Stage 2	-	-	-	-	734

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	570	-	-	1279	-
HCM Lane V/C Ratio	0.124	-	-	0.028	-
HCM Control Delay (s)	12.2	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	170	60	30	180	10	50	100	20	10	130	30
Future Vol, veh/h	10	170	60	30	180	10	50	100	20	10	130	30
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	0	0	0
Mvmt Flow	12	207	73	37	220	12	61	122	24	12	159	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.8	12.7	11.9	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	4%	14%	6%
Vol Thru, %	59%	71%	82%	76%
Vol Right, %	12%	25%	5%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	240	220	170
LT Vol	50	10	30	10
Through Vol	100	170	180	130
RT Vol	20	60	10	30
Lane Flow Rate	207	293	268	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.338	0.442	0.418	0.332
Departure Headway (Hd)	5.866	5.439	5.611	5.757
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	610	659	639	620
Service Time	3.941	3.507	3.681	3.83
HCM Lane V/C Ratio	0.339	0.445	0.419	0.334
HCM Control Delay	11.9	12.8	12.7	11.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.5	2.3	2.1	1.5

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	90	50	30	80	10	90	120	20	0	0	0
Future Vol, veh/h	60	90	50	30	80	10	90	120	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	74	74	74	74	74	74	74	74	74	74	74
Heavy Vehicles, %	3	3	3	2	2	2	3	3	3	8	8	8
Mvmt Flow	81	122	68	41	108	14	122	162	27	0	0	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	482	434	1	516	421	176	1	0	0	189	0	0
Stage 1	1	1	-	420	420	-	-	-	-	-	-	-
Stage 2	481	433	-	96	1	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.12	6.52	6.22	4.13	-	-	4.18	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.518	4.018	3.318	2.227	-	-	2.272	-	-
Pot Cap-1 Maneuver	493	514	1081	470	524	867	1615	-	-	1350	-	-
Stage 1	1019	893	-	611	589	-	-	-	-	-	-	-
Stage 2	564	580	-	911	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	376	470	1081	331	479	867	1615	-	-	1350	-	-
Mov Cap-2 Maneuver	376	470	-	331	479	-	-	-	-	-	-	-
Stage 1	932	893	-	559	539	-	-	-	-	-	-	-
Stage 2	406	531	-	738	895	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.2		17.6		2.9		0	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1615	-	-	503	446	1350	-	-
HCM Lane V/C Ratio	0.075	-	-	0.537	0.364	-	-	-
HCM Control Delay (s)	7.4	0	-	20.2	17.6	0	-	-
HCM Lane LOS	A	A	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.1	1.6	0	-	-
























Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	110	10	10	280	290	110
Future Vol, veh/h	110	10	10	280	290	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	1	1
Mvmt Flow	125	11	11	318	330	125

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	733	393	455	0	-	0
Stage 1	393	-	-	-	-	-
Stage 2	340	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	391	660	1106	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	386	660	1106	-	-	-
Mov Cap-2 Maneuver	386	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.6	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1106	-	400	-	-
HCM Lane V/C Ratio	0.01	-	0.341	-	-
HCM Control Delay (s)	8.3	0	18.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.5	-	-

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 39: General Jim Moore Boulevard & Gigling Road 06/11/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	270	50	530	60	260	430	750	250	50
Future Volume (veh/h)	20	20	30	270	50	530	60	260	430	750	250	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	303	56	0	67	292	0	843	281	0
Adj No. of Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	263	35	360	939	420	108	476	213	377	1013	453
Arrive On Green	0.03	0.09	0.09	0.20	0.26	0.00	0.06	0.13	0.00	0.21	0.29	0.00
Sat Flow, veh/h	1691	2991	399	1792	3574	1599	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	22	12	13	303	56	0	67	292	0	843	281	0
Grp Sat Flow(s),veh/h/ln	1691	1687	1703	1792	1787	1599	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	0.6	0.3	0.3	8.0	0.6	0.0	1.8	3.8	0.0	10.5	3.0	0.0
Cycle Q Clear(g_c), s	0.6	0.3	0.3	8.0	0.6	0.0	1.8	3.8	0.0	10.5	3.0	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	148	150	360	939	420	108	476	213	377	1013	453
V/C Ratio(X)	0.49	0.08	0.09	0.84	0.06	0.00	0.62	0.61	0.00	2.24	0.28	0.00
Avail Cap(c_a), veh/h	701	1041	1050	743	2205	986	377	1825	817	377	1825	817
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	20.7	20.7	19.0	13.7	0.0	22.7	20.2	0.0	19.5	13.7	0.0
Incr Delay (d2), s/veh	3.1	0.1	0.1	2.1	0.0	0.0	2.2	0.5	0.0	565.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.2	4.2	0.3	0.0	1.0	1.9	0.0	64.2	1.5	0.0
LnGrp Delay(d),s/veh	26.8	20.8	20.8	21.0	13.7	0.0	24.8	20.7	0.0	584.8	13.7	0.0
LnGrp LOS	C	C	C	C	B		C	C		F	B	
Approach Vol, veh/h		47			359			359			1124	
Approach Delay, s/veh		23.6			19.9			21.4			442.0	
Approach LOS		C			B			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	18.6	5.8	17.5	15.0	11.2	14.4	8.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+I1), s	3.8	5.0	2.6	2.6	12.5	5.8	10.0	2.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.1	0.0	0.3	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			271.5									
HCM 2010 LOS			F									
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 40: Malmedy Road & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	10	1180	10	30	820	30	30	60	50	30	40	10
Future Volume (veh/h)	10	1180	10	30	820	30	30	60	50	30	40	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1810	1900
Adj Flow Rate, veh/h	11	1297	11	33	901	33	33	66	55	33	44	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	5	5	5
Cap, veh/h	153	1642	14	172	1459	55	224	133	100	278	159	34
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	9	3496	30	34	3107	117	280	811	606	469	966	205
Grp Volume(v), veh/h	690	0	629	492	0	475	154	0	0	88	0	0
Grp Sat Flow(s),veh/h/ln	1844	0	1690	1567	0	1691	1697	0	0	1640	0	0
Q Serve(g_s), s	0.0	0.0	7.7	0.6	0.0	5.1	0.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	7.7	8.3	0.0	5.1	2.0	0.0	0.0	1.1	0.0	0.0
Prop In Lane	0.02		0.02	0.07		0.07	0.21		0.36	0.37		0.12
Lane Grp Cap(c), veh/h	1015	0	794	892	0	794	457	0	0	471	0	0
V/C Ratio(X)	0.68	0.00	0.79	0.55	0.00	0.60	0.34	0.00	0.00	0.19	0.00	0.00
Avail Cap(c_a), veh/h	3868	0	3469	3312	0	3472	2240	0	0	2094	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	0.0	5.5	4.7	0.0	4.8	9.4	0.0	0.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.2	0.0	0.3	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	3.6	2.4	0.0	2.3	1.0	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	5.8	0.0	6.2	4.9	0.0	5.1	9.6	0.0	0.0	9.1	0.0	0.0
LnGrp LOS	A		A	A		A	A			A		
Approach Vol, veh/h		1319			967			154			88	
Approach Delay, s/veh		6.0			5.0			9.6			9.1	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.5		16.1		8.5		16.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		4.0		9.7		3.1		10.3				
Green Ext Time (p_c), s		0.2		1.4		0.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				5.9								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 41: Parker Flatts Cut Off Road & Gigling Road 06/11/2019



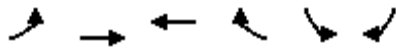
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	10	1220	30	50	780	10	90	20	90	10	20	10
Future Volume (veh/h)	10	1220	30	50	780	10	90	20	90	10	20	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	1371	34	56	876	11	101	22	101	11	22	11
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	0	0	0
Cap, veh/h	136	1739	43	174	1492	19	436	59	270	204	174	72
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	8	3435	85	54	2947	39	1181	349	1610	244	1036	427
Grp Volume(v), veh/h	742	0	674	456	0	487	123	0	101	44	0	0
Grp Sat Flow(s),veh/h/ln	1848	0	1680	1335	0	1705	1530	0	1610	1706	0	0
Q Serve(g_s), s	0.0	0.0	9.1	1.4	0.0	5.4	1.1	0.0	1.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.0	0.0	9.1	10.5	0.0	5.4	1.9	0.0	1.5	0.6	0.0	0.0
Prop In Lane	0.01		0.05	0.12		0.02	0.82		1.00	0.25		0.25
Lane Grp Cap(c), veh/h	1067	0	850	822	0	863	494	0	270	449	0	0
V/C Ratio(X)	0.70	0.00	0.79	0.55	0.00	0.56	0.25	0.00	0.37	0.10	0.00	0.00
Avail Cap(c_a), veh/h	3462	0	3073	2508	0	3119	1866	0	1779	1978	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	5.6	4.6	0.0	4.7	10.3	0.0	10.2	9.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.2	0.0	0.2	0.1	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	4.3	2.2	0.0	2.5	0.8	0.0	0.7	0.3	0.0	0.0
LnGrp Delay(d),s/veh	5.9	0.0	6.3	4.8	0.0	4.9	10.4	0.0	10.5	9.8	0.0	0.0
LnGrp LOS	A		A	A		A	B		B	A		
Approach Vol, veh/h		1416			943			224			44	
Approach Delay, s/veh		6.1			4.9			10.4			9.8	
Approach LOS		A			A			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.1		18.5		9.1		18.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		3.9		11.1		2.6		12.5				
Green Ext Time (p_c), s		0.1		1.5		0.0		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				6.1								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 42: 6th Avenue & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Volume (veh/h)	180	1140	10	10	660	10	10	10	20	10	10	180
Future Volume (veh/h)	180	1140	10	10	660	10	10	10	20	10	10	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	189	1200	11	11	695	11	11	11	0	11	11	189
Adj No. of Lanes	0	2	0	0	2	0	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	304	1507	14	120	1901	30	267	203	282	123	22	254
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	297	2727	25	13	3440	54	592	1162	1615	45	125	1456
Grp Volume(v), veh/h	662	0	738	373	0	344	22	0	0	211	0	0
Grp Sat Flow(s),veh/h/ln	1342	0	1707	1822	0	1686	1754	0	1615	1625	0	0
Q Serve(g_s), s	10.4	0.0	11.2	0.0	0.0	3.8	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	11.2	3.7	0.0	3.8	0.3	0.0	0.0	4.0	0.0	0.0
Prop In Lane	0.29		0.01	0.03		0.03	0.50		1.00	0.05		0.90
Lane Grp Cap(c), veh/h	882	0	943	1119	0	931	470	0	282	398	0	0
V/C Ratio(X)	0.75	0.00	0.78	0.33	0.00	0.37	0.05	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	2166	0	2615	2792	0	2582	1574	0	1494	1610	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.2	0.0	5.8	4.1	0.0	4.1	11.4	0.0	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	0.0	5.3	1.9	0.0	1.7	0.2	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	6.7	0.0	6.4	4.2	0.0	4.2	11.4	0.0	0.0	13.3	0.0	0.0
LnGrp LOS	A		A	A		A	B			B		
Approach Vol, veh/h		1400			717			22			211	
Approach Delay, s/veh		6.5			4.2			11.4			13.3	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.3		22.7		10.3		22.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		30.5		50.5		30.5		50.5				
Max Q Clear Time (g_c+I1), s		2.3		16.2		6.0		5.8				
Green Ext Time (p_c), s		0.0		2.0		0.3		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				6.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 43: Gigling Road & 7th Avenue 06/11/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations		↑↑	↑↑		↑↑			
Traffic Volume (veh/h)	200	970	610	10	10	70		
Future Volume (veh/h)	200	970	610	10	10	70		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1900	1863	1881	1900	1827	1900		
Adj Flow Rate, veh/h	208	1010	635	10	10	73		
Adj No. of Lanes	0	2	2	0	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	1	1	0	0		
Cap, veh/h	394	1355	1889	30	17	127		
Arrive On Green	0.52	0.52	0.52	0.52	0.09	0.09		
Sat Flow, veh/h	356	2668	3696	57	187	1368		
Grp Volume(v), veh/h	591	627	315	330	84	0		
Grp Sat Flow(s),veh/h/ln	1329	1610	1787	1871	1574	0		
Q Serve(g_s), s	6.2	7.1	2.4	2.4	1.2	0.0		
Cycle Q Clear(g_c), s	8.6	7.1	2.4	2.4	1.2	0.0		
Prop In Lane	0.35			0.03	0.12	0.87		
Lane Grp Cap(c), veh/h	904	845	937	981	146	0		
V/C Ratio(X)	0.65	0.74	0.34	0.34	0.58	0.00		
Avail Cap(c_a), veh/h	3205	3802	4220	4418	1707	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	4.4	4.4	3.2	3.2	10.2	0.0		
Incr Delay (d2), s/veh	0.3	0.5	0.1	0.1	1.3	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.0	3.1	1.2	1.2	0.6	0.0		
LnGrp Delay(d),s/veh	4.7	4.8	3.3	3.3	11.6	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h		1218	645		84			
Approach Delay, s/veh		4.8	3.3		11.6			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				16.8		6.7		16.8
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				55.5		25.5		55.5
Max Q Clear Time (g_c+I1), s				10.6		3.2		4.4
Green Ext Time (p_c), s				1.8		0.0		0.6
Intersection Summary								
HCM 2010 Ctrl Delay			4.6					
HCM 2010 LOS			A					
Notes								

User approved volume balancing among the lanes for turning movement.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 44: 8th Avenue & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	270	710	10	10	340	10	10	10	10	10	10	280
Future Volume (veh/h)	270	710	10	10	340	10	10	10	10	10	10	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1900	1900	1900	1881	1900
Adj Flow Rate, veh/h	297	780	11	11	374	11	11	11	11	11	11	132
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	1	1	1
Cap, veh/h	537	1142	17	160	1715	50	243	108	82	161	21	197
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	624	2245	33	26	3372	98	398	755	576	80	150	1380
Grp Volume(v), veh/h	518	0	570	207	0	189	33	0	0	154	0	0
Grp Sat Flow(s),veh/h/ln	1213	0	1689	1818	0	1678	1729	0	0	1610	0	0
Q Serve(g_s), s	8.0	0.0	6.5	0.0	0.0	1.6	0.0	0.0	0.0	1.2	0.0	0.0
Cycle Q Clear(g_c), s	9.6	0.0	6.5	1.6	0.0	1.6	0.4	0.0	0.0	2.3	0.0	0.0
Prop In Lane	0.57		0.02	0.05		0.06	0.33		0.33	0.07		0.86
Lane Grp Cap(c), veh/h	836	0	859	1071	0	853	433	0	0	379	0	0
V/C Ratio(X)	0.62	0.00	0.66	0.19	0.00	0.22	0.08	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	2389	0	2975	3208	0	2955	2341	0	0	2349	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	0.0	4.7	3.5	0.0	3.5	9.7	0.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	2.9	0.8	0.0	0.7	0.2	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	5.8	0.0	5.0	3.5	0.0	3.6	9.7	0.0	0.0	10.7	0.0	0.0
LnGrp LOS	A		A	A		A	A			B		
Approach Vol, veh/h		1088			396			33			154	
Approach Delay, s/veh		5.4			3.6			9.7			10.7	
Approach LOS		A			A			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.2		17.6		8.2		17.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		35.5		45.5		35.5		45.5				
Max Q Clear Time (g_c+I1), s		2.4		11.6		4.3		3.6				
Green Ext Time (p_c), s		0.0		1.4		0.2		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				5.5								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 45: Eastside Parkway & Gigling Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	700	10	20	10	10	10	20	350	10	10	190	330
Future Volume (veh/h)	700	10	20	10	10	10	20	350	10	10	190	330
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	761	11	15	11	11	11	22	380	11	11	207	250
Adj No. of Lanes	1	2	0	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	797	795	711	20	20	20	45	432	13	25	425	361
Arrive On Green	0.45	0.45	0.45	0.04	0.04	0.04	0.03	0.24	0.24	0.01	0.23	0.23
Sat Flow, veh/h	1774	1770	1583	577	577	577	1774	1801	52	1774	1863	1583
Grp Volume(v), veh/h	761	11	15	33	0	0	22	0	391	11	207	250
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1732	0	0	1774	0	1854	1774	1863	1583
Q Serve(g_s), s	25.3	0.2	0.3	1.1	0.0	0.0	0.7	0.0	12.4	0.4	5.9	8.8
Cycle Q Clear(g_c), s	25.3	0.2	0.3	1.1	0.0	0.0	0.7	0.0	12.4	0.4	5.9	8.8
Prop In Lane	1.00		1.00	0.33		0.33	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	797	795	711	61	0	0	45	0	445	25	425	361
V/C Ratio(X)	0.95	0.01	0.02	0.54	0.00	0.00	0.49	0.00	0.88	0.44	0.49	0.69
Avail Cap(c_a), veh/h	1457	1453	1300	638	0	0	163	0	782	160	783	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.2	9.3	9.4	29.0	0.0	0.0	29.4	0.0	22.4	29.9	20.5	21.6
Incr Delay (d2), s/veh	4.7	0.0	0.0	2.8	0.0	0.0	7.9	0.0	2.3	12.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.1	0.1	0.6	0.0	0.0	0.5	0.0	6.6	0.3	3.0	3.9
LnGrp Delay(d),s/veh	20.9	9.3	9.4	31.8	0.0	0.0	37.3	0.0	24.6	41.9	20.8	22.5
LnGrp LOS	C	A	A	C			D		C	D	C	C
Approach Vol, veh/h		787			33			413			468	
Approach Delay, s/veh		20.5			31.8			25.3			22.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	18.7		31.5	5.6	18.0		6.1				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.5	25.8		50.2	5.6	25.7		22.5				
Max Q Clear Time (g_c+1), s	12.4	14.4		27.3	2.7	10.8		3.1				
Green Ext Time (p_c), s	0.0	0.2		0.2	0.0	0.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.4								
HCM 2010 LOS				C								
Notes												

User approved pedestrian interval to be less than phase max green.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 46: General Jim Moore Boulevard & Normandy Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕↕		↕	↕↕	↕
Traffic Volume (veh/h)	140	40	100	290	50	10	90	790	320	30	480	80
Future Volume (veh/h)	140	40	100	290	50	10	90	790	320	30	480	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	43	84	315	54	8	98	859	325	33	522	28
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	367	113	160	494	63	9	403	962	363	66	686	306
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.23	0.38	0.38	0.04	0.19	0.19
Sat Flow, veh/h	802	351	497	1134	194	29	1792	2540	958	1810	3610	1611
Grp Volume(v), veh/h	279	0	0	377	0	0	98	604	580	33	522	28
Grp Sat Flow(s),veh/h/ln	1649	0	0	1357	0	0	1792	1787	1711	1810	1805	1611
Q Serve(g_s), s	0.0	0.0	0.0	6.5	0.0	0.0	2.3	16.3	16.4	0.9	7.1	0.7
Cycle Q Clear(g_c), s	6.8	0.0	0.0	13.4	0.0	0.0	2.3	16.3	16.4	0.9	7.1	0.7
Prop In Lane	0.54		0.30	0.84		0.02	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	640	0	0	566	0	0	403	677	648	66	686	306
V/C Ratio(X)	0.44	0.00	0.00	0.67	0.00	0.00	0.24	0.89	0.90	0.50	0.76	0.09
Avail Cap(c_a), veh/h	1106	0	0	991	0	0	403	884	846	281	1786	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	0.0	16.3	0.0	0.0	16.4	15.0	15.0	24.4	19.8	17.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.5	0.0	0.0	0.1	7.8	8.5	2.2	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	0.0	5.0	0.0	0.0	1.2	9.4	9.3	0.5	3.5	0.3
LnGrp Delay(d),s/veh	14.3	0.0	0.0	16.8	0.0	0.0	16.5	22.9	23.5	26.5	20.4	17.2
LnGrp LOS	B			B			B	C	C	C	C	B
Approach Vol, veh/h		279			377			1282			583	
Approach Delay, s/veh		14.3			16.8			22.7			20.6	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	14.3		21.1	6.4	24.0		21.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.0	25.5		33.0	8.0	25.5		33.0				
Max Q Clear Time (g_c+14), s	14.3	9.1		15.4	2.9	18.4		8.8				
Green Ext Time (p_c), s	0.0	0.6		0.5	0.0	1.1		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 47: General Jim Moore Boulevard & Coe Avenue 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	100	310	10	10	150	1080	500	10	530	60
Future Volume (veh/h)	60	10	100	310	10	10	150	1080	500	10	530	60
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1863	1881	1863	1863	1863	1881	1881	1863	1863	1881	1881
Adj Flow Rate, veh/h	67	11	11	348	11	11	169	1213	535	11	596	31
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	2	1	2	2	2	1	1	2	2	1	1
Cap, veh/h	577	581	495	569	581	494	200	1427	628	25	1078	478
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.11	0.40	0.40	0.01	0.30	0.30
Sat Flow, veh/h	1398	1863	1587	1374	1863	1583	1792	3574	1573	1774	3574	1586
Grp Volume(v), veh/h	67	11	11	348	11	11	169	1213	535	11	596	31
Grp Sat Flow(s),veh/h/ln	1398	1863	1587	1374	1863	1583	1792	1787	1573	1774	1787	1586
Q Serve(g_s), s	1.7	0.2	0.2	11.5	0.2	0.2	4.5	15.2	15.2	0.3	6.9	0.7
Cycle Q Clear(g_c), s	1.9	0.2	0.2	11.7	0.2	0.2	4.5	15.2	15.2	0.3	6.9	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	577	581	495	569	581	494	200	1427	628	25	1078	478
V/C Ratio(X)	0.12	0.02	0.02	0.61	0.02	0.02	0.84	0.85	0.85	0.44	0.55	0.06
Avail Cap(c_a), veh/h	1435	1724	1469	1412	1724	1466	200	2581	1136	199	2581	1145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	11.7	11.7	15.8	11.7	11.7	21.4	13.4	13.4	24.0	14.4	12.2
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.0	25.3	0.6	1.3	4.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.1	4.4	0.1	0.1	3.7	7.5	6.8	0.2	3.4	0.3
LnGrp Delay(d),s/veh	12.4	11.7	11.7	16.2	11.7	11.7	46.7	14.0	14.7	28.4	14.6	12.2
LnGrp LOS	B	B	B	B	B	B	D	B	B	C	B	B
Approach Vol, veh/h		89			370			1917			638	
Approach Delay, s/veh		12.2			15.9			17.1			14.7	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	19.3		19.8	5.2	24.1		19.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	35.5		45.5	5.5	35.5		45.5				
Max Q Clear Time (g_c+10), s	5.5	8.9		13.7	2.3	17.2		3.9				
Green Ext Time (p_c), s	0.0	0.7		0.1	0.0	1.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				16.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 48: Fremont Boulevard/Highway 1 Southbound Off-Ramp & Monterey Road 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	160	70	90	100	70	110	1200	230	50	720	170
Future Volume (veh/h)	230	160	70	90	100	70	110	1200	230	50	720	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	201	215	25	93	103	66	113	1237	225	52	742	103
Adj No. of Lanes	1	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	2	2	2
Cap, veh/h	269	282	235	105	117	75	593	1486	268	67	671	297
Arrive On Green	0.15	0.15	0.15	0.17	0.17	0.17	0.33	0.49	0.49	0.04	0.19	0.19
Sat Flow, veh/h	1792	1881	1565	634	702	450	1792	3023	545	1774	3539	1568
Grp Volume(v), veh/h	201	215	25	262	0	0	113	727	735	52	742	103
Grp Sat Flow(s),veh/h/ln	1792	1881	1565	1785	0	0	1792	1787	1781	1774	1770	1568
Q Serve(g_s), s	13.4	13.7	1.7	17.9	0.0	0.0	5.6	43.6	44.6	3.6	23.7	7.1
Cycle Q Clear(g_c), s	13.4	13.7	1.7	17.9	0.0	0.0	5.6	43.6	44.6	3.6	23.7	7.1
Prop In Lane	1.00		1.00	0.35		0.25	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	269	282	235	297	0	0	593	879	876	67	671	297
V/C Ratio(X)	0.75	0.76	0.11	0.88	0.00	0.00	0.19	0.83	0.84	0.77	1.11	0.35
Avail Cap(c_a), veh/h	573	602	501	357	0	0	593	879	876	241	671	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	51.0	45.9	50.9	0.0	0.0	29.8	27.2	27.5	59.6	50.7	43.9
Incr Delay (d2), s/veh	2.9	3.0	0.1	20.8	0.0	0.0	0.1	8.8	9.5	6.9	67.4	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	7.3	0.8	10.6	0.0	0.0	2.8	23.6	24.1	1.9	17.8	3.4
LnGrp Delay(d),s/veh	53.8	54.0	46.0	71.7	0.0	0.0	29.9	36.1	37.0	66.5	118.0	47.1
LnGrp LOS	D	D	D	E			C	D	D	E	F	D
Approach Vol, veh/h		441			262			1575			897	
Approach Delay, s/veh		53.4			71.7			36.1			106.9	
Approach LOS		D			E			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	66.8		23.4	46.7	29.0		25.9				
Change Period (Y+Rc), s	4.2	5.3		* 4.7	5.3	* 5.3		5.1				
Max Green Setting (Gmax), s	17	23.7		* 40	17.0	* 24		25.0				
Max Q Clear Time (g_c+1.5I), s	15.6	46.6		15.7	7.6	25.7		19.9				
Green Ext Time (p_c), s	0.0	0.0		1.9	0.1	0.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			61.4									
HCM 2010 LOS			E									
Notes												

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM 49: California Avenue/Highway 1 Southbound On-Ramp & Highway 1 Northbound Off-Ramp Monterey Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕	↗	↖		↗		↕	↗		↕	
Traffic Volume (veh/h)	10	140	120	280	0	130	0	120	300	10	10	0
Future Volume (veh/h)	10	140	120	280	0	130	0	120	300	10	10	0
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	0	1900	0	1881	1881	1900	1900	0
Adj Flow Rate, veh/h	11	154	14	308	0	69	0	132	51	11	11	0
Adj No. of Lanes	0	2	1	1	0	1	0	1	1	0	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	0	0	0	0	1	1	0	0	0
Cap, veh/h	193	2838	1323	0	0	0	0	164	139	57	43	0
Arrive On Green	0.84	0.84	0.84	0.00	0.00	0.00	0.00	0.09	0.09	0.09	0.09	0.00
Sat Flow, veh/h	230	3391	1580		0		0	1881	1599	155	496	0
Grp Volume(v), veh/h	88	77	14		0.0		0	132	51	22	0	0
Grp Sat Flow(s),veh/h/ln	1851	1770	1580				0	1881	1599	651	0	0
Q Serve(g_s), s	1.0	0.9	0.2				0.0	8.6	3.8	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.9	0.2				0.0	8.6	3.8	8.7	0.0	0.0
Prop In Lane	0.12		1.00				0.00		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	1549	1481	1323				0	164	139	100	0	0
V/C Ratio(X)	0.06	0.05	0.01				0.00	0.81	0.37	0.22	0.00	0.00
Avail Cap(c_a), veh/h	1549	1481	1323				0	271	230	125	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.7	1.7	1.7				0.0	56.0	53.8	52.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0				0.0	3.5	0.6	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.1				0.0	4.6	1.7	0.7	0.0	0.0
LnGrp Delay(d),s/veh	1.8	1.7	1.7				0.0	59.5	54.4	53.3	0.0	0.0
LnGrp LOS	A	A	A					E	D	D		
Approach Vol, veh/h		179						183			22	
Approach Delay, s/veh		1.7						58.1			53.3	
Approach LOS		A						E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				15.1		109.9		15.1				
Change Period (Y+Rc), s				* 4.2		5.3		* 4.2				
Max Green Setting (Gmax), s				* 18		21.0		* 13				
Max Q Clear Time (g_c+I1), s				10.6		3.0		10.7				
Green Ext Time (p_c), s				0.3		0.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			31.6									
HCM 2010 LOS			C									
Notes												

User approved pedestrian interval to be less than phase max green.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 50: Reservation Road & SR 68 WB On Ramp/SR 68 WB Off Ramp 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕	↕	↕			↕	
Traffic Volume (veh/h)	0	0	0	410	10	250	130	250	0	0	530	180
Future Volume (veh/h)	0	0	0	410	10	250	130	250	0	0	530	180
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1863	1863	1845	1845	0	0	1827	1900
Adj Flow Rate, veh/h				436	11	84	138	266	0	0	564	181
Adj No. of Lanes				0	1	1	1	1	0	0	1	0
Peak Hour Factor				0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %				2	2	2	3	3	0	0	4	4
Cap, veh/h				485	12	443	172	1091	0	0	600	192
Arrive On Green				0.28	0.28	0.28	0.03	0.20	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1732	44	1581	1757	1845	0	0	1326	426
Grp Volume(v), veh/h				447	0	84	138	266	0	0	0	745
Grp Sat Flow(s),veh/h/ln				1776	0	1581	1757	1845	0	0	0	1752
Q Serve(g_s), s				20.6	0.0	3.4	6.6	10.4	0.0	0.0	0.0	34.5
Cycle Q Clear(g_c), s				20.6	0.0	3.4	6.6	10.4	0.0	0.0	0.0	34.5
Prop In Lane				0.98		1.00	1.00		0.00	0.00		0.24
Lane Grp Cap(c), veh/h				498	0	443	172	1091	0	0	0	792
V/C Ratio(X)				0.90	0.00	0.19	0.80	0.24	0.00	0.00	0.00	0.94
Avail Cap(c_a), veh/h				564	0	502	248	1091	0	0	0	792
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.95	0.95	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				29.4	0.0	23.3	40.3	18.1	0.0	0.0	0.0	22.2
Incr Delay (d2), s/veh				15.9	0.0	0.2	6.8	0.5	0.0	0.0	0.0	20.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.3	0.0	1.5	3.6	5.5	0.0	0.0	0.0	21.0
LnGrp Delay(d),s/veh				45.4	0.0	23.5	47.1	18.6	0.0	0.0	0.0	42.6
LnGrp LOS				D		C	D	B				D
Approach Vol, veh/h					531			404			745	
Approach Delay, s/veh					41.9			28.4			42.6	
Approach LOS					D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.8	44.4		28.7		56.3						
Change Period (Y+Rc), s	3.5	6.0		4.9		6.0						
Max Green Setting (Gmax), s	2.0	31.6		27.0		47.1						
Max Q Clear Time (g_c+1.0), s	1.0	36.5		22.6		12.4						
Green Ext Time (p_c), s	0.0	0.0		1.2		1.3						
Intersection Summary												
HCM 2010 Ctrl Delay				38.9								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary Cumulative with Eastside Parkway with Project, PM
 51: River Road/Reservation Road & SR 68 Off Ramp/SR 68 EB On Ramp 06/11/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↗					↑	↗	↘	↑	
Traffic Volume (veh/h)	100	10	180	0	0	0	0	300	320	260	680	0
Future Volume (veh/h)	100	10	180	0	0	0	0	300	320	260	680	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863				0	1845	1845	1827	1827	0
Adj Flow Rate, veh/h	106	11	12				0	319	201	277	723	0
Adj No. of Lanes	0	1	1				0	1	1	1	1	0
Peak Hour Factor	0.94	0.94	0.94				0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2				0	3	3	4	4	0
Cap, veh/h	144	15	141				0	1038	882	307	1430	0
Arrive On Green	0.09	0.09	0.09				0.00	0.56	0.56	0.35	1.00	0.00
Sat Flow, veh/h	1614	168	1583				0	1845	1568	1740	1827	0
Grp Volume(v), veh/h	117	0	12				0	319	201	277	723	0
Grp Sat Flow(s),veh/h/ln	1782	0	1583				0	1845	1568	1740	1827	0
Q Serve(g_s), s	5.4	0.0	0.6				0.0	7.8	5.5	12.8	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	0.6				0.0	7.8	5.5	12.8	0.0	0.0
Prop In Lane	0.91		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	159	0	141				0	1038	882	307	1430	0
V/C Ratio(X)	0.74	0.00	0.08				0.00	0.31	0.23	0.90	0.51	0.00
Avail Cap(c_a), veh/h	524	0	466				0	1038	882	348	1430	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.09	0.09	0.00
Uniform Delay (d), s/veh	37.7	0.0	35.5				0.0	9.8	9.3	26.8	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	0.3				0.0	0.8	0.6	3.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.3				0.0	4.1	2.5	6.3	0.0	0.0
LnGrp Delay(d),s/veh	44.2	0.0	35.8				0.0	10.6	9.9	29.9	0.1	0.0
LnGrp LOS	D		D					B	A	C	A	
Approach Vol, veh/h		129						520			1000	
Approach Delay, s/veh		43.4						10.3			8.4	
Approach LOS		D						B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.5			18.7	53.8		12.5				
Change Period (Y+Rc), s		6.0			3.7	6.0		4.9				
Max Green Setting (Gmax), s		43.1			17.0	28.4		25.0				
Max Q Clear Time (g_c+I1), s		2.0			14.8	9.8		7.4				
Green Ext Time (p_c), s		5.0			0.2	2.1		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			11.7									
HCM 2010 LOS			B									

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	220	70	180	40	80	220
Future Vol, veh/h	220	70	180	40	80	220
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	239	76	196	43	87	239
Number of Lanes	1	1	1	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	11.2	11.8	10.9
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	220	220	70	180	40
LT Vol	80	0	0	0	180	0
Through Vol	0	0	220	0	0	40
RT Vol	0	220	0	70	0	0
Lane Flow Rate	87	239	239	76	196	43
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.158	0.355	0.386	0.108	0.346	0.071
Departure Headway (Hd)	6.555	5.345	5.806	5.097	6.374	5.867
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	674	622	704	565	611
Service Time	4.283	3.072	3.53	2.821	4.101	3.594
HCM Lane V/C Ratio	0.159	0.355	0.384	0.108	0.347	0.07
HCM Control Delay	10.5	11	12.1	8.4	12.4	9
HCM Lane LOS	B	B	B	A	B	A
HCM 95th-tile Q	0.6	1.6	1.8	0.4	1.5	0.2

Intersection				
Intersection Delay, s/veh	8.2			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	353	352	61	232
Demand Flow Rate, veh/h	364	356	61	236
Vehicles Circulating, veh/h	202	302	508	98
Vehicles Exiting, veh/h	132	267	58	560
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	9.7	6.3	5.8
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	364	356	61	236
Cap Entry Lane, veh/h	923	835	680	1024
Entry HV Adj Factor	0.969	0.990	1.000	0.981
Flow Entry, veh/h	353	352	61	232
Cap Entry, veh/h	895	827	680	1005
V/C Ratio	0.394	0.426	0.090	0.230
Control Delay, s/veh	8.6	9.7	6.3	5.8
LOS	A	A	A	A
95th %tile Queue, veh	2	2	0	1

Intersection			
Intersection Delay, s/veh	33.9		
Intersection LOS	D		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	608	680	711
Demand Flow Rate, veh/h	620	693	711
Vehicles Circulating, veh/h	525	72	410
Vehicles Exiting, veh/h	240	1049	735
Follow-Up Headway, s	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	44.4	13.3	44.6
Approach LOS	E	B	E
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193
Entry Flow, veh/h	620	693	711
Cap Entry Lane, veh/h	668	1051	750
Entry HV Adj Factor	0.981	0.981	1.000
Flow Entry, veh/h	608	680	711
Cap Entry, veh/h	655	1031	750
V/C Ratio	0.928	0.659	0.948
Control Delay, s/veh	44.4	13.3	44.6
LOS	E	B	E
95th %tile Queue, veh	12	5	14

**APPENDIX F: ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS
TRAVEL MODEL VALIDATION**





MEMORANDUM

Date: June 10, 2019

To: Anya Spear and Matt McCluney, California State University Monterey Bay
Steve Lohr and Dawn Theodora, California State University Office of the Chancellor
Ann Sansevero, Dudek

From: Bryan Esparza, Daniel Rubins, and Matt Haynes, Fehr & Peers

Subject: California State University Monterey Bay Master Plan EIR – AMBAG Model Review and Documentation

SJ17-1728

Fehr & Peers reviewed the Association of Bay Area Governments (AMBAG) regional travel model to evaluate its suitability for developing long-range traffic forecast for streets and highways within the greater Monterey Bay Area. Fehr & Peers reviewed the primary model inputs in the project area (such as base and future year land use inputs and roadway network assumptions) and also checked the performance of the model against typical validation thresholds. Modifications to the AMBAG regional travel model land use and transportation network inputs were completed to improve the validation of the daily, peak period and peak hour travel models. These changes to the AMBAG regional travel model are documented in this memorandum for application within the CSUMB study area.

REVIEW OF AMBAG REGIONAL TRAVEL MODEL INPUTS

The AMBAG regional travel model was fully updated in 2014, with minor updates incorporating more recent estimates of existing and future land uses per the Fort Ord Reuse Authority (FORA) travel model update completed in 2017. The AMBAG regional travel model as-received includes a 2010 base year and a 2035 future year. A screen capture of the 2010 base year model near the CSUMB campus and region wide is shown in **Attachments A** and **B**, respectively. The 2010 base year model contains freeways, arterials, and local streets within the Monterey County and the land use is summarized in traffic analysis zones. The model includes similar detail in the rest of the AMBAG region of Santa Cruz and San Benito counties. Fehr & Peers reviewed the street network coding including the number of lanes, vehicle speed, and vehicle capacity, and the land use in puts in the traffic analysis zones near the CSUMB campus.



The existing and future land use inputs are summarized into traffic analysis zones (TAZs). **Table 1** summarizes the as-received version of the land use inputs under existing and future years for the AMBAG regional travel model. The AMBAG regional travel model is based on the *2014 Regional Growth Forecast* (AMBAG, 2014) with land use projections for 2010 and 2035. The AMBAG base travel model (2010) includes social and demographic information from the 2010 Census (*Association of Monterey Bay Area Governments Regional Travel Demand Model Technical Report*, 2014).

TABLE 1: AMBAG Model Residential and Employment Land Uses

Land Use Category	2010			2035		
	Monterey County	Santa Cruz County	San Benito County	Monterey County	Santa Cruz County	San Benito County
Residential						
Total Households	126,180	94,130	16,910	143,390	111,000	23,970
Total Population	385,050	246,240	54,400	444,080	292,790	75,830
Employment						
Agricultural	45,100	9,600	1,600	48,670	10,230	1,500
Construction	4,300	3,000	800	6,220	4,320	960
Industrial	5,600	5,300	2,500	5,420	4,490	2,790
Retail	20,100	14,900	2,400	23,910	15,640	2,790
Service	60,900	43,700	5,100	77,810	50,370	6,730
Public	46,000	33,700	3,800	60,140	46,090	4,780
Total	182,000	110,200	16,200	222,170	131,140	19,550

Notes: All values have been rounded to the nearest 10.

Monterey County TAZs in **Attachment M**

Santa Cruz County TAZs in **Attachment N**

San Benito County TAZs in **Attachment O**

Based on summary of AMBAG TAZs ranging between 3 and 1839.

Source: AMBAG regional travel model.

The review and update of the AMBAG regional travel model involved several steps. The land use allocation for the base year (2010) model and future year was reviewed. The travel model land use changes from base year to future year (2035) models were updated to be consistent with the FORA version of the AMBAG model and adjacent city approved and pending project lists. All of these steps are described in more detail in the following sections of the memorandum.

MODEL VALIDATION GUIDELINES

The AMBAG regional travel model is one of the only tools available for estimating long-range traffic forecasts for streets and highways in the greater Monterey Bay area. The review and refinement of



the AMBAG regional travel model is intended to provide more accurate forecasts than are currently available for non-regional (i.e., local) streets in Marina, Salinas, and Seaside. Since it would be impossible for any travel forecasting model to precisely replicate all counts within a given roadway network, two-way morning peak hour, evening peak hour, and daily validation guidelines have been established by Caltrans and other agencies. These guidelines are meant to measure the travel model's relative performance in forecasting existing travel volumes as compared to existing counts while maintaining sensitivity to land use and roadway network changes. Key static validation standards for daily travel models based on Caltrans guidelines¹ are summarized below.

- At least 75 percent of the roadway links for which counts are available should be within the maximum desirable deviation, which ranges from approximately 13 to 68 percent depending on total roadway volume (the larger the volume, the less deviation is permitted).
- The correlation coefficient between the actual ground counts and the estimated traffic volumes should be greater than 88 percent.
- The Root Mean Square Error (RMSE) should not exceed 40 percent. This measure of effectiveness (MOE) is most important for screenlines, but is also used to describe the certainty of functional classification and volume ranges.

Although not stated in the Caltrans standards, additional Fehr & Peers validation guidelines were applied to the TDF model:

- The two-way sum of the volumes on all roadway links for which counts are available should be within 10 percent of the counts.
- All roadway screenlines should be within the maximum desirable deviation, which ranges from approximately 17 to 64 percent depending on total screenline volume.

INITIAL BASE MODEL RUN

We began with the base year (Year 2010) model provided by AMBAG. This as-is model represents the model as received from AMBAG, with no changes made. The initial sub-area validation results from this version of the model are presented in **Table 2** for daily and the morning and evening peak hours. The statistics show that while most of the measures are met, some are not.

The AMBAG model generates volumes for four time periods. These periods are the Morning Peak Period (6:00 to 9:00 AM), Midday Peak Period (9:00 AM to 4:00 PM), Evening Peak Period (4:00 to 7:00 PM), and Nighttime (7:00 PM to 6:00 AM). In order to convert these period volumes to peak hour volumes, Fehr & Peers used a peak period to peak hour factor of 0.51 for the morning peak

¹ Static Validation Criteria and Thresholds, *2017 California Regional Transportation Plan Guidelines*, California Transportation Commission, January 2017.



hour and 0.40 for the evening peak hour informed by the volume-to-count ratio of all the 2017 validation count locations. This is a similar method to how the AMBAG regional travel model converts peak period volumes to peak hour volume within the travel model.

Fehr & Peers collected traffic count data in between 2015 and 2017 specifically for the purpose of model validation of the roadways within the study area. These roadway counts were supplemented with annual monitoring counts from the Transportation Agency Monterey County (TAMC) for calibration of regional freeways and ramps.

As shown in **Table 2**, for each of the validation periods, some of the static validation statistics (i.e., percent of links within Caltrans deviation allowance and percent of screenlines within maximum deviation) are not met. And for the daily model results the volume-to-count ratio is not met. In addition to the model-wide statistics, the detailed results by Functional Classification, Volume Range, Two-Way Total Traffic Volume, and Screenlines are attached **Attachment C, D, E** and **F**.

Table 2: SUB-AREA TDF MODEL STATIC VALIDATION SUMMARY (RUN 00)

Validation Item	Threshold	AM Peak Hour	PM Peak Hour	Daily
Summary Statistics				
Local Street Count Locations	N/A	40	40	40
Freeway and Ramp Count Locations	N/A	10	10	10
Model/Count Ratio	N/A	1.00	1.00	0.87
Static Validation Statistics				
Percent of Links Within Caltrans Deviation Allowance =	At Least 75%	48%	42%	54%
Correlation Coefficient =	At Least 0.88	0.98	0.98	0.99
Percent Root Mean Square Error (RMSE) =	Below 40%	32%	32%	26%
Volume-to-Count Ratio (Sum of all Locations) =	Within ±10%	0	0	-13%
Percent of Screenlines Within Maximum Deviation =	100% of links between 17% to 64%	80%	65%	79%

Notes:

1. **Bold text** indicates model validation meets guidelines.

Source: Fehr & Peers, 2019.



In general, the base year model overestimated volumes on most freeway facilities in the project area for the daily, AM peak hour, and PM peak hour model runs. The local roadways were generally underestimated for each time period too.

BASE MODEL INPUT ADJUSTMENTS

To improve model validation, adjustments were made to several model components, including the roadway network inputs and CSUMB campus trip generation. These changes are described below and include land use and population changes, as well as roadway network changes.

BASE MODEL LAND USE CHANGES

Based on information received from CSUMB staff and comparing land uses in the model to aeriels of Existing Conditions, land use and population adjustments were made to the as-is Existing Conditions TDF model (Run 00). These edits are presented in **Table 3**.

TABLE 3: BASE MODEL LAND USE CHANGES

TAZ	Jurisdiction	Description of Edit
1056	Monterey County	<ul style="list-style-type: none"> Increase Public Employment from 0 to 13 Increase K-12 enrollment from 0 to 30
808	Marina	<ul style="list-style-type: none"> Adjust Industry Employment to 30 employees Adjust Administrative Employment to 7 employees
878	Monterey County	<ul style="list-style-type: none"> Adjust Service Employment to 50 employees
863	Monterey County	<ul style="list-style-type: none"> Adjust Employment to zero
806	CSUMB	<ul style="list-style-type: none"> Adjusted University Enrollment to 2,322
826	CSUMB	<ul style="list-style-type: none"> Adjusted University Enrollment to 995
847	CSUMB	<ul style="list-style-type: none"> Increase University Enrollment from 0 to 3,317
765	Seaside	<ul style="list-style-type: none"> Shift 56 Public Employees from TAZ 765 to TAZ 762
749	Seaside	<ul style="list-style-type: none"> Increase Public Employment 0 to 150
743	Seaside	<ul style="list-style-type: none"> Shift 304 K-12 Enrollment from TAZ 743 to TAZ 749
729	Santa Cruz County	<ul style="list-style-type: none"> Shift 47 Public Employees from TAZ 729 to TAZ 755 Shift 229 K-12 Enrollment from TAZ 729 to TAZ 755



BASE MODEL ROADWAY NETWORK CHANGES

Roadway network edits were made to improve model validation, improve consistency with local traffic counts, and more accurately represent existing roadways within the study area. These changes are presented on **Table 4**.

TABLE 4: BASE MODEL ROADWAY NETWORK CHANGES

Facility Type	Attribute Edited	Description
Roadway Network	Road Expansion	Changed Imjin Parkway from Reservation Road to Imjin Road to be a 2-lane minor arterial.
Roadway Network	Road Expansion	Changed Imjin Parkway from Imjin Road to Highway 1 to be a 4-lane minor arterial.
Roadway Network	Speed Increase	Increase speed on Del Monte Boulevard from Reservation Road to Marina Green Road from 35 miles per hour (mph) to 40 mph.
Roadway Network	Bike Class	Adjust bicycle facility type on Imjin Road from Imjin Road to Reservation Parkway to Bike Class II.
Roadway Network	Node	Adjust centroid connector placement from node 3568 to node 37011.
Roadway Network	Node	Adjust centroid connector placement from node 8071 to node 37004.
Roadway Network	Node	Adjust centroid connector placement from node 33033 to node 37006.
Roadway Network	Node	Adjust centroid connector placement from node 33036 to node 37005.
Roadway Network	Node	Adjust centroid connector placement from node 33034 to node 37007.
Roadway Network	Node	Adjust centroid connector placement from node 3087 to node 37008.
Roadway Network	Node	Adjust centroid connector placement from node 3190 to node 37009.
Roadway Network	Node	Adjust centroid connector placement from node 2672 to node 37010.
Roadway Network	Functional Class	Changed from Local Road to Transit Only Link on Divarty Street between Engineer Lane and 4 th Street to reflect existing limited access conditions.
Roadway Network	Functional Class	Changed from Local Road to Transit Only Link on 6 th Avenue between A Street and B Street to reflect existing limited access conditions.

Source: Fehr & Peers, 2019.



CSUMB CAMPUS TRIP GENERATION CHANGES

The Existing Conditions external trip generation for the CSUMB campus described in the *California State University Monterey Bay Master Plan EIR – Trip Generation Evaluation Methods and Estimates* memorandum is implemented by factoring the morning and evening peak hour vehicle trip matrices for the traffic analysis zones 806, 826, 847, 908, and 913.

UPDATED BASE MODEL RUN (RUN 01) VALIDATION RESULTS

By making adjustments described in the previous sections, the model performance was slightly improved for each time period. The revised base year model sub-area validation results classified by Functional Class Volume Range, Two-Way Total Traffic Volume, and Screenlines are attached (see **Attachments G, H, I and J**), and are referred to as Run 01, which includes daily, AM and PM peak hour. For all time periods the amount of two-way roadway model to count volume ratios within deviation increased. Validation results by functional class for both the PM peak hour and Daily show increase number of RSME values within deviation. AM peak hour and Daily have more screenlines within deviation. The model validation results for the updated base model given in **Table 5** presents the validation results for all validation locations regardless of functional class or volume.



ABLE 5: SUB-AREA TDF MODEL STATIC VALIDATION SUMMARY (Run 01)

Validation Item	Threshold	AM Peak Hour	PM Peak Hour	Daily
Summary Statistics				
Local Street Count Locations	N/A	40	40	40
Freeway and Ramp Count Locations	N/A	10	10	10
Model/Count Ratio	N/A	1.02	1.02	0.88
Static Validation Statistics				
Percent of Links Within Caltrans Deviation Allowance =	At Least 75%	<u>48%</u>	<u>48%</u>	<u>58%</u>
Correlation Coefficient =	At Least 0.88	0.98	0.98	0.99
Percent Root Mean Square Error (RMSE) =	Below 40%	34%	35%	24%
Volume-to-Count Ratio (Sum of all Locations) =	Within ±10%	2%	2%	<u>-11%</u>
Percent of Screenlines Within Maximum Deviation =	100% of links between 17% to 64%	<u>75%</u>	85%	79%

Notes:

1. **Bold text** indicates model validation meet guidelines.
 2. Underlined text indicates model validation results improved from Run 00.
- Source Fehr & Peers, 2019

For each of the validation periods, some of the static validation statistics (i.e., percent of links within Caltrans deviation allowance and percent of screenlines within maximum deviation) are not met; however, the results do show improvement compared to Run 00. Percent root mean square error is still below the 40% threshold and has shown further improvement in Run 01. Similar to the Run 00 results, the revised base year TDF model (Run 01) overestimated volumes on most freeway/expressway facilities in the Marina area for the daily, AM peak hour, and PM peak hour model runs. The local roadways were generally underestimated for the three time periods.

Fehr & Peers was able to improve the validation and reduce the overall error in the model for street and highway segments within the study area. Therefore, this updated Association of Bay Area Governments (AMBAG) regional travel model is the best tool available for developing long-range traffic forecast for streets and highways within the greater Monterey Bay Area.



FUTURE YEAR MODEL INPUT ADJUSTMENTS

The future year (Year 2035) model was provided by AMBAG. This as-is model represents the model as received from AMBAG, with no changes made. Fehr & Peers updated and added land use and roadway coding according to the Regional Transportation Plan (RTP) planned and funded street improvements planned by the Fort Ord Reuse Authority (FORA), City of Marina, and the AMBAG Regional Transportation Plan (RTP). The future year model update incorporates land use and network changes per the (FORA) travel model update completed in 2017. Fehr & Peers also adjusted the external trip generation for the CSUMB campus to represent future conditions.

FUTURE MODEL LAND USE CHANGES

Land use and population refinements were made based on information received from CSUMB staff and comparing land uses in the model to other models including the FORA AMBAG regional travel model. **Table 6** presents these changes.



TABLE 6: FUTURE YEAR MODEL LAND USE CHANGES

TAZ	Jurisdiction	Description
826	Marina	<ul style="list-style-type: none"> Add 508 K-12 Student Enrollment
1803	Seaside	<ul style="list-style-type: none"> Add 214 Retail Employment Add 375 Service Employment Add 100 Industrial Employment
1035, 1039, 1042, 1052, 1063, 1065, 1068, 1070,	Monterey County	<p>The following land uses were spread amongst the listed TAZs:</p> <ul style="list-style-type: none"> Add 167 Public Employment Add 167 Service Employment Add 161 Industrial Employment
790	Marina	<ul style="list-style-type: none"> Add 500 Hotel Rooms
832	Marina	<ul style="list-style-type: none"> Add 21 Public Employment Add 135 Industrial Employment
836	Marina	<ul style="list-style-type: none"> Add 48 Public Employment Add 135 Industrial Employment
819	Marina	<ul style="list-style-type: none"> Edit number of K-12 Enrollment to be 86 from 3 Edit Retail Employment to be 86 from 0 Edit Service Employment to be 360 from 233 Edit Industrial Employment to be 1,304 from 24
788	Marina	<ul style="list-style-type: none"> Edit number of Retail Employment to be 127 from 0 Edit number of Hotel Rooms to be 100 from 0
791	Marina	<ul style="list-style-type: none"> Edit number of Retail Employment to be 126 from 0 Edit number of Hotel Rooms to be 100 from 0
710	Seaside	<ul style="list-style-type: none"> Edit number of Industrial Employment to be 148 from 0
761	Seaside	<ul style="list-style-type: none"> Edit number of Service Employment to be 74 from 0

Source: Fehr & Peers, 2019.

FUTURE YEAR ROADWAY NETWORK CHANGES

The future year transportation network includes the planned and funded street improvements planned by the Fort Ord Reuse Authority (FORA), City of Marina, and the AMBAG Regional Transportation Plan (RTP) (see **Attachment K** and **L** for a description of the Cumulative without Project Conditions transportation improvements list). **Table 7** summarizes the roadway network edits to the 2035 roadway network near the study area.



TABLE 7: FUTURE YEAR MODEL ROADWAY NETWORK CORRECTIONS

Attributes Edited	Description
Road Classification/Speed	Changed Eastside Parkway classification from a Local Road to a Minor Arterial with posted speeds of 45 mph from the end of the existing Eucalyptus Road to Inter Garrison Road.
Road Addition	Add Watkins Gate Road to the model from Sloat Street to Reservation Road. Classification is coded in as a local road with two lanes.
Road Expansion	Changed Imjin Parkway from Reservation Road to Highway 1 from a Local Road classification to a 4-lane Minor Arterial with a posted speed of 40 mph.
Road Classification/Speed	Changed Lightfighter Drive from Highway 1 SB Ramps to General Jim Moore Boulevard from a Local Roadway to a Principal Arterial with a posted speed of 40 mph.
Road Expansion	Widened 2 nd Avenue between Lightfighter Drive to Imjin Parkway to four lanes.
Bike Facility Classification	Change Bike Lane Facility to Class II on Imjin Parkway from Imjin Road to 2nd Avenue.
Bike Facility Classification	Change Bike Lane Facility to Class II on Giggling Road from 6th Division Road to General Jim Moore Boulevard.
Bike Facility Classification	Change Bike Lane Facility to Class II on General Jim Moore Boulevard from Giggling Road to Inter-Garrison Road.
Bike Facility Classification	Change Bike Lane Facility to Class III on A Street from 7th Avenue to Divarty Street.
Bike Facility Classification	Change Bike Lane Facility to Class III on Divarty Street from General Jim Moore Boulevard to 5th Avenue.
Bike Facility Classification	Change Bike Lane Facility to Class I on Beach Range Road from 1st Street to Highway 1.
Node	Adjust centroid connector placement for node 39023 in order to correctly load volumes onto roadway network.
Node	Adjust centroid connector placement from node 33033 to node 39025.
Node	Adjust centroid connector placement from node 33036 to node 39024.
Node	Adjust centroid connector placement from node 33034 to node 39026.
Node	Adjust centroid connector placement from node 3087 to node 39027.
Node	Adjust centroid connector placement from node 3190 to node 39028.
Node	Adjust centroid connector placement from node 2672 to node 39029.
Node	Adjust centroid connector placement from node 3568 to node 39030.

Source: Fehr & Peers, 2019

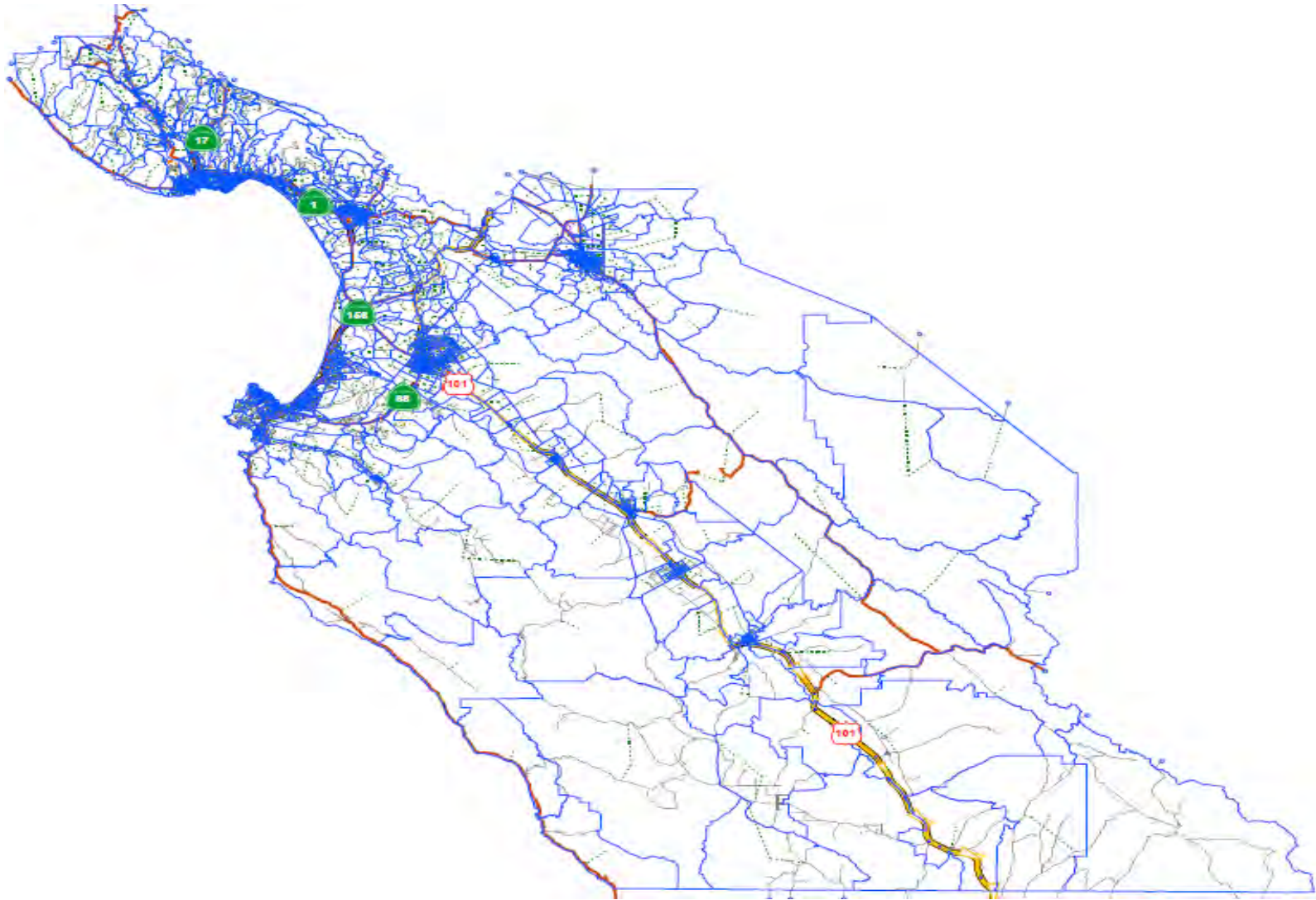


ATTACHMENTS:

- Attachment A: AMBAG Base Year Model Network and TAZs Near the CSUMB Campus
- Attachment B: AMBAG Base Year Model Network and TAZs Regionwide
- Attachment C: Initial Model Validation Results: Functional Classification, Run 00
- Attachment D: Initial Model Validation Results: Roadway Volume Range, Run 00
- Attachment E: Initial Model Validation Results: Screenlines Using Two-Way Volume, Run 00
- Attachment F: Initial Model Validation Results: By Link Using Two-Way Volume, Run 00
- Attachment G: Final Model Validation Results: Functional Classification, Run 01
- Attachment H: Final Model Validation Results: Roadway Volume Range, Run 01
- Attachment I: Final Model Validation Results: Screenlines Using Two-Way Volume, Run 01
- Attachment J: Final Model Validation Results: By Link Using Two-Way Volume, Run 01
- Attachment K: Cumulative without Project Conditions Roadway Improvements
- Attachment L: Cumulative without Project Conditions Intersection Improvements
- Attachment M: Monterey County List of TAZs
- Attachment N: San Benito County List of TAZs
- Attachment O: Santa Cruz County List of TAZs

**ATTACHMENT A: AMBAG BASE YEAR MODEL NETWORK AND
TAZS NEAR THE CSUMB CAMPUS**

**ATTACHMENT B: AMBAG BASE YEAR MODEL NETWORK AND
TAZS REGIONWIDE**



**ATTACHMENT C: INITIAL MODEL VALIDATION RESULTS:
FUNCTIONAL CLASSIFICATION, RUN 00**

Table C1: Results of AM Peak-Hour Model Area Validation by Functional Class, Run 00							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	10%	Yes	14%	40%	Yes
Principal Arterial	10	29%	3%	Yes	35%	40%	Yes
Minor Arterial	6	48%	-3%	Yes	39%	40%	Yes
Local Roadway	18	48%	-58%	No	89%	40%	No
Major Collector	6	48%	-11%	Yes	91%	40%	No
Ramp	1	28%	-23%	Yes	23%	40%	Yes
Total	50	10%	0%	Yes	32%	40%	Yes

Table C2: Results of PM Peak-Hour Model Area Validation by Functional Class, Run 00							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	14%	Yes	18%	40%	Yes
Principal Arterial	10	29%	-9%	Yes	28%	40%	Yes
Minor Arterial	6	48%	-1%	Yes	41%	40%	No
Local Roadway	18	48%	-53%	No	87%	40%	No
Major Collector	6	48%	-25%	Yes	42%	40%	No
Ramp	1	28%	-13%	Yes	13%	40%	Yes
Total	50	10%	0%	Yes	32%	40%	Yes

Table C3: Results of Daily Model Area Validation by Functional Class, Run 00							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	-5%	Yes	12%	40%	Yes
Principal Arterial	10	29%	-20%	Yes	27%	40%	Yes
Minor Arterial	6	48%	-13%	Yes	36%	40%	Yes
Local Roadway	18	48%	-51%	No	88%	40%	No
Major Collector	6	48%	-29%	Yes	43%	40%	No
Ramp	1	28%	-39%	No	39%	40%	Yes
Total	50	10%	-13%	No	26%	40%	Yes

**ATTACHMENT D: INITIAL MODEL VALIDATION RESULTS:
ROADWAY VOLUME RANGE, RUN 00**

Table D1: Results of AM Peak-Hour Model Area Validation by Roadway Volume, Run 00							
Functional Class	Counts	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Less than 1,000	30	34%	-30%	Yes	81%	116%	Yes
1,000 to 2,499	10	25%	-6%	Yes	38%	116%	Yes
2,500 to 4,999	2	19%	9%	Yes	28%	116%	Yes
5,000 to 10,000	8	14%	9%	Yes	13%	43%	Yes
Total	50						

Table D2: Results of PM Peak-Hour Model Area Validation by Roadway Volume, Run 00							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid	%	Maximum	Valid?
Less than 1,000	27	34%	-33%	Yes	69%	116%	Yes
1,000 to 2,499	13	25%	-12%	Yes	32%	116%	Yes
2,500 to 4,999	3	19%	20%	No	36%	116%	Yes
5,000 to 10,000	7	14%	10%	Yes	13%	43%	Yes
Total	50						

Table D3: Results of Daily Model Area Validation by Roadway Volume, Run 00							
Functional Class	Counts	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Less than 1,000	3	34%	291%	No	81%	116%	Yes
1,000 to 2,499	0	25%	NA	N/A	68%	116%	N/A
2,500 to 4,999	11	19%	-56%	No	74%	116%	Yes
5,000 to 9,999	15	14%	-30%	No	48%	43%	No
10,000 to 19,999	5	14%	-26%	No	38%	28%	No
20,000 to 24,999	3	14%	-36%	No	36%	25%	No
25,000 to 39,999	4	14%	-21%	No	25%	25%	Yes
40,000 to 49,999	0	14%	N/A	N/A	NA	30%	N/A
50,000 to 59,999	1	14%	2%	Yes	2%	30%	Yes
60,000 to 89,999	5	14%	2%	Yes	8%	19%	Yes
Total	47						

**ATTACHMENT E: INITIAL MODEL VALIDATION RESULTS:
SCREENLINES USING TWO-WAY VOLUME, RUN 00**

Table E1: Results of Screenline AM Peak Hour - Two-Way Volume, Run 00											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	1,090	997	93	0.093	0.55	YES	93	8,632	
40543	SB	Blanco Road between Cooper Road and Reservation Road	1,179	998	181	0.181	0.55	YES	181	32,610	
13421	NB	Davis Road just north of Reservation Road	413	280	133	0.476	0.63	YES	133	17,757	
13421	SB	Davis Road just north of Reservation Road	563	406	157	0.386	0.62	YES	157	24,545	
4810	EB	Reservation Road just west of SR-68	224	420	-196	-0.466	0.62	YES	-196	38,289	
4810	WB	Reservation Road just west of SR-68	274	648	-374	-0.577	0.59	YES	-374	139,971	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			3,743	3,749	-6	-0.002	0.35	YES	-6	41	0%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	65	50	15	0.291	0.64	YES	15	212	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	31	310	-279	-0.899	0.63	NO	-279	77,665	
4020	NB	Inter-Garrison between Eight Avenue and Abrams Drive	418	139	279	2.006	0.64	NO	279	77,716	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	262	990	-728	-0.735	0.55	NO	-728	530,167	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	741	797	-56	-0.070	0.57	YES	-56	3,154	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	575	1,127	-552	-0.490	0.54	YES	-552	304,582	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,091	3,413	-1,322	-0.387	0.37	NO	-1,322	1,746,479	39%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	477	953	-476	-0.500	0.56	YES	-476	226,797	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	959	901	58	0.064	0.56	YES	58	3,364	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	932	1,288	-356	-0.276	0.52	YES	-356	126,776	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	1,032	1,212	-180	-0.149	0.53	YES	-180	32,397	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	308	382	-74	-0.195	0.62	YES	-74	5,536	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	121	587	-466	-0.793	0.6	NO	-466	216,906	
13637	NB	Fremont Boulevard	574	826	-252	-0.305	0.57	YES	-252	63,361	
13637	SB	Fremont Boulevard	786	943	-157	-0.166	0.56	YES	-157	24,515	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			5,189	7,092	-1,903	-0.268	0.26	NO	-1,903	3,620,287	38%

Table E2: Results of Screenline PM Peak Hour - Two-Way Volume, Run 00											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	1,145	972	173	0.178	0.55	YES	173	30,038	
40543	SB	Blanco Road between Cooper Road and Reservation Road	1,054	972	82	0.084	0.55	YES	82	6,678	
13421	NB	Davis Road just north of Reservation Road	693	392	301	0.767	0.62	NO	301	90,322	
13421	SB	Davis Road just north of Reservation Road	547	282	265	0.939	0.63	NO	265	70,188	
4810	EB	Reservation Road just west of SR-68	280	615	-335	-0.544	0.6	YES	-335	112,083	
4810	WB	Reservation Road just west of SR-68	255	455	-200	-0.439	0.61	YES	-200	39,947	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			3,974	3,688	286	0.078	0.36	YES	286	81,707	11%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	47	197	-150	-0.762	0.64	NO	-150	22,552	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	37	153	-116	-0.759	0.64	NO	-116	13,473	
4020	WB	Inter-Garrison between Eight Avenue and Abrams Drive	284	782	-498	-0.636	0.58	NO	-498	247,709	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	405	244	161	0.661	0.64	NO	161	26,032	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	576	980	-404	-0.412	0.55	YES	-404	163,412	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	678	840	-162	-0.193	0.57	YES	-162	26,330	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,027	3,196	-1,169	-0.366	0.38	YES	-1,169	1,366,827	37%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	1,132	1,071	61	0.057	0.54	YES	61	3,715	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	699	1,033	-334	-0.324	0.55	YES	-334	111,717	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	1,036	1,326	-290	-0.219	0.51	YES	-290	84,266	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	940	1,398	-458	-0.328	0.5	YES	-458	210,056	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	248	572	-324	-0.567	0.6	YES	-324	105,269	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	117	733	-616	-0.841	0.58	NO	-616	379,955	
13637	NB	Fremont Boulevard	894	1,317	-423	-0.321	0.52	YES	-423	178,783	
13637	SB	Fremont Boulevard	568	717	-149	-0.208	0.58	YES	-149	22,300	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			5,632	8,167	-2,535	-0.310	0.25	NO	-2,535	6,425,771	44%

Table E3: Results of Screenline Daily - Two-Way Volume, Run 00											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	11,511	13,770	-2,259	-0.164	0.53	YES	173	30,038	
40543	SB	Blanco Road between Cooper Road and Reservation Road	11,225	13,769	-2,544	-0.185	0.53	YES	82	6,678	
13421	NB	Davis Road just north of Reservation Road	5,063	N/A	N/A	0.000	N/A	N/A	301	90,322	
13421	SB	Davis Road just north of Reservation Road	5,093	N/A	N/A	0.000	N/A	N/A	265	70,188	
4810	EB	Reservation Road just west of SR-68	2,678	N/A	N/A	0.000	N/A	N/A	-335	112,083	
4810	WB	Reservation Road just west of SR-68	2,824	N/A	N/A	0.000	N/A	N/A	-200	39,947	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			38,395	27,539	-4,804	-0.174	0.17	NO	10,856	117,852,409	56%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	65	50	15	0.291	0.64	YES	15	212	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	31	310	-279	-0.899	0.63	NO	-279	77,665	
4020	WB	Inter-Garrison between Eight Avenue and Abrams Drive	418	139	279	2.006	0.64	NO	279	77,716	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	262	990	-728	-0.735	0.55	NO	-728	530,167	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	741	797	-56	-0.070	0.57	YES	-56	3,154	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	575	1,127	-552	-0.490	0.54	YES	-552	304,582	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,091	3,413	-1,322	-0.387	0.37	NO	-1,322	1,746,479	39%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	8,061	13,945	-5,884	-0.422	0.54	YES	-5,884	3,715	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	8,393	12,841	-4,448	-0.346	0.55	YES	-4,448	111,717	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	10,630	14,435	-3,805	-0.264	0.51	YES	-3,805	84,266	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	10,176	13,788	-3,612	-0.262	0.5	YES	-3,612	210,056	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	3,104	6,315	-3,211	-0.508	0.6	YES	-3,211	105,269	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	1,207	8,687	-7,480	-0.861	0.58	NO	-7,480	379,955	
13637	NB	Fremont Boulevard	8,055	N/A	N/A	N/A	0.52	N/A	N/A	178,783	
13637	SB	Fremont Boulevard	7,567	N/A	N/A	N/A	0.58	N/A	N/A	22,300	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			57,193	70,011	-28,439	-0.406	0.17	NO	-12,818	164,288,520	26%

**ATTACHMENT F: INITIAL MODEL VALIDATION RESULTS: BY LINK
USING TWO-WAY VOLUME, RUN 00**

Table F1: Results of AM Peak-Hour Model Area Validation by Two-Way Volume, Run 00

ID	Direction	Description		Model Volume	Traffic Count	Model/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location							
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	5,016	3,875	1.295	0.21	NO	1,141	1,302,556
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	6,452	5,777	1.117	0.17	YES	675	455,713
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	7,728	6,955	1.111	0.15	YES	773	597,656
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	8,047	7,484	1.075	0.14	YES	563	316,696
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	7,072	6,296	1.123	0.16	YES	776	602,928
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	7,242	6,388	1.134	0.16	YES	854	729,527
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	6,606	5,620	1.175	0.18	NO	986	972,328
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	6,758	5,600	1.207	0.18	NO	1,158	1,339,990
9	SB/NB	Highway 1	between SR 68 and Fremont Street	7,546	8,584	0.879	0.14	YES	-1,038	1,077,881
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	112	609	0.185	0.44	NO	-497	246,644
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	1,436	1,854	0.774	0.28	YES	-418	174,917
12	SB/NB	Second Avenue	between Imjin Parkway and Tenth Street	480	217	2.212	0.63	NO	263	69,203
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	127	817	0.156	0.38	NO	-690	476,023
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	110	147	0.746	0.63	YES	-37	1,389
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	802	441	1.818	0.48	NO	361	130,167
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	536	730	0.735	0.41	YES	-194	37,497
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	545	700	0.779	0.41	YES	-155	23,914
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	625	432	1.447	0.52	YES	193	37,352
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	218	430	0.506	0.52	YES	-212	45,126
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	294	398	0.738	0.52	YES	-104	10,914
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	51	158	0.322	0.63	NO	-107	11,478
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	96	360	0.266	0.52	NO	-264	69,770
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	185	389	0.475	0.52	NO	-204	41,728
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	178	466	0.383	0.48	NO	-288	82,665
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	2,268	1,995	1.137	0.27	YES	273	74,797
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	1,239	418	2.964	0.52	NO	821	673,846
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	787	557	1.413	0.44	YES	230	53,009
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	1,460	1,606	0.909	0.29	YES	-146	21,246
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	1,432	1,526	0.938	0.29	YES	-94	8,918
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	2,587	1,224	2.113	0.31	NO	1,363	1,857,546
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	535	752	0.712	0.41	YES	-217	46,915
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	1,118	1,160	0.964	0.33	YES	-42	1,772
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	251	371	0.677	0.52	YES	-120	14,376
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	1,964	2,500	0.786	0.25	YES	-536	287,346
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	1,656	1,570	1.055	0.29	YES	86	7,456
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	1,316	1,924	0.684	0.27	NO	-608	369,729
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	1,284	934	1.375	0.36	NO	350	122,825
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	152	147	1.033	0.63	YES	5	24
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	620	277	2.240	0.58	NO	343	117,943
40	WB/EB	Inter-Garrison Road	between Eight Avenue and Abrams Drive	680	1,129	0.602	0.33	NO	-449	201,916
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	429	969	0.443	0.36	NO	-540	291,750
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	628	1,503	0.418	0.29	NO	-875	766,146
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	0	463	0.000	0.48	NO	-463	214,249
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	0	895	0.000	0.36	NO	-895	800,640
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	26	217	0.118	0.63	NO	-191	36,592
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	98	506	0.193	0.48	NO	-408	166,705
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	169	728	0.232	0.41	NO	-559	312,463
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	398	582	0.684	0.44	YES	-184	33,885
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	25	828	0.030	0.38	NO	-803	645,591

Local Roadway/Freeway/Ramp Results:

89,384 89,508

Model/Count Ratio = 1.00 0%
 Percent Within Caltrans Maximum Deviation = 48% <75%
 Percent Root Mean Square Error = 0.32 <40%
 Correlation Coefficient = 0.98 >0.88

Total Count= 49
 Link within Deviation= 24
 Link Outside Deviation= 25

Local Roadway Results:

25,481 31,075

Model/Count Ratio = 0.82 -28%
 Percent Within Caltrans Maximum Deviation = 43% <75%
 Percent Root Mean Square Error = 0.32 <40%
 Correlation Coefficient = 0.98 >0.88

Total Count= 39
 Link within Deviation= 17
 Link Outside Deviation= 22

Table F2: Results of PM Peak Hour Two-Way Total Traffic Volumes, Run 00

ID	Direction	Description		Model Volume	Traffic Count	Model/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location							
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	4,945	4,088	1.210	0.21	NO	857	733,817
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	6,775	6,318	1.072	0.16	YES	457	209,160
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	8,000	7,763	1.031	0.14	YES	237	56,124
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	8,187	7,903	1.036	0.14	YES	284	80,667
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	7,057	5,729	1.232	0.17	NO	1,328	1,764,186
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	7,207	5,945	1.212	0.17	NO	1,262	1,592,780
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	6,257	5,027	1.245	0.19	NO	1,230	1,512,766
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	6,930	4,774	1.452	0.20	NO	2,156	4,646,740
9	SB/NB	Highway 1	between SR 68 and Fremont Street	7,601	7,792	0.976	0.14	YES	-191	36,436
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	152	634	0.240	0.44	NO	-482	231,992
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	1,831	2,104	0.870	0.26	YES	-273	74,688
12	SB/NB	Second Avenue	between Imjin Parkway and Tenth Street	567	290	1.955	0.58	NO	277	76,652
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	138	554	0.250	0.44	NO	-416	172,835
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	130	142	0.912	0.63	YES	-12	156
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	793	384	2.065	0.52	NO	409	167,132
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	630	896	0.704	0.36	YES	-266	70,504
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	706	722	0.977	0.41	YES	-16	266
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	806	554	1.454	0.44	NO	252	63,314
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	233	505	0.461	0.48	NO	-272	74,053
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	329	562	0.586	0.44	YES	-233	54,159
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	57	77	0.738	0.68	YES	-20	409
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	84	350	0.239	0.52	NO	-266	70,887
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	198	496	0.400	0.48	NO	-298	88,546
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	198	446	0.445	0.48	NO	-248	61,308
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	2,199	1,944	1.131	0.27	YES	255	65,041
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	1,267	1,104	1.148	0.33	YES	163	26,719
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	821	734	1.119	0.41	YES	87	7,648
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	1,775	1,873	0.948	0.27	YES	-98	9,515
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	1,717	1,670	1.028	0.28	YES	47	2,212
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	2,783	2,001	1.391	0.27	NO	782	612,245
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	480	789	0.609	0.38	NO	-309	95,414
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	1,393	1,166	1.195	0.33	YES	227	51,586
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	283	581	0.487	0.44	NO	-298	88,860
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	1,975	2,724	0.725	0.24	NO	-749	560,408
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	1,643	2,001	0.821	0.27	YES	-358	128,364
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	1,253	1,820	0.689	0.28	NO	-567	320,930
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	1,211	2,098	0.577	0.26	NO	-887	786,426
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	159	169	0.943	0.63	YES	-10	93
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	621	230	2.700	0.58	NO	391	152,812
40	WB/EB	Inter-Garrison Road	between Eight Avenue and Abrams Drive	690	1,026	0.672	0.34	YES	-336	113,138
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	364	1,305	0.279	0.31	NO	-941	885,212
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	635	1,326	0.479	0.30	NO	-691	477,302
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	0	390	0.000	0.52	NO	-390	152,040
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	20	786	0.026	0.38	NO	-766	586,164
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	31	307	0.101	0.58	NO	-276	76,212
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	113	279	0.405	0.58	NO	-166	27,535
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	201	391	0.514	0.52	YES	-190	36,101
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	436	612	0.713	0.44	YES	-176	30,912
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	41	635	0.065	0.44	NO	-594	352,789
Local Roadway/Freeway/Ramp Results:				91,925	92,016			Model/Count Ratio=	1.00	0%
								Percent within Caltrans Maximum Deviation=	100%	<75%
								Percent Root Mean Square Error (RSME)=	32%	<40%
								Correlation Coefficient =	98%	>0.88
								Total Count=	49	
								Link within Deviation=	21	
								Link Outside Deviation=	28	
Local Roadway Results:				27,136	34,573			Model/Count Ratio =	0.78	-32%
								Percent Within Caltrans Maximum Deviation =	45%	<75%
								Percent Root Mean Square Error =	32%	<40%
								Correlation Coefficient =	0.26	<0.88
								Total Count=	39	
								Link within Deviation=	16	
								Link Outside Deviation=	23	

Table F3: Results of Daily Two-Way Total Traffic Volumes, Run 00

ID	Direction	Description		Model Volume	Traffic Count	Model Delta	Model Delta/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location								
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	5,016	3,875	1,141	0.295	0.20	NO	1,141	1,145,744
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	69,091	76,532	-7,441	-0.097	0.15	YES	-7,441	55,368,834
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	82,256	93,403	-11,147	-0.119	0.14	YES	-11,147	124,247,799
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	85,460	96,962	-11,502	-0.119	0.14	YES	-11,502	132,304,298
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	75,157	69,564	5,593	0.080	0.17	YES	5,593	31,276,992
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	77,936	77,104	832	0.011	0.15	YES	832	692,144
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	69,306	68,590	716	0.010	0.17	YES	716	512,955
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	73,941	66,292	7,649	0.115	0.17	YES	7,649	58,506,054
9	SB/NB	Highway 1	between SR 68 and Fremont Street	81,385	100,509	-19,124	-0.190	0.14	NO	-19,124	365,738,798
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	1,614	7,580	-5,966	-0.787	0.41	NO	-5,966	35,589,710
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	16,455	26,786	-10,331	-0.386	0.25	NO	-10,331	106,738,197
12	SB/NB	Second Avenue	between Imjin Parkway and Tenth Street	5,999	3,274	2,725	0.832	0.58	NO	2,725	7,424,982
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	1,412	6,331	-4,919	-0.777	0.44	NO	-4,919	24,198,334
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	1,486	2,502	-1,016	-0.406	0.58	YES	-1,016	1,031,457
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	8,304	5,232	3,072	0.587	0.48	NO	3,072	9,434,882
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	5,835	9,611	-3,776	-0.393	0.38	NO	-3,776	14,256,535
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	6,384	6,683	-299	-0.045	0.44	YES	-299	89,661
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	7,752	7,004	748	0.107	0.44	YES	748	559,265
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	2,318	4,672	-2,354	-0.504	0.52	YES	-2,354	5,543,078
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	3,373	5,915	-2,542	-0.430	0.48	YES	-2,542	6,464,031
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	562	992	-430	-0.433	0.68	YES	-430	184,820
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	1,126	4,122	-2,996	-0.727	0.52	NO	-2,996	8,975,291
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	2,033	5,616	-3,583	-0.638	0.48	NO	-3,583	12,836,338
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	1,842	4,486	-2,644	-0.589	0.52	NO	-2,644	6,992,550
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	22,735	27,539	-4,804	-0.174	0.25	YES	-4,804	23,073,720
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	13,571	12,776	795	0.062	0.33	YES	795	631,535
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	8,706	8,470	236	0.028	0.41	YES	236	55,668
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	15,968	17,396	-1,428	-0.082	0.29	YES	-1,428	2,038,365
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	14,726	16,489	-1,763	-0.107	0.29	YES	-1,763	3,107,636
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	26,211	26,567	-356	-0.013	0.25	YES	-356	126,736
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	4,057	6,224	-2,167	-0.348	0.48	YES	-2,167	4,697,697
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	11,526	9,844	1,682	0.171	0.38	YES	1,682	2,828,111
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	2,865	6,441	-3,576	-0.555	0.44	NO	-3,576	12,787,665
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	20,806	28,223	-7,417	-0.263	0.25	NO	-7,417	55,007,516
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	17,056	22,817	-5,761	-0.252	0.27	YES	-5,761	33,192,375
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	13,312	23,570	-10,258	-0.435	0.27	NO	-10,258	105,231,784
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	13,005	20,860	-7,855	-0.377	0.28	NO	-7,855	61,703,185
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	1,722	2,630	-908	-0.345	0.58	YES	-908	825,229
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	6,398	665	5,733	8.621	0.68	NO	5,733	32,863,491
40	WB/EB	Inter-Garrison Road	between Eighth Avenue and Abrams Drive	6,762	8,450	-1,688	-0.200	0.41	YES	-1,688	2,849,131
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	4,311	15,002	-10,691	-0.713	0.30	NO	-10,691	114,291,943
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	6,865	13,257	-6,392	-0.482	0.33	NO	-6,392	40,852,192
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	1	3,746	-3,745	-1.000	0.58	NO	-3,745	14,027,031
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	53	6,281	-6,228	-0.992	0.44	NO	-6,228	38,789,101
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	270	3,280	-3,010	-0.918	0.58	NO	-3,010	9,059,431
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	993	2,950	-1,957	-0.663	0.58	NO	-1,957	3,827,956
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	1,948	3,963	-2,015	-0.508	0.52	YES	-2,015	4,060,689
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	4,622	7,304	-2,682	-0.367	0.44	YES	-2,682	7,192,084
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	151	4,578	-4,427	-0.967	0.52	NO	-4,427	19,601,879

Local Roadway/Freeway/Ramp Results:

904,681 1,052,959

Model/Count Ratio = 0.86
 Percent within Caltrans Maximum Deviation = 100% <75%
 Percent Root Mean Square Error (RSME) = 26% <40%
 Correlation Coefficient = 99% >0.88

Total Count = 49
 Link within Deviation = 26
 Link Outside Deviation = 23

Local Roadway Results:

268,678 373,342

Model/Count Ratio = 0.72
 Percent Within Caltrans Maximum Deviation = 43% <75%
 Percent Root Mean Square Error = 27% <40%
 Correlation Coefficient = 0.99 >0.88

Total Count = 39
 Link within Deviation = 19
 Link Outside Deviation = 20

**ATTACHMENT G: FINAL MODEL VALIDATION RESULTS: FUNCTIONAL
CLASSIFICATION, RUN 01**

Table C1: Results of AM Peak-Hour Model Area Validation by Functional Class, Run 01							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	11%	Yes	14%	40%	Yes
Principal Arterial	10	29%	9%	Yes	47%	40%	No
Minor Arterial	6	48%	-14%	Yes	32%	40%	Yes
Local Roadway	18	48%	-52%	No	90%	40%	No
Major Collector	6	48%	-16%	Yes	82%	40%	No
Ramp	1	28%	-26%	Yes	26%	40%	Yes
Total	50	10%	2%	Yes	34%	40%	Yes

Table C2: Results of PM Peak-Hour Model Area Validation by Functional Class, Run 01							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	16%	Yes	21%	40%	Yes
Principal Arterial	10	29%	-6%	Yes	25%	40%	Yes
Minor Arterial	6	48%	-17%	Yes	38%	40%	Yes
Local Roadway	18	48%	-43%	Yes	86%	40%	No
Major Collector	6	48%	-30%	Yes	46%	40%	No
Ramp	1	28%	-31%	No	31%	40%	Yes
Total	50	10%	0%	Yes	35%	40%	Yes

Table C3: Results of Daily Model Area Validation by Functional Class, Run 01							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Freeway or Expressway	9	16%	-4%	Yes	11%	40%	Yes
Principal Arterial	10	29%	-12%	Yes	18%	40%	Yes
Minor Arterial	6	48%	-15%	Yes	29%	40%	Yes
Local Roadway	18	48%	-47%	Yes	88%	40%	No
Major Collector	6	48%	-32%	Yes	44%	40%	No
Ramp	1	28%	-37%	No	37%	40%	Yes
Total	50	10%	-11%	No	24%	40%	Yes

**ATTACHMENT H: FINAL MODEL VALIDATION RESULTS: ROADWAY
VOLUME RANGE, RUN 01**

Table D1: Results of AM Peak-Hour Model Area Validation by Roadway Volume, Run 01							
Functional Class	Counts	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Less than 1,000	30	34%	-27%	Yes	86%	116%	Yes
1,000 to 2,499	10	25%	-6%	Yes	47%	116%	Yes
2,500 to 4,999	2	19%	17%	Yes	26%	116%	Yes
5,000 to 10,000	8	14%	10%	Yes	13%	43%	Yes
Total	50						

Table D2: Results of PM Peak-Hour Model Area Validation by Roadway Volume, Run 01							
Functional Class	Links	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid	%	Maximum	Valid?
Less than 1,000	27	34%	-36%	No	74%	116%	Yes
1,000 to 2,499	13	25%	-13%	Yes	31%	116%	Yes
2,500 to 4,999	3	19%	27%	No	35%	116%	Yes
5,000 to 10,000	7	14%	12%	Yes	17%	43%	Yes
Total	50						

Table D3: Results of Daily Model Area Validation by Roadway Volume, Run 01							
Functional Class	Counts	Volume-to-Count Ratio			Root Mean Square Error		
		Criteria	%	Valid?	%	Maximum	Valid?
Less than 1,000	3	34%	186%	No	86%	116%	Yes
1,000 to 2,499	0	25%	NA	N/A	84%	116%	N/A
2,500 to 4,999	11	19%	-48%	No	96%	116%	Yes
5,000 to 9,999	15	14%	-28%	No	45%	43%	No
10,000 to 19,999	5	14%	-25%	No	35%	28%	No
20,000 to 24,999	3	14%	-22%	No	23%	25%	Yes
25,000 to 39,999	4	14%	-14%	No	21%	25%	Yes
40,000 to 49,999	0	14%	N/A	N/A	NA	30%	N/A
50,000 to 59,999	1	14%	4%	Yes	4%	30%	Yes
60,000 to 89,999	5	14%	3%	Yes	7%	19%	Yes
Total	47						

**ATTACHMENT I: FINAL MODEL VALIDATION RESULTS: SCREENLINES
USING TWO-WAY VOLUME, RUN 01**

Table E1: Results of Screenline AM Peak Hour - Two-Way Volume, Run 01											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	1,223	997	226	0.227	0.55	YES	226	51,044	
40543	SB	Blanco Road between Cooper Road and Reservation Road	1,453	998	455	0.456	0.55	YES	455	207,189	
13421	NB	Davis Road just north of Reservation Road	123	280	-157	-0.560	0.63	YES	-157	24,553	
13421	SB	Davis Road just north of Reservation Road	206	406	-200	-0.492	0.62	YES	-200	39,920	
4810	EB	Reservation Road just west of SR-68	231	420	-189	-0.449	0.62	YES	-189	35,540	
4810	WB	Reservation Road just west of SR-68	267	648	-381	-0.588	0.59	YES	-381	145,273	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			3,504	3,749	-245	-0.065	0.35	YES	-245	60,051	9%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	171	50	121	2.422	0.64	NO	121	14,669	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	43	310	-267	-0.861	0.63	NO	-267	71,276	
4020	WB	Inter-Garrison between Eight Avenue and Abrams Drive	338	139	199	1.435	0.64	NO	199	39,764	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	85	990	-905	-0.915	0.55	NO	-905	819,736	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	1,035	797	238	0.299	0.57	YES	238	56,787	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	588	1,127	-539	-0.478	0.54	YES	-539	290,273	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,261	3,413	-1,152	-0.338	0.37	YES	-1,152	1,327,826	34%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	486	953	-467	-0.490	0.56	YES	-467	218,447	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	889	901	-12	-0.013	0.56	YES	-12	136	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	1,126	1,288	-162	-0.126	0.52	YES	-162	26,379	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	1,329	1,212	117	0.096	0.53	YES	117	13,607	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	234	382	-148	-0.388	0.62	YES	-148	22,022	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	121	587	-466	-0.795	0.6	NO	-466	217,559	
13637	NB	Fremont Boulevard	570	826	-256	-0.310	0.57	YES	-256	65,740	
13637	SB	Fremont Boulevard	756	943	-187	-0.199	0.56	YES	-187	35,154	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			5,508	7,092	-1,584	-0.223	0.26	YES	-1,584	2,507,536	32%

Table E2: Results of Screenline PM Peak Hour - Two-Way Volume, Run 01											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	1,307	972	335	0.345	0.55	YES	335	112,276	
40543	SB	Blanco Road between Cooper Road and Reservation Road	1,225	972	253	0.260	0.55	YES	253	63,783	
13421	NB	Davis Road just north of Reservation Road	395	392	3	0.009	0.62	YES	3	12	
13421	SB	Davis Road just north of Reservation Road	185	282	-97	-0.345	0.63	YES	-97	9,486	
4810	EB	Reservation Road just west of SR-68	268	615	-347	-0.564	0.6	YES	-347	120,436	
4810	WB	Reservation Road just west of SR-68	251	455	-204	-0.449	0.61	YES	-204	41,782	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			3,630	3,688	-58	-0.016	0.36	YES	-58	3,342	2%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	84	197	-113	-0.576	0.64	YES	-113	12,865	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	145	153	-8	-0.052	0.64	YES	-8	64	
4020	WB	Inter-Garrison between Eight Avenue and Abrams Drive	138	782	-644	-0.823	0.58	NO	-644	414,341	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	441	244	197	0.807	0.64	NO	197	38,747	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	703	980	-277	-0.283	0.55	YES	-277	76,761	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	1,051	840	211	0.251	0.57	YES	211	44,438	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,561	3,196	-635	-0.199	0.38	YES	-635	402,602	20%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	805	1,071	-266	-0.248	0.54	YES	-266	70,770	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	647	1,033	-386	-0.374	0.55	YES	-386	149,081	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	1,504	1,326	178	0.134	0.51	YES	178	31,605	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	1,187	1,398	-211	-0.151	0.5	YES	-211	44,713	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	279	572	-293	-0.511	0.6	YES	-293	85,580	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	111	733	-622	-0.849	0.58	NO	-622	387,008	
13637	NB	Fremont Boulevard	816	1,317	-501	-0.380	0.52	YES	-501	250,889	
13637	SB	Fremont Boulevard	676	717	-41	-0.057	0.58	YES	-41	1,683	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			6,025	8,167	-2,142	-0.262	0.25	NO	-2,142	4,589,730	37%

Table E3: Results of Screenline Daily - Two-Way Volume, Run 01											
Count ID	Direction	Location	Model Volume	Traffic Count	Delta AM	Delta/Count AM	Maximum Deviation	Within Deviation	Model-Count	Difference Squared	Percent RSME
Screenline 1: East of Reservation Road between Blanco Road and SR-68											
40543	NB	Blanco Road between Cooper Road and Reservation Road	11,537	13,770	-2,233	-0.162	0.53	YES	335	112,276	
40543	SB	Blanco Road between Cooper Road and Reservation Road	11,141	13,769	-2,628	-0.191	0.53	YES	253	63,783	
13421	NB	Davis Road just north of Reservation Road	5,077	N/A	N/A	0.000	N/A	N/A	3	12	
13421	SB	Davis Road just north of Reservation Road	5,261	N/A	N/A	0.000	N/A	N/A	-97	9,486	
4810	EB	Reservation Road just west of SR-68	2,690	N/A	N/A	0.000	N/A	N/A	-347	120,436	
4810	WB	Reservation Road just west of SR-68	2,856	N/A	N/A	0.000	N/A	N/A	-204	41,782	
Screenline 1: East of Reservation Road between Blanco Road and SR-68			38,561	27,539	-4,861	-0.177	0.17	NO	11,022	121,494,873	57%
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway											
12644	SB	Imjin Road between Imjin Parkway and Eight Street	171	50	121	2.422	0.64	NO	121	14,669	
12644	NB	Imjin Road between Imjin Parkway and Eight Street	43	310	-267	-0.861	0.63	NO	-267	71,276	
4020	WB	Inter-Garrison between Eight Avenue and Abrams Drive	338	139	199	1.435	0.64	NO	199	39,764	
4020	EB	Inter-Garrison between Eight Avenue and Abrams Drive	85	990	-905	-0.915	0.55	NO	-905	819,736	
3700	WB	Imjin Parkway between Abrams Drive and Imjin Road	1,035	797	238	0.299	0.57	YES	238	56,787	
3700	EB	Imjin Parkway between Abrams Drive and Imjin Road	588	1,127	-539	-0.478	0.54	YES	-539	290,273	
Screenline 2: 6th Ave between Inter-Garrison Road and Imjin Parkway			2,261	3,413	-1,152	-0.338	0.37	YES	-1,152	1,327,826	34%
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard											
41432	NB	Del Monte Boulevard between Reindollar Avenue and SR 1	8,137	13,945	-5,808	-0.416	0.54	YES	-5,808	70,770	
10104	SB	Del Monte Boulevard between Reindollar Avenue and SR 1	8,871	12,841	-3,970	-0.309	0.55	YES	-3,970	149,081	
45007	EB	Imjin Parkway between Second Avenue and Highway 1	13,230	14,435	-1,205	-0.083	0.51	YES	-1,205	31,605	
45007	WB	Imjin Parkway between Second Avenue and Highway 1	11,885	13,788	-1,903	-0.138	0.5	YES	-1,903	44,713	
10078	WB	Light Fighter Drive between Highway 1 and First Avenue	2,986	6,315	-3,329	-0.527	0.6	YES	-3,329	85,580	
10078	EB	Light Fighter Drive between Highway 1 and First Avenue	1,344	8,687	-7,343	-0.845	0.58	NO	-7,343	387,008	
13637	NB	Fremont Boulevard	7,970	N/A	N/A	N/A	0.52	N/A	N/A	250,889	
13637	SB	Fremont Boulevard	7,531	N/A	N/A	N/A	0.58	N/A	N/A	1,683	
Screenline 3: US-1 between Del Monte Boulevard and Fremont Boulevard			61,954	70,011	-23,558	-0.336	0.17	NO	-8,057	64,917,957	16%

**ATTACHMENT J: FINAL MODEL VALIDATION RESULTS: BY LINK USING
TWO-WAY VOLUME, RUN 01**

Table F1: Results of AM Peak-Hour Model Area Validation by Two-Way Volume, Run 01

ID	Direction	Description		Model Volume	Traffic Count	Model Delta	Model Delta/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location								
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	5,032	3,875	1,157	0.299	0.21	NO	1,157	1,338,354
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	6,407	5,777	630	0.109	0.17	YES	630	396,696
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	7,596	6,955	641	0.092	0.15	YES	641	411,052
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	7,861	7,484	377	0.050	0.14	YES	377	141,866
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	6,963	6,296	667	0.106	0.16	YES	667	445,228
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	7,529	6,388	1,141	0.179	0.16	NO	1,141	1,301,752
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	6,728	5,620	1,108	0.197	0.18	NO	1,108	1,228,432
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	6,914	5,600	1,314	0.235	0.18	NO	1,314	1,727,244
9	SB/NB	Highway 1	between SR 68 and Fremont Street	8,027	8,584	-557	-0.065	0.14	YES	-557	310,316
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	749	609	140	0.230	0.44	YES	140	19,563
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	1,375	1,854	-479	-0.258	0.28	YES	-479	229,474
12	NB/SB	Second Avenue	between Imjin Parkway and Tenth Street	976	217	759	3.500	0.63	NO	759	576,724
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	231	817	-586	-0.718	0.38	NO	-586	343,944
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	51	147	-96	-0.651	0.63	NO	-96	9,171
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	629	441	188	0.427	0.48	YES	188	35,397
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	611	730	-119	-0.163	0.41	YES	-119	14,244
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	487	700	-213	-0.304	0.41	YES	-213	45,166
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	496	432	64	0.148	0.52	YES	64	4,103
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	207	430	-223	-0.519	0.52	YES	-223	49,840
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	263	398	-135	-0.338	0.52	YES	-135	18,124
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	53	158	-105	-0.666	0.63	NO	-105	11,065
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	214	360	-146	-0.405	0.52	YES	-146	21,275
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	493	389	104	0.267	0.52	YES	104	10,752
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	287	466	-179	-0.383	0.48	YES	-179	31,868
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	2,676	1,995	681	0.341	0.27	NO	681	463,909
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	1,119	418	701	1.677	0.52	NO	701	491,434
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	175	557	-382	-0.685	0.44	NO	-382	145,638
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	1,267	1,606	-339	-0.211	0.29	YES	-339	114,596
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	1,166	1,526	-360	-0.236	0.29	YES	-360	129,341
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	2,881	1,224	1,657	1.354	0.31	NO	1,657	2,745,640
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	281	752	-471	-0.626	0.41	NO	-471	221,689
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	470	1,160	-690	-0.594	0.33	NO	-690	475,559
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	251	371	-120	-0.322	0.52	YES	-120	14,311
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	2,454	2,500	-46	-0.018	0.25	YES	-46	2,095
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	1,861	1,570	291	0.185	0.29	YES	291	84,413
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	1,624	1,924	-300	-0.156	0.27	YES	-300	90,282
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	1,849	934	915	0.979	0.36	NO	915	836,580
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	0	147	-147	-0.999	0.63	NO	-147	21,546
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	174	277	-103	-0.371	0.58	YES	-103	10,579
40	WB/EB	Inter-Garrison Road	between Eighth Avenue and Abrams Drive	423	1,129	-706	-0.625	0.33	NO	-706	498,413
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	354	969	-615	-0.634	0.36	NO	-615	378,016
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	851	1,503	-652	-0.434	0.29	NO	-652	425,683
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	87	463	-376	-0.813	0.48	NO	-376	141,693
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	38	895	-857	-0.958	0.36	NO	-857	735,189
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	14	217	-203	-0.937	0.63	NO	-203	41,385
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	131	506	-375	-0.740	0.48	NO	-375	140,284
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	128	728	-600	-0.824	0.41	NO	-600	359,435
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	331	582	-251	-0.431	0.44	YES	-251	62,783
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	8	828	-820	-0.990	0.38	NO	-820	671,803

Local Roadway/Freeway/Ramp Results:

90,795 89,508

Model/Count Ratio = 1.02
 Percent Within Caltrans Maximum Deviation = 48% <75%
 Percent Root Mean Square Error = 0.34 <40%
 Correlation Coefficient = 0.98 >0.88

Total Count= 49
 Link within Deviation= 24
 Link Outside Deviation= 25

Local Roadway Results:

26,362 31,075

Model/Count Ratio = 0.85
 Percent Within Caltrans Maximum Deviation = 43% <75%
 Percent Root Mean Square Error = 34% <40%
 Correlation Coefficient = 0.98 >0.88

Total Count= 39
 Link within Deviation= 17
 Link Outside Deviation= 22

Table F2: Results of PM Peak Hour Two-Way Total Traffic Volumes, Run 01

ID	Direction	Description		Model Volume	Traffic Count	Model Delta	Model Delta/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location								
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	5,032	3,875	1,157	0.299	0.21	NO	1,157	955,546
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	6,517	6,318	199	0.032	0.16	YES	199	39,754
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	7,800	7,763	37	0.005	0.14	YES	37	1,364
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	8,036	7,903	133	0.017	0.14	YES	133	17,613
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	7,170	5,729	1,441	0.252	0.17	NO	1,441	2,077,581
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	7,785	5,945	1,840	0.310	0.17	NO	1,840	3,386,106
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	6,862	5,027	1,835	0.365	0.19	NO	1,835	3,367,686
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	6,914	4,774	2,140	0.448	0.20	NO	2,140	4,580,283
9	SB/NB	Highway 1	between SR 68 and Fremont Street	7,949	7,792	157	0.020	0.14	YES	157	24,774
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	714	634	80	-0.126	0.44	YES	80	6,360
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	1,452	2,104	-652	-0.310	0.26	NO	-652	425,281
12	SB/NB	Second Avenue	between Imjin Parkway and Tenth Street	1,113	290	823	2.840	0.58	NO	823	678,125
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	215	554	-339	-0.611	0.44	NO	-339	114,597
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	71	142	-71	-0.499	0.63	YES	-71	5,022
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	707	384	323	0.842	0.52	NO	323	104,515
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	653	896	-243	-0.272	0.36	YES	-243	59,212
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	518	722	-204	-0.282	0.41	YES	-204	41,475
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	546	554	-8	-0.014	0.44	YES	-8	59
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	215	505	-290	-0.574	0.48	NO	-290	84,086
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	322	562	-240	-0.427	0.44	YES	-240	57,645
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	54	77	-23	-0.297	0.68	YES	-23	523
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	229	350	-121	-0.347	0.52	YES	-121	14,739
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	380	496	-116	-0.234	0.48	YES	-116	13,528
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	367	446	-79	-0.176	0.48	YES	-79	6,170
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	2,532	1,944	588	0.302	0.27	NO	588	345,307
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	1,199	1,104	95	0.086	0.33	YES	95	9,022
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	192	734	-542	-0.738	0.41	NO	-542	293,538
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	1,331	1,873	-542	-0.289	0.27	NO	-542	293,432
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	1,205	1,670	-465	-0.278	0.28	YES	-465	216,178
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	2,754	2,001	753	0.376	0.27	NO	753	566,829
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	235	789	-554	-0.702	0.38	NO	-554	307,026
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	746	1,166	-420	-0.360	0.33	NO	-420	175,997
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	279	581	-302	-0.520	0.44	NO	-302	91,170
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	2,690	2,724	-34	-0.012	0.24	YES	-34	1,134
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	2,061	2,001	60	0.030	0.27	YES	60	3,637
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	1,754	1,820	-66	-0.036	0.28	YES	-66	4,390
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	1,693	2,098	-405	-0.193	0.26	YES	-405	164,227
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	1	169	-168	-0.997	0.63	NO	-168	28,382
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	343	230	113	0.492	0.58	YES	113	12,825
40	WB/EB	Inter-Garrison Road	between Eight Avenue and Abrams Drive	579	1,026	-447	-0.436	0.34	NO	-447	199,674
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	390	1,305	-915	-0.701	0.31	NO	-915	836,567
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	936	1,326	-390	-0.294	0.30	YES	-390	152,100
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	82	390	-308	-0.789	0.52	NO	-308	94,744
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	38	786	-748	-0.951	0.38	NO	-748	559,201
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	16	307	-291	-0.947	0.58	NO	-291	84,514
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	140	279	-139	-0.498	0.58	YES	-139	19,306
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	149	391	-242	-0.620	0.52	NO	-242	58,797
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	358	612	-254	-0.416	0.44	YES	-254	64,747
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	9	635	-626	-0.986	0.44	NO	-626	392,117
Local Roadway/Freeway/Ramp Results:				93,336	91,803					Model/Count Ratio= 1.02	
										Percent within Caltrans Maximum Deviation= 48% <75%	
										Percent Root Mean Square Error (RSME)= 35% <40%	
										Correlation Coefficient = 98% >0.88	
										Total Count= 49	
										Link within Deviation= 24	
										Link Outside Deviation= 25	
Local Roadway Results:				27,818	34,573					Model/Count Ratio = 0.80	
										Percent Within Caltrans Maximum Deviation = 45% <75%	
										Percent Root Mean Square Error = 35% <40%	
										Correlation Coefficient = 0.25 <0.88	
										Total Count= 39	
										Link within Deviation= 16	
										Link Outside Deviation= 23	

Table F3: Results of Daily Two-Way Total Traffic Volumes, Run 01

ID	Direction	Description		Model Volume	Traffic Count	Model Delta	Model Delta/Count	Maximum Deviation	Withing Deviation	Model-Count	Difference Squared
		Roadway	Location								
1	SB/NB	Highway 1	between Del Monte Boulevard and Reservation Road	5,032	3,875	1,157	0.299	0.20	NO	1,157	4,639,956
2	SB/NB	Highway 1	between Imjin Parkway and Del Monte Boulevard	70,728	76,532	-5,804	-0.076	0.15	YES	-5,804	33,680,668
3	SB/NB	Highway 1	between Light Fighter Drive and Imjin Parkway	84,273	93,403	-9,130	-0.098	0.14	YES	-9,130	83,357,546
4	SB/NB	Highway 1	between Del Monte Boulevard and Light Fighter Drive	86,270	96,962	-10,692	-0.110	0.14	YES	-10,692	114,321,860
5	SB/NB	Highway 1	between Canyon Del Rey Boulevard and Del Monte Boulevard	75,470	69,564	5,906	0.085	0.17	YES	5,906	34,876,378
6	SB/NB	Highway 1	between Del Monte Boulevard and Canyon Del Rey Boulevard	77,964	77,104	860	0.011	0.15	YES	860	739,346
7	SB/NB	Highway 1	between Casa Verde Way and Del Monte Boulevard	69,295	68,590	705	0.010	0.17	YES	705	497,188
8	SB/NB	Highway 1	between SR 68 and Casa Verde Way	73,901	66,292	7,609	0.115	0.17	YES	7,609	57,898,475
9	SB/NB	Highway 1	between SR 68 and Fremont Street	81,515	100,509	-18,994	-0.189	0.14	NO	-18,994	360,759,040
10	NB/SB	Del Monte Boulevard	between Beach Road and Reservation Road	8,054	7,580	474	0.063	0.41	YES	474	224,762
11	NB/SB	Del Monte Boulevard	between Reindollar Avenue and SR 1	17,008	26,786	-9,778	-0.365	0.25	NO	-9,778	95,600,690
12	SB/NB	Second Avenue	between Imjin Parkway and Tenth Street	10,768	3,274	7,494	2.289	0.58	NO	7,494	56,158,747
13	NB/SB	Second Avenue	between Eight Street and Fifth Street	1,822	6,331	-4,509	-0.712	0.44	NO	-4,509	20,330,549
14	SB/NB	Second Avenue	between Divarty Street and Light Fighter Drive	1,294	2,502	-1,208	-0.483	0.58	YES	-1,208	1,459,429
15	SB/NB	General Jim Moore	between Divarty Street and Light Fighter Drive	6,722	5,232	1,490	0.285	0.48	YES	1,490	2,220,977
16	NB/SB	General Jim Moore Boulevard	between Light Fighter Drive and Gigling Road	7,554	9,611	-2,057	-0.214	0.38	YES	-2,057	4,229,235
17	SB/NB	General Jim Moore Boulevard	between Normandy Road and Coe Avenue	6,486	6,683	-197	-0.029	0.44	YES	-197	38,736
18	SB/NB	General Jim Moore Boulevard	between Coe Avenue and San Pablo Avenue	7,653	7,004	649	0.093	0.44	YES	649	420,864
19	NB/SB	California Avenue	between Reservation Road and Windsor Court	2,289	4,672	-2,383	-0.510	0.52	YES	-2,383	5,677,280
20	NB/SB	California Avenue	between Reindollar Avenue and Imjin Parkway	2,682	5,915	-3,233	-0.547	0.48	NO	-3,233	10,455,452
21	SB/NB	California Avenue	between Imjin Parkway and Fifth Avenue	535	992	-457	-0.461	0.68	YES	-457	208,735
22	SB/NB	Imjin Road	between Imjin Parkway and Eight Street	300	4,122	-3,822	-0.927	0.52	NO	-3,822	14,611,359
23	NB/SB	Abram Drive	between Imjin Parkway and Bunker Hill Drive	1,873	5,616	-3,743	-0.666	0.48	NO	-3,743	14,008,267
24	NB/SB	Abram Drive	between Manassas Drive and Inter-Garrison Road	1,995	4,486	-2,491	-0.555	0.52	NO	-2,491	6,204,223
25	NB/SB	Blanco Road	between Cooper Road and Reservation Road	22,678	27,539	-4,861	-0.177	0.25	YES	-4,861	23,629,870
26	EB/WB	Reservation Road	between Highway 1 and Cardoza Avenue	12,612	12,776	-164	-0.013	0.33	YES	-164	26,924
27	WB/EB	Reservation Road	between Robinin Drive and Del Monte Boulevard	2,247	8,470	-6,223	-0.735	0.41	NO	-6,223	38,731,652
28	WB/EB	Reservation Road	between Del Monte Boulevard and Vista Del Camino	15,574	17,396	-1,822	-0.105	0.29	YES	-1,822	3,321,463
29	EB/WB	Reservation Road	between Salinas Avenue and Imjin Parkway	13,629	16,489	-2,860	-0.173	0.29	YES	-2,860	8,178,238
30	EB/WB	Reservation Road	between Imjin Parkway and Blanco Road	28,507	26,567	1,940	0.073	0.25	YES	1,940	3,764,027
31	EB/WB	Reservation Road	between Blanco Road and Inter-Garrison Road	6,589	6,224	365	0.059	0.48	YES	365	133,545
32	EB/WB	Reservation Road	between Inter-Garrison Road and East Garrison Road	11,862	9,844	2,018	0.205	0.38	YES	2,018	4,074,212
33	WB/NB	Reindollar Avenue	between Del Monte Boulevard and Sunset Avenue	2,906	6,441	-3,535	-0.549	0.44	NO	-3,535	12,498,625
34	EB/WB	Imjin Parkway	between Second Avenue and Highway 1	25,115	28,223	-3,108	-0.110	0.25	YES	-3,108	9,659,074
35	EB/WB	Imjin Parkway	between Fourth Avenue and Third Avenue	19,390	22,817	-3,427	-0.150	0.27	YES	-3,427	11,744,532
36	WB/EB	Imjin Parkway	between Abrams Drive and Imjin Road	16,832	23,570	-6,738	-0.286	0.27	NO	-6,738	45,400,059
37	SB/NB	Imjin Parkway	between Reservation Road and Preston Drive	16,307	20,860	-4,553	-0.218	0.28	YES	-4,553	20,731,768
38	WB/EB	Inter-Garrison Road	between Second Avenue and Third Avenue	6	2,630	-2,624	-0.998	0.58	NO	-2,624	6,885,675
39	WB/EB	Inter-Garrison Road	between Sixth Avenue and Seventh Avenue	3,844	665	3,179	4.781	0.68	NO	3,179	10,107,214
40	WB/EB	Inter-Garrison Road	between Eighth Avenue and Abrams Drive	5,508	8,450	-2,942	-0.348	0.41	YES	-2,942	8,654,687
41	WB/EB	Lightfighter Drive	between Highway 1 and First Avenue	4,329	15,002	-10,673	-0.711	0.30	NO	-10,673	113,905,231
42	EB/WB	Lightfighter Drive	between Second Avenue and General Jim Moore Boulevard	9,936	13,257	-3,321	-0.251	0.33	YES	-3,321	11,029,613
43	EB/WB	Lightfighter Drive	between General Jim Moore Blvd and Colonel Durham Street	780	3,746	-2,966	-0.792	0.58	NO	-2,966	8,799,186
44	WB/EB	Gigling Road	between General Jim Moore Boulevard and Malmedy Road	638	6,281	-5,643	-0.898	0.44	NO	-5,643	31,846,968
45	NB/SB	Monterey Road	between Buna Road and Noumea Road	258	3,280	-3,022	-0.921	0.58	NO	-3,022	9,130,486
46	WB/EB	Coe Avenue	between Buttercup Boulevard and Coe Avenue	1,000	2,950	-1,950	-0.661	0.58	NO	-1,950	3,802,154
47	EB/WB	San Pablo	between Nadina Street and General Jim Moore Boulevard	1,780	3,963	-2,183	-0.551	0.52	NO	-2,183	4,765,298
48	EB/WB	Broadway Avenue	between Mescal Street and General Jim Moore Boulevard	4,526	7,304	-2,778	-0.380	0.44	YES	-2,778	7,716,210
49	SB/NB	Eight Avenue	between Inter-Garrison Road and A Street	371	4,578	-4,207	-0.919	0.52	NO	-4,207	17,700,546

Local Roadway/Freeway/Ramp Results:

928,708 1,052,959

Model/Count Ratio = 0.88
 Percent within Caltrans Maximum Deviation = 48% <75%
 Percent Root Mean Square Error (RSME) = 24% <40%
 Correlation Coefficient = 99% >0.88

Total Count = 49
 Link within Deviation = 28
 Link Outside Deviation = 21

Local Roadway Results:

287,252 373,342

Model/Count Ratio = 0.77
 Percent Within Caltrans Maximum Deviation = 43% <75%
 Percent Root Mean Square Error = 25% <40%
 Correlation Coefficient = 0.99 >0.88

Total Count = 39
 Link within Deviation = 19
 Link Outside Deviation = 20

**ATTACHMENT K: CUMULATIVE WITHOUT PROJECT CONDITIONS
ROADWAY IMPROVEMENTS**

TABLE K: CUMULATIVE WITHOUT PROJECT CONDITIONS ROADWAY IMPROVEMENTS

Project Number ¹	Name	Description	Sources ²			Included in Cumulative without Project Conditions?	Included in Cumulative without Project Conditions and Eastside Parkway?	Notes
			City ³	FORA ⁴	RTP ⁵			
City of Marina Capital Improvement Program								
R 05	Second Avenue Extension	Extend Second Avenue as a 2-lane arterial between Imjin Parkway and Reindollar Avenue	X	X		Yes	Yes	
R 34	Eighth Street	Upgrade/construct Eighth Street as a 2-lane arterial from Second Avenue to Inter-Garrison Road	X	X		Yes	Yes	
R 37	Patton Parkway Extension	Extension of Patton Parkway from Del Monte Boulevard to Crescent Street	X	X		Yes	Yes	
R49	Del Monte/Imjin Parkway & SR 1 Interchange	Construct new/consolidate interchange. On Caltrans Regional Transportation Improvement Program	X			No	No	Project is planned, funding projected between 2020 to 2035. Marina Capital Improvement Plan (CIP) describes project as being on the Caltrans Regional Transportation Improvement Program, though this improvement is not found in Caltrans State Transportation Improvement Program (2016) and Interregional Transportation Strategic Plan (2016).
R59	Imjin Road Widening	Reconstruct and widen Imjin Road to four lanes from Imjin Parkway to Eighth Street	X			No	No	Project is planned, funding projected between 2020 and 2035.
R 61	Second Avenue Widening	Widen Second Avenue from Tenth street to Inter-Garrison Road. Remove Class II bike lanes and restripe for two lanes each direction	X			Yes	Yes	Project is planned, funding projected between 2020 and 2035.
T 22 / T 23	Imjin Parkway/SR 1 Improvements	Accommodate a second westbound left turn lane onto SR 1 southbound. Convert SR 1 southbound off-ramp to a loop ramp (or the functional equivalent). Widen SR 1 southbound on-ramp from 1 lane to 2 lanes	X			No	No	
Fort Ord Reuse Authority (FORA)								
FO 6	Inter-Garrison Road Widening	Widen Inter-Garrison Road to a 4-lane arterial from Eastside Parkway to Reservation Road		X		Yes	Yes	Partially completed between Sherman Blvd to Reservation Road
FO 7	Gigling Road	Widen Gigling Road to a 4-lane arterial from General Jim Moore Boulevard to Future Eastside Parkway near Eighth Avenue		X		Yes	Yes	
FO 12	Eucalyptus Road	Upgrade Eucalyptus Road to 2-lane collector from General Jim Moore Blvd to Eastside Parkway to Parker Flatts Cut-Off Road		X		No	Yes	Partially completed from General Jim Moore Boulevard to approx. 700 feet east of Parker Flatts Cut-Off Road.

TABLE K: CUMULATIVE WITHOUT PROJECT CONDITIONS ROADWAY IMPROVEMENTS

Project Number ¹	Name	Description	Sources ²			Included in Cumulative without Project Conditions?	Included in Cumulative without Project Conditions and Eastside Parkway?	Notes
			City ³	FORA ⁴	RTP ⁵			
FO 13B	Eastside Parkway	Construct new 2-lane arterial from Eucalyptus Road at Parker Flatts Cut-Off Road to Schoonover Drive		X		No	Yes	
AMBAG Regional Transportation Plan (RTP)								
MON-MAR001-MA	Reservation Road Widening	Widen Reservation Road to 4 lanes between East Garrison Gate and Davis Road		X	X	Yes	Yes	
MON-MAR001-MA	Imjin Parkway Widening	Widen Imjin Parkway to four lanes from Imjin Road to Reservation Road	X		X	Yes	Yes	
MON-MAR115-MA	Imjin Parkway Widening	Widen Imjin Parkway from 4 lanes to 6 lanes and construct turning lanes at intersections between Second Avenue and Imjin Road.	X		X	No	No	Described as obligatory in Marina 5 year Capital Improvement Plan (CIP), and as an unconstrained transportation project in the 2035 Metropolitan Transportation Plan / Sustainable Communities Strategy (2014).
MON-CT045-MA	SR 1/Monterey Road Interchange Improvements	New interchange at Monterey Road between Lightfighter Road interchange and the Fremont Boulevard Interchange		X	X	No	No	All on- and off-ramps shown as diagonal ramps in Fort Ord Reuse Authority Fee Reallocation Study: Deficiency Analysis and Fee Reallocation (2017).

Notes:

1. Project ID Number based on leading agency from source document.
2. Projects appearing in multiple source lists are described and denoted by source.
3. Listed in City of Marina's 5 Year Capital Improvement Project List, Revised March 2016.
4. Listed in Fort Ord Reuse Authority's Capital Improvement Program Fiscal Year 2017/18 through 2027/28, and Fort Ord Reuse Authority Fee Reallocation Study: Deficiency Analysis and Fee Reallocation (2017).
5. Listed in the 2035 Metropolitan Transportation Plan / Sustainable Communities Strategy (2014).

Source: Fehr & Peers, 2019.

**ATTACHMENT L: CUMULATIVE WITHOUT PROJECT CONDITIONS
INTERSECTION IMPROVEMENTS**

TABLE L. CUMULATIVE WITHOUT PROJECT CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Estimated Construction Date	Intersection	Geometry Changes	Intersection Control Changes	Included in Cumulative without Project Conditions?	Included in Cumulative without Project Conditions and Eastside Parkway?	Notes
			City ³	FORA ⁴	RTP ⁵							
City of Marina Capital Improvement Program												
R 05	Second Avenue Extension	Extend Second Avenue as a 2 lane arterial between Imjin Parkway and Reindollar Avenue	X	X		2035	2 Patton Parkway and Second Avenue Extension (Future Intersection)	3-way signalized intersection (NB, SB, and EB legs), one lane in each direction with left turn pockets with 120 feet of vehicle storage	Signalized ⁶	Yes	Yes	
R 34	Eighth Street	Upgrade/construct Eighth Street as a 2-lane arterial from Second Avenue to Inter-Garrison Road	X	X		2035	16 Eighth Street and Second Avenue	See Improvement R 61	Signalized	Yes	Yes	Signalization part of project TI 18 in the City of Marina Capital Improvement Program
							18 Eighth Street and Imjin Road	Southbound: change from a shared through-left and right turn to one lane entering the roundabout Eastbound: change from a shared through-left and right turn to one lane entering the roundabout Westbound: change from a shared through-left and right turn to one lane entering the roundabout	Roundabout	Yes	Yes	Roundabout part of project TI 08 in the City of Marina Capital Improvement Program
R 37	Patton Parkway Extension	Extension of Patton Parkway from Del Monte Boulevard to Crescent Street	X	X		2035	2 Patton Parkway and Second Avenue Extension (Future Intersection)	See Improvement R 05	See Improvement 1	Yes	Yes	
R 61	Second Avenue Widening	Widen Second Avenue from Tenth Street to Inter-Garrison Road. Remove Class II bike lanes and restripe for two lanes each direction	X			2035	15 Ninth Street and Second Avenue	Southbound: change from a shared through-left and 1 right turn to 1 left, 1 through, 1 shared through-right Northbound: change from 1 left turn and 1 through/right to 1 left, 1 through and 1 a shared through-right	Signalized	Yes	Yes	
							16 Eighth Street and Second Avenue	Southbound: Change to 2 through lanes and 1 left turn lane Northbound: Change to 2 through lanes and 1 right turn lane	Signalized	Yes	Yes	Signalization part of project TI 18 in the City of Marina Capital Improvement Program
							19 Inter-Garrison Road and Second Avenue	Southbound: from 1 left turn and 1 through to 1 left, 2 through lanes Northbound: from 1 through and 1 right turn lanes to 1 through and 1 shared through-right lanes	Signalized	Yes	Yes	

TABLE L. CUMULATIVE WITHOUT PROJECT CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Estimated Construction Date	Intersection	Geometry Changes	Intersection Control Changes	Included in Cumulative without Project Conditions?	Included in Cumulative without Project Conditions and Eastside Parkway?	Notes
			City ³	FORA ⁴	RTP ⁵							
TI 06	Traffic Intersection	Intersection Improvement	X			2035	6	Imjin Parkway and Third Avenue	No geometry changes	Signalized	Yes	Yes
TI 09	Traffic Intersection	Intersection Improvement	X			2035	7	Imjin Parkway and Fourth Avenue	No geometry changes	Signalized	Yes	Yes
TI 27	Traffic Intersection	Intersection Improvement	X			2035	11	Imjin Parkway and Abrams Drive	Install double left turn and right turn lanes on Imjin Pkwy, left and right turn lanes on Abrams Drive, signalize, and restripe	Signalized	Yes	Yes
TI 44	Traffic Intersection	Intersection Improvement	X			2035	23	Inter-Garrison Road and Abrams Drive	Signalize, add southbound free right turn, 2nd southbound left-turn.	Signalized	Yes	Yes
TI 42	Traffic Intersection	Intersection Improvement	X			2035	21	Inter-Garrison Road and Eighth Street/Seventh Avenue	Signalize, add eastbound and westbound left-turn pockets, westbound free right	Signalized	Yes	Yes
TI 45	Traffic Intersection	Intersection Improvement	X			2035	30	Divarty Street and Second Avenue	No geometry changes	Signalized	Yes	Yes
Fort Ord Reuse Authority (FORA)												
FO 13B	Eastside Parkway	Construct new 2 lane arterial from Eucalyptus Road at Parker Flats Cut-Off Road to Schoonover Drive		X		2035	48	Coe Avenue and General Jim Moore Boulevard	Westbound: through lane, right turn lane, and left turn pocket Eastbound: left turn pocket, through lane, and right lane Southbound: add left turn pocket Northbound: add right turn pocket	AWSC ⁶	No	Yes
FO 12	Eucalyptus Road	Upgrade Eucalyptus Road to 2 lane collector from General Jim Moore Blvd to Eastside Rd to Parker Flats Cut-Off Road		X		2025	46	Gigling Road and Eastside Parkway	All approaches: 1 shared right-through-left lane	AWSC ⁶	No	Yes
							25	Inter-Garrison Road and Eastside Parkway (Future Intersection)	Northbound: right turn lane and left turn pocket Westbound: left turn pocket and 2 through lanes Eastbound: left turn pocket, 1 through right	AWSC ⁶	No	Yes
FO 6	Inter-Garrison Road Widening	Widen Inter-Garrison Road to a 4 lane arterial from Eastside Parkway to Reservation Road		X		2035	26	Inter-Garrison Road and Inter-Garrison Road Connection	Westbound: 1 through, 1 shared through-right Eastbound: 1 left turn lane and 1 through lane	AWSC	Yes	Yes
FO 7	Gigling Road	Widen Gigling Road to a 4-lane arterial from General Jim Moore Boulevard to Future Eastside Parkway near Eighth Avenue		X		2035	40-45	Gigling from General Jim Moore Boulevard to Eastside Parkway	Add a through lane both eastbound/westbound on Gigling	AWSC	Yes	Yes

TABLE L. CUMULATIVE WITHOUT PROJECT CONDITIONS INTERSECTION IMPROVEMENTS

Project Number ¹	Project Name	Project Description	Sources ²			Estimated Construction Date	Intersection	Geometry Changes	Intersection Control Changes	Included in Cumulative without Project Conditions?	Included in Cumulative without Project Conditions and Eastside Parkway?	Notes
			City ³	FORA ⁴	RTP ⁵							
AMBAG Regional Transportation Plan (RTP)												
MON-MAR001-MA	Reservation Road Widening	Widen Reservation Road to 4 lanes between East Garrison Gate and Davis Road	X	X	2035	28	Watkins Gate Road and Reservation Road	Northbound: from one shared through/right/left lane to 1 through, 1 through/right and 1 left turn lane Southbound: from one shared through/right/left lane to 1 through, 1 through/right and 1 left turn lane Eastbound: 1 left turn and 1 right turn lane	None	Yes	Yes	
						29	Reservation Road and Davis Road	Southbound: from 1 left turn lane and a through lane to 1 left turn lane, 1 through lane, and 1 shared through-right Northbound: from 1 left turn lane and a through lane to 1 left turn lane, 1 through lane, 1 shared through-right Eastbound and westbound remain the same	None	Yes	Yes	
MON-MAR001-MA	Imjin Parkway Widening	Widen Imjin Parkway to four lanes from Imjin Road to Reservation Road	X	X	2025	11	Imjin Parkway and Abrams Drive	Eastbound and westbound: Install 1 left turn lane, 1 through lane, and 1 shared through/right Northbound and Southbound: left and right turn lanes on Abrams Drive	None	Yes	Yes	Marina CIP - Funded
						12	Imjin Parkway and Reservation Road	Westbound: Change to 2 left turn lanes, 1 through lane, and 2 right turn lanes	None	Yes	Yes	

Notes:

1. Project ID Number based on leading agency from source document.
2. Projects appearing in multiple source lists are described and denoted by source.
3. Listed in City of Marina's 5 Year Capital Improvement Project List, Revised March 2016.
4. Listed in Fort Ord Reuse Authority's Capital Improvement Program Fiscal Year 2017/18 through 2027/28, and *Fort Ord Reuse Authority Fee Reallocation Study: Deficiency Analysis and Fee Reallocation* (2017).
5. Listed in the *2035 Metropolitan Transportation Plan / Sustainable Communities Strategy* (2014).
6. Improvement from source does not define control.

Source: Fehr & Peers, 2019.

ATTACHMENT M: MONTEREY COUNTY LIST OF TAZS

List of Monterey County TAZs	
ID	TAZ Number
1	375
2	383
3	415
4	439
5	448
6	457
7	469
8	471
9	479
10	486
11	489
12	502
13	507
14	512
15	527
16	538
17	539
18	547
19	551
20	553
21	554
22	556
23	562
24	563
25	564
26	566
27	569
28	572
29	573
30	574
31	575
32	576
33	577
34	579
35	580
36	581
37	582
38	585
39	586
40	587
41	588
42	591
43	595
44	597
45	601

List of Monterey County TAZs	
ID	TAZ Number
46	603
47	604
48	607
49	608
50	609
51	611
52	612
53	613
54	615
55	616
56	619
57	620
58	621
59	622
60	623
61	625
62	627
63	628
64	629
65	630
66	633
67	634
68	635
69	637
70	638
71	639
72	640
73	642
74	643
75	645
76	658
77	660
78	661
79	663
80	666
81	669
82	670
83	672
84	673
85	674
86	675
87	679
88	680
89	681
90	683

List of Monterey County TAZs	
ID	TAZ Number
91	684
92	687
93	690
94	693
95	695
96	697
97	698
98	702
99	704
100	709
101	714
102	726
103	742
104	746
105	766
106	770
107	771
108	778
109	779
110	795
111	796
112	799
113	804
114	809
115	818
116	829
117	850
118	851
119	861
120	863
121	864
122	868
123	875
124	876
125	878
126	880
127	887
128	889
129	908
130	909
131	913
132	917
133	922
134	923
135	925

List of Monterey County TAZs	
ID	TAZ Number
136	928
137	929
138	930
139	936
140	943
141	954
142	965
143	966
144	971
145	973
146	977
147	980
148	981
149	985
150	987
151	992
152	995
153	997
154	1002
155	1003
156	1006
157	1012
158	1015
159	1017
160	1018
161	1022
162	1028
163	1029
164	1035
165	1039
166	1042
167	1044
168	1045
169	1046
170	1047
171	1050
172	1051
173	1052
174	1054
175	1055
176	1056
177	1058
178	1059
179	1060
180	1062

List of Monterey County TAZs	
ID	TAZ Number
181	1063
182	1064
183	1065
184	1066
185	1068
186	1069
187	1070
188	1071
189	1072
190	1073
191	1074
192	1075
193	1076
194	1078
195	1081
196	1082
197	1083
198	1084
199	1086
200	1088
201	1096
202	1097
203	1098
204	1100
205	1104
206	1105
207	1106
208	1108
209	1109
210	1110
211	1111
212	1112
213	1114
214	1118
215	1122
216	1124
217	1126
218	1130
219	1132
220	1134
221	1136
222	1146
223	1147
224	1149
225	1150

List of Monterey County TAZs	
ID	TAZ Number
226	1155
227	1156
228	1159
229	1166
230	1169
231	1178
232	1181
233	1193
234	1233
235	1243
236	1248
237	1256
238	1258
239	1265
240	1266
241	1269
242	1271
243	1279
244	1286
245	1292
246	1293
247	1301
248	1304
249	1314
250	1316
251	1335
252	1339
253	1346
254	1350
255	1355
256	1359
257	1362
258	1364
259	1365
260	1366
261	1367
262	1368
263	1369
264	1372
265	1373
266	1375
267	1376
268	1379
269	1383
270	1393

List of Monterey County TAZs	
ID	TAZ Number
271	1395
272	1403
273	1406
274	1407
275	1408
276	1411
277	1413
278	1418
279	1423
280	1428
281	1429
282	1438
283	1475
284	1551
285	1604
286	1631
287	1635
288	1640
289	1643
290	1645
291	1649
292	1652
293	1663
294	1667
295	1675
296	1677
297	1679
298	1685
299	1686
300	1700
301	1704
302	1711
303	1714
304	1716
305	1718
306	1720
307	1728
308	1749
309	1756
310	1761
311	1764
312	1769
313	1774
314	1777
315	1782

List of Monterey County TAZs	
ID	TAZ Number
316	1792
317	1799
318	1805
319	1808
320	1809
321	1810
322	1813
323	1814
324	1815
325	1816
326	1817
327	1819
328	1820
329	1821
330	1822
331	1823
332	1826
333	1827
334	1828
335	1829
336	1830
337	1831
338	1835
339	1837
340	1838
341	1839

ATTACHMENT N: SAN BENITO COUNTY LIST OF TAZS

List of San Benito County TAZs	
ID	TAZ Number
1	1275
2	1303
3	1321
4	1322
5	1349
6	1361
7	1370
8	1371
9	1374
10	1377
11	1378
12	1380
13	1381
14	1385
15	1402
16	1404
17	1409
18	1410
19	1412
20	1414
21	1415
22	1419
23	1420
24	1421
25	1424
26	1425
27	1431
28	1439
29	1444
30	1452
31	1453
32	1458
33	1465
34	1466
35	1474
36	1490
37	1492
38	1505
39	1512
40	1514
41	1521
42	1539
43	1570
44	1575
45	1578

List of San Benito County TAZs	
ID	TAZ Number
46	1581
47	1583
48	1584
49	1588
50	1593
51	1597
52	1606
53	1607
54	1619
55	1621
56	1623
57	1624
58	1625
59	1626
60	1627
61	1628
62	1629
63	1630
64	1632
65	1633
66	1634
67	1636
68	1639
69	1642
70	1644
71	1646
72	1655
73	1669
74	1673
75	1676
76	1680
77	1681
78	1687
79	1754
80	1760
81	1767
82	1768
83	1770
84	1781

ATTACHMENT O: SANTA CRUZ COUNTY LIST OF TAZS

Santa Cruz County	
ID	TAZ Number
1	3
2	5
3	7
4	9
5	11
6	12
7	13
8	14
9	15
10	16
11	17
12	18
13	19
14	20
15	21
16	22
17	25
18	27
19	28
20	29
21	30
22	31
23	32
24	33
25	34
26	35
27	36
28	37
29	38
30	39
31	40
32	41
33	42
34	43
35	44
36	45
37	46
38	47
39	48
40	49
41	50
42	51
43	52
44	53
45	54

Santa Cruz County	
ID	TAZ Number
46	55
47	56
48	57
49	59
50	60
51	61
52	62
53	63
54	64
55	65
56	66
57	68
58	69
59	70
60	72
61	73
62	74
63	75
64	76
65	77
66	78
67	79
68	80
69	81
70	82
71	83
72	84
73	85
74	86
75	87
76	88
77	89
78	91
79	92
80	93
81	94
82	96
83	97
84	98
85	100
86	103
87	105
88	114
89	119
90	134

Santa Cruz County	
ID	TAZ Number
91	135
92	138
93	163
94	178
95	180
96	197
97	207
98	226
99	227
100	238
101	240
102	265
103	286
104	295
105	307
106	309
107	310
108	311
109	312
110	314
111	315
112	318
113	319
114	321
115	324
116	326
117	327
118	328
119	330
120	331
121	332
122	333
123	334
124	335
125	336
126	337
127	338
128	339
129	340
130	341
131	342
132	343
133	344
134	345
135	348

Santa Cruz County	
ID	TAZ Number
136	349
137	350
138	351
139	352
140	353
141	354
142	355
143	356
144	357
145	358
146	360
147	361
148	362
149	363
150	364
151	365
152	366
153	367
154	368
155	369
156	371
157	372
158	373
159	374
160	376
161	377
162	378
163	379
164	380
165	381
166	384
167	385
168	386
169	387
170	388
171	389
172	390
173	392
174	394
175	395
176	397
177	399
178	400
179	406
180	407

Santa Cruz County	
ID	TAZ Number
181	408
182	409
183	414
184	422
185	424
186	426
187	431
188	432
189	442
190	443
191	447
192	454
193	456
194	458
195	462
196	466
197	467
198	468
199	470
200	476
201	481
202	488
203	492
204	496
205	498
206	508
207	515
208	526
209	529
210	530
211	536
212	548
213	549
214	558
215	560
216	578
217	584
218	590
219	593
220	594
221	596
222	598
223	600
224	605
225	606

Santa Cruz County	
ID	TAZ Number
226	614
227	617
228	618
229	624
230	626
231	631
232	632
233	641
234	647
235	649
236	650
237	651
238	653
239	654
240	655
241	657
242	662
243	664
244	665
245	668
246	671
247	676
248	682
249	685
250	686
251	688
252	689
253	691
254	692
255	694
256	696
257	699
258	700
259	701
260	708
261	717
262	719
263	722
264	730
265	735
266	739
267	740
268	751
269	758
270	759

Santa Cruz County	
ID	TAZ Number
271	763
272	764
273	768
274	772
275	776
276	777
277	780
278	782
279	783
280	785
281	793
282	798
283	800
284	803
285	810
286	811
287	820
288	828
289	830
290	834
291	844
292	857
293	901
294	903
295	905
296	911
297	932
298	940
299	945
300	946
301	1020
302	1027
303	1036
304	1037
305	1061
306	1077
307	1080
308	1089
309	1099
310	1811
311	1812

**APPENDIX G: VMT ANALYSIS FOR GREENHOUSE GASES AND VMT
FORECASTING OUTLINE**



VMT ANALYSIS FOR GREENHOUSE GASES

VMT ESTIMATION PROCESS FOR GHG ANALYSIS

Daily VMT estimates are used as an input into the air quality, noise and greenhouse gas (GHG) analyses. The process by which daily VMT is estimated for these uses is described below.

TOTAL VMT ACCOUNTING METHOD

The total VMT accounting method is often used as an input for the air quality and greenhouse gas analysis and is the method to be used in analyzing the Project's air quality, noise, and GHG analyses

Under the total VMT accounting method, vehicle trips are placed into three categories based on whether their origin and destination are internal or external to the geographic area in question. Trips that have an origin and a destination outside the area are not included in the VMT estimate under this method. Other trips are either wholly or partially included as described below:

- Internal-internal (II): The full length of all trips made entirely within the geographic area limits is counted.
- Internal-external (IX): The full length of trips with an origin within the geographic area and destination outside of the area is counted. This assumes that the geographic area bears all the responsibility for trips traveling to other areas.
- External-internal (XI): The full length of trips with an origin outside of the geographic area and destination within the area is counted. Similar to the IX trips, this assumes that the geographic area bears the full responsibility for trips traveling to it from other areas.

This "total accounting" method therefore captures the complete length of all trips that begin or end within the geographic area of study. This method is similar, but not identical, to the Project generated VMT estimation used for the SB 743 VMT assessment.

VMT ESTIMATES FOR GHG ANALYSIS

The results of the total VMT accounting methods are presented in **Table G-1**. This VMT is used for the GHG analysis.

The Existing and Existing with Project Conditions results support the concept that providing housing near jobs increases the likelihood that trips can remain within a local area, thus shortening travel distances and increasing residents' ability to accomplish some travel needs by walking, cycling, or using short-distance transit. The Cumulative with Project and without Eastside Parkway Conditions provide more housing near

jobs, which results in VMT per service population that is closer to that without the Project, with a difference of 0.1.

TABLE G-1: TOTAL VMT ACCOUNTING

	Existing Conditions	Existing with Project Conditions	Cumulative Conditions	Cumulative with Project and without Eastside Parkway Conditions
CSUMB Campus				
Vehicle Miles Traveled (A) ¹	160,800	279,400	162,400	297,800
Service Population (B) ^{1,2}	8,000	14,600	8,000	14,600
VMT per Service Population (A/B = C)	20.10	19.13	20.30	20.40

Notes:

1. Rounded service population and VMT to nearest 100.
2. Service population is defined as the sum of all employees, residents and students (K to University).

Source: Fehr & Peers, June 2019.

VMT Forecasting Outline Using the AMBAG Regional Travel Model

The AMBAG regional travel forecasting model was used to develop daily vehicle miles traveled (VMT) and traffic forecasts within the CSUMB campus and the Project study area. The travel forecasting model used for this analysis includes a 2017 base year, and a 2035 future year that reflect growth in the AMBAG region (Santa Cruz, Monterey and San Benito counties). The weekday daily model assignment is the sum of four time periods including: 1) morning peak period (6:00 to 9:00 AM), 2) mid-day peak period (9:00 AM to 4:00 PM), 3) evening peak period (4:00 to 7:00 PM), and 4) evening off-peak period (7:00 PM to 6:00 AM).

Fehr & Peers reviewed the Association of Bay Area Governments (AMBAG) regional travel model to evaluate its suitability for developing long-range traffic forecast for streets and highways within the greater Monterey Bay Area. Fehr & Peers reviewed the primary model inputs in the project area (such as base and future year land use inputs and roadway network assumptions) and also checked the performance of the model against typical validation thresholds. Modifications to the AMBAG regional travel model land use and transportation network inputs were completed to improve the validation of the daily, peak period and peak hour travel models. These changes to the AMBAG regional travel model are documented in a memorandum included in **Appendix F**.

The following steps were taken estimate the Project generated VMT and Project effect on VMT within specified geographic areas.

- Land Use Inputs: CSUMB transportation analysis (TAZ) land use inputs for base year and future year are summarized in **Table G-2**. The base and future land use by county is shown in **Table G-3**. The data dictionary for the land use codes is shown **Table G-4**. **Appendix F** also documents the land use changes.

TABLE G-2: CSUMB LAND USE CHANGES

TAZ	Description of Edit
Main Campus	
806	<ul style="list-style-type: none"> • Baseline University Enrollment is 2,322 • Project University Enrollment is 4,445
826	<ul style="list-style-type: none"> • Baseline University Enrollment is 995 • Project University Enrollment is 1,905
847	<ul style="list-style-type: none"> • Baseline University Enrollment is 3,317 • Project University Enrollment is 6,350
East Campus	
908 and 913	<ul style="list-style-type: none"> • Baseline Students is 1,380 • Baseline Faculty, Staff and Community Partners is 743 • Project Students is 0 • Project Faculty, Staff, and Community Housing Partners is 1,220

Note: Land use added to the TAZs where the campus parking locations are located.

Source: Fehr & Peers, 2019.

TABLE G-3: AMBAG Model Residential and Employment Land Uses

Land Use Category	2010			2035		
	Monterey County	Santa Cruz County	San Benito County	Monterey County	Santa Cruz County	San Benito County
Residential						
Total Households	126,180	94,130	16,910	143,390	111,000	23,970
Total Population	385,050	246,240	54,400	444,080	292,790	75,830
Employment						
Agricultural	45,100	9,600	1,600	48,670	10,230	1,500
Construction	4,300	3,000	800	6,220	4,320	960
Industrial	5,600	5,300	2,500	5,420	4,490	2,790
Retail	20,100	14,900	2,400	23,910	15,640	2,790
Service	60,900	43,700	5,100	77,810	50,370	6,730
Public	46,000	33,700	3,800	60,140	46,090	4,780
Total	182,000	110,200	16,200	222,170	131,140	19,550

Notes: All values have been rounded to the nearest 10.

Source: AMBAG regional travel model. Fehr & Peers, 2019.

TABLE G-4: LAND USE CATEGORIES

Attribute	Description	Unit
Population	Total population in TAZ	People
Households	Total households in TAZ	Household
Retail Employment	Retail trade	Job
Service Employment	Service trade	Job
Public Employment	Public trade	Job
University Enrollment	University students	Student

Source: Fehr & Peers, 2019

- **Transportation Network Inputs:** The future year travel mode includes funded street improvements planned by the Fort Ord Reuse Authority (FORA), City of Marina, and the *2040 Metropolitan Transportation Plan / Sustainable Communities Strategy (2018)* as described in **Chapter 4** of the Transportation Analysis Report. The project specific transportation improvements are described in **Chapter 1** of the Transportation Analysis report. **Appendix F** also documents the network changes.
- **Campus Trip Generation Adjustments:** The AMBAG base and future models without and with the project were run. Each peak period vehicle trip matrix was adjusted using the Fratar method for the traffic analysis zones (TAZs) 802, 806, 826, 847, 908, and 913 to match the daily and peak hour

trip generation estimates presented in **Appendix A**. This method included factoring the morning and evening peak hour vehicle trip matrices until the trip generation from the CSUMB campus TAZs matched the estimated project trip generation values. A map showing TAZs for the CSUMB campus is shown in **Figure G-1**.

- **Project Generated VMT Estimation:** A select zone analysis was conducted for each geographic area (e.g., City, County or Region) to estimate Project generated VMT as specified in **Chapter 4**. The Project generated VMT was adjusted at the model edges to include the full length of trips that leave the AMBAG region (Santa Cruz County, Monterey County, and San Benito County). Adjacent jurisdictions (e.g., San Mateo County, Santa Clara County, Merced County, Fresno County, Kings County, and San Luis Obispo County) are represented by external stations or gateways where major roadways provide access into the overall model area. These stations capture the traffic entering, exiting, or passing through the model area on major county and state roadways (e.g. Highway 1, US 101, State Route 9, State Route 25, State Route 152, State Route 156, State Route 198, Skyline Boulevard, Frazier Lake Road, and San Felipe Road). To include VMT outside of the AMBAG region, the distances listed in **Table G-5** were used to estimate VMT for CSUMB campus or Monterey County trips occurring outside of the AMBAG region. The Project generated VMT metric for Monterey County is illustrated in **Figure G-2**.

TABLE G-5: EXTERNAL STATION DISTANCES

External Station Location	Distance (miles)	Origin/Destination City ¹
Highway 1 Northbound	75	Marin County
State Route 9	25	San Jose
Skyline Boulevard	20	San Jose
State Route 152	40	San Jose
US 101 Northbound	40	San Jose
State Route 25	40	San Jose
Frazier Lake Road	40	San Jose
San Felipe Road	40	San Jose
State Route 156	75	Merced
State Route 198	90	Fresno
Highway 1 Southbound	95	Santa Maria
US 101 Southbound	60	Santa Maria

Notes:

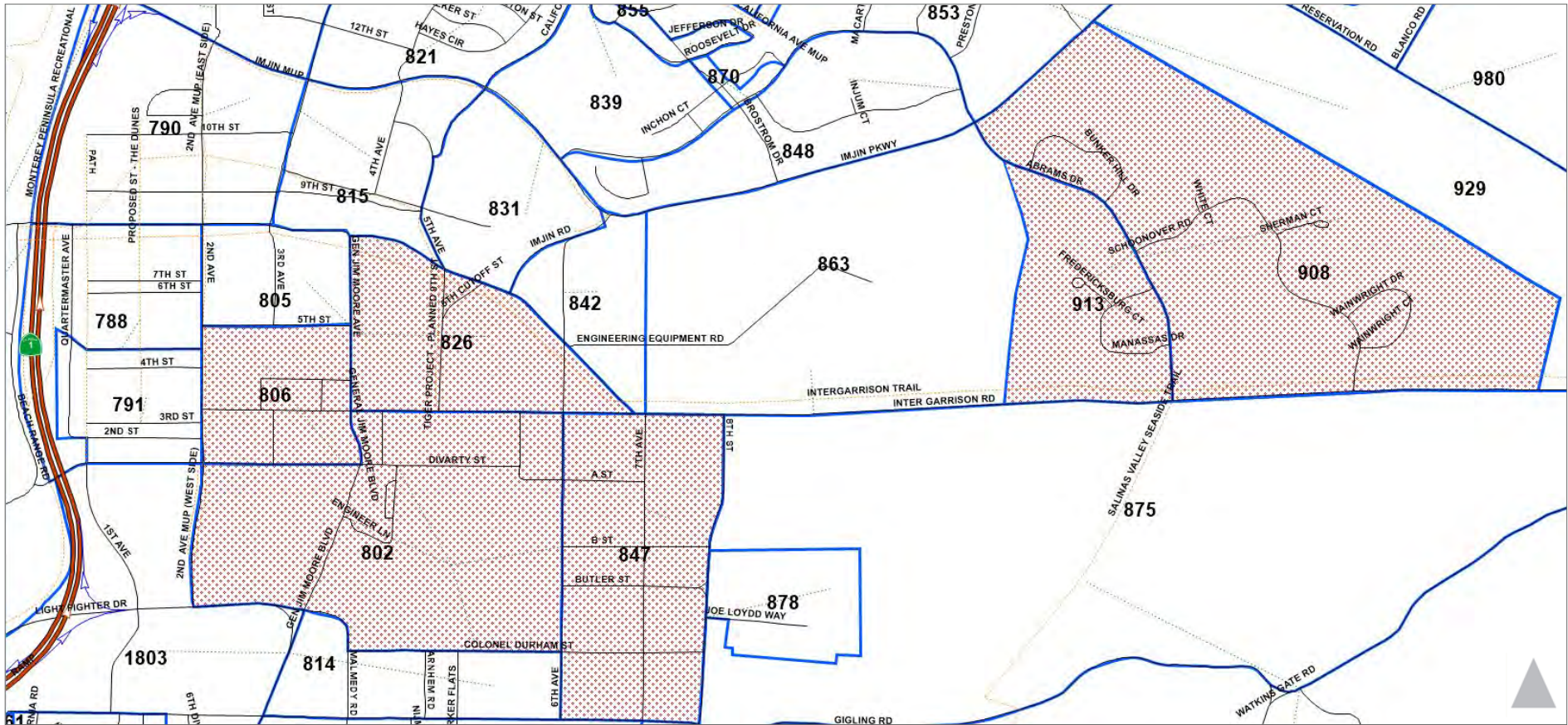
1. Distances measured from external station edge of AMBAG region to larger urban destination.

Source: Fehr & Peers, 2019

- **Project Effect on VMT (Boundary VMT):** As described in **Chapter 4**, the Project's effect on VMT, or cumulative impact, is evaluated using the boundary VMT, which captures all VMT on a roadway network within a specified geographic area, including local trips plus interregional travel that does not have an origin or destination within the area. The geographical boundary method only considers traffic within the physical limits of the selected study area and does not include the impact of vehicles once they travel outside the area limits. The use of boundary VMT is a more

complete evaluation of the potential effects of the project because it captures the combined effect of new VMT, shifting existing VMT to/from other neighborhoods, and/or shifts in existing traffic to alternate travel routes or modes. The Project generated VMT metric for Monterey County is illustrated in **Figure G-2**.

- VMT for Greenhouse Gas (GHG) Analysis (Total VMT Accounting): As described earlier in **Appendix G**, vehicle trips are placed into three categories based on whether their origin and destination are internal or external to the geographic area in question. Trips that have an origin and destination outside the area are not included in the VMT estimates under this method. The “total accounting” method therefore captures the complete length of all trips that begin or end within the geographic area to study.




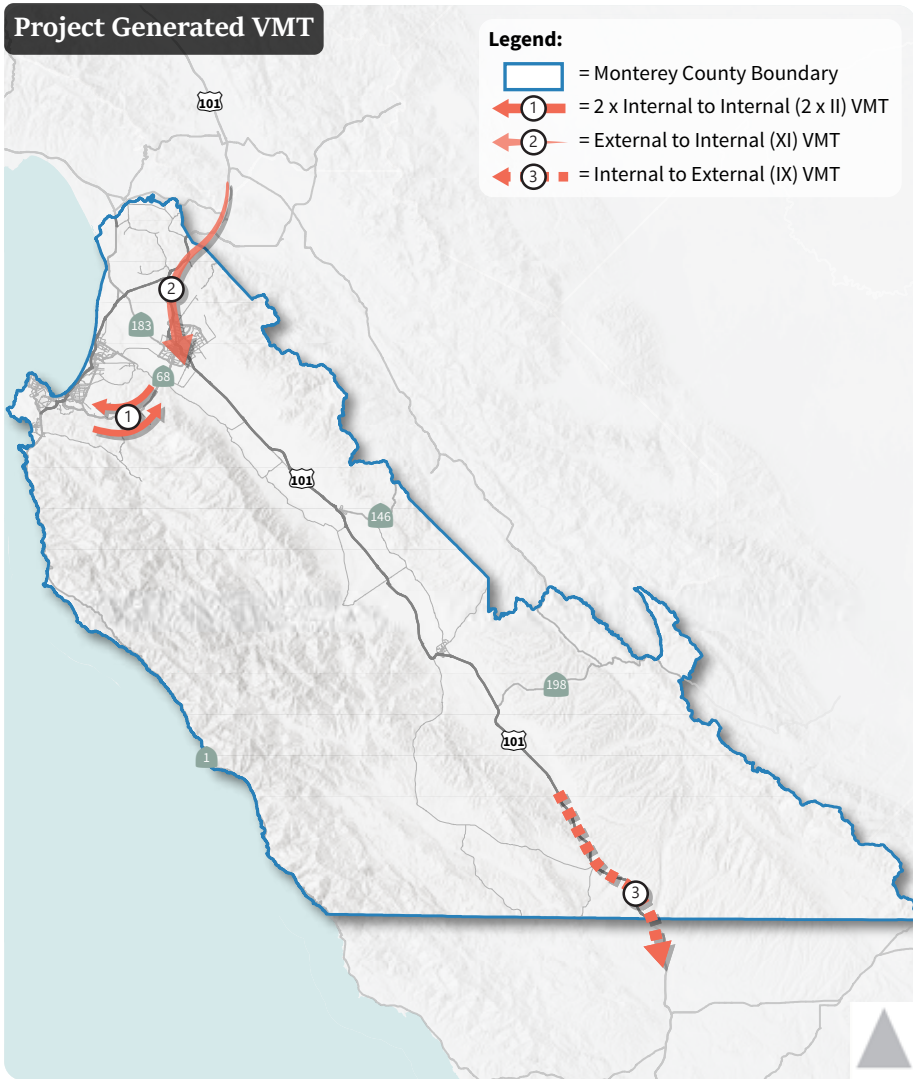
 CSUMB Campus TAZs selected based on Parking Locations



Figure G-1
TAZs used for CSUMB Campus



Notes: External to External (XX) trips are excluded from this VMT metric. Adjustments to project generated VMT made to include the full length of trips that leave Monterey County to capture inter-regional travel.

Notes: Boundary VMT is all the VMT within Monterey County.



Figure G-2
Measuring Vehicle Miles Traveled (VMT)

APPENDIX H: CSUMB DRAFT PARKING SUPPLY SCENARIOS





MEMORANDUM

Date: August 25, 2015
To: Philip Perlin, Page/BMS
From: Anais Schenk and Matt Haynes, Fehr & Peers
Subject: **CSUMB Draft Parking Supply Scenarios**

SJ15-1576

The following parking scenarios were developed for the California State University, Monterey Bay (CSUMB) Master Plan update planning process. CSUMB currently has the highest parking ratio in the CSU system at approximately 0.65 spaces per full time equivalent (FTE).¹ However, CSUMB stakeholders have expressed a strong desire to transition the campus from being mostly auto-oriented to a bicycle, pedestrian and transit friendly environment consistent with the Master Plan's sustainability goals. In order to help achieve this goal, the new Master Plan will seek to proactively manage campus parking supply and reduce the corresponding number of single occupancy vehicles entering campus.

As part of the Master Plan, the campus will also be considering new transportation demand management (TDM) measures as part of the overall effort to increase the use of alternative transportation modes. Currently, CSUMB offers a limited range of TDM measures such as rideshare matching services and resources for commuters wishing to use transit or bicycle to campus. While these TDM measures are responsive to the needs of commuters, the new Master Plan will need to include a broader and more comprehensive TDM program to improve transportation choices for students, staff and faculty.

In a campus setting, the most effective TDM measures relate to managing parking supply and pricing. The strategies presented below therefore seek to better manage both the supply and price of parking on the CSUMB campus.

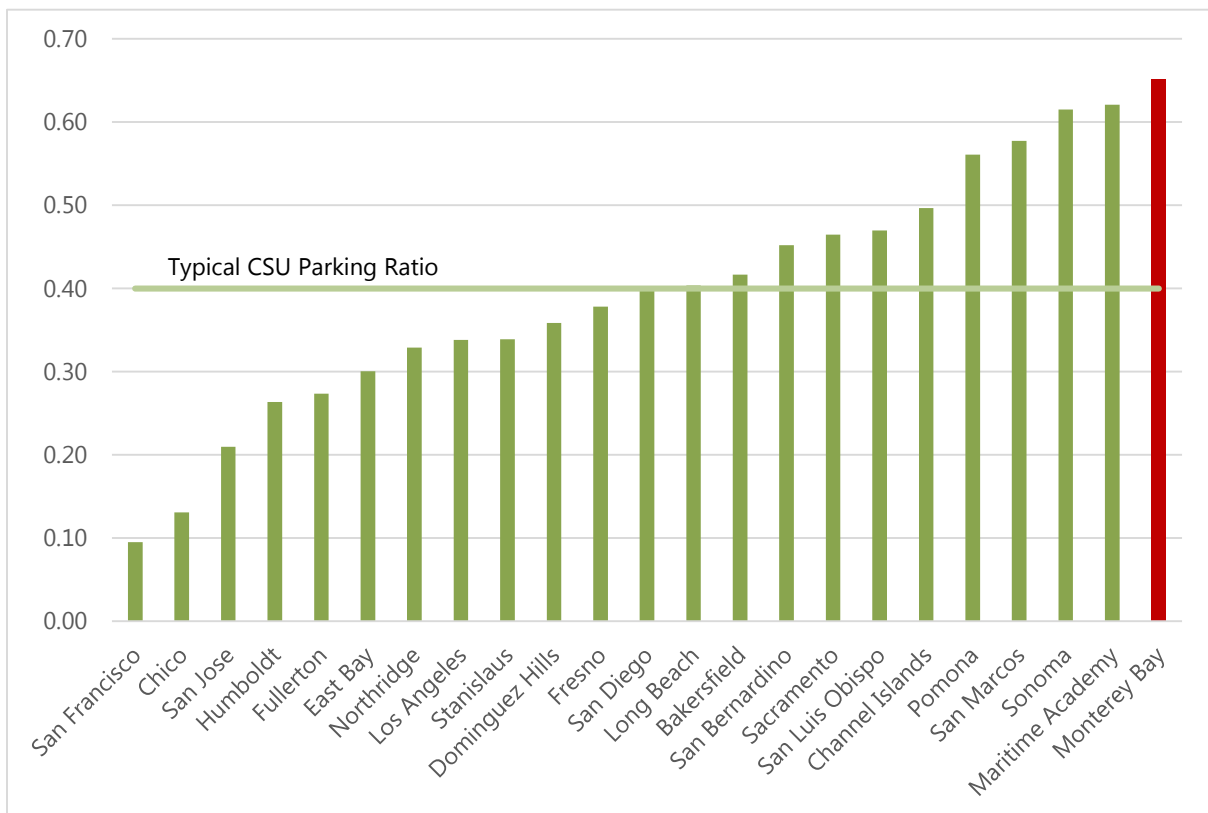
¹ The current CSUMB parking ratio varies from 0.6 to 0.7 depending on the source of information for full time equivalent students and the existing number of parking spaces.



PARKING SUPPLY ALTERNATIVES

Three parking scenarios are provided below for consideration in developing the land use program for the CSUMB Master Plan. The parking ratios are within the range of those achieved by other CSU campuses in suburban land use contexts. Cal State East Bay, Fullerton, Humboldt and Stanislaus all currently have parking ratios around 0.3 per FTE. CSUs that currently have a ratio close to 0.4 include Bakersfield, Fresno, Long Beach and San Diego. See **Figure 1** below.

Figure 1: CSU Parking Ratios per FTE



Source: California State University Financing and Treasury Department (July 2013) and California State University Analytic Studies (2013-2014).

Examples from other CSUs demonstrate that parking ratios between 0.3 and 0.4 are realistic and achievable within the context of suburban campus environments. **Table 1** below shows the results of three different parking ratios: 0.3, 0.35 and 0.4.



TABLE 1: PARKING SUPPLY SCENARIOS AT MASTER PLAN BUILDOUT¹

Scenario	Parking Pricing Strategy ²	Parking Ratio per FTE	Residential Parking Supply	Non-Residential Parking Supply	Total Campus Stalls	Total Supply in Acres ³
Alternative 1: Aggressive Parking Management	High Cost with Tiered Pricing	0.30	1,020	2,770	3,790	27
Alternative 2: Moderate Parking Management	Moderate Cost with Limited Tiered Pricing	0.35	1,650	2,770	4,420	32
Alternative 3: Typical CSU Parking Supply	Moderate Cost (Comparable to Other CSUs)	0.40	1,760	3,290	5,050	36

Notes:

1. The number of spaces shown are for stalls on campus (excluding East Campus) and do not include parking spaces provided by garages or driveways in campus faculty/staff housing.
 2. See Table 2 for details on pricing and corresponding strategies.
 3. The total number of acres was calculated assuming 140 parking spaces are accommodated in one acre for surface lots.
- Source: Fehr & Peers, 2015

The total number of parking stalls for each scenario were divided amongst residential and non-residential users based on the following assumptions:

- Population totals of 12,631 full time equivalent students and 1,421 staff/faculty positions as provided by Page/BMS.
- Sixty percent of students will be housed on campus.
- Campus housing for staff and faculty provides driveways or garages to house their vehicles.
- In addition to current on-campus housing for staff and faculty, we assume East Campus housing will be converted to staff and faculty housing.
- In order to achieve the Moderate and Aggressive parking alternatives, the Master Plan will need to incorporate a robust TDM program that achieves a 45-50 percent single occupancy vehicle mode share target along with a 10 percent rideshare mode share. The Typical CSU Parking Supply alternative will need to achieve an approximately 55 percent single occupancy vehicle mode share.



There are varying sources of information for existing parking spaces on the CSUMB campus. Current parking estimates range from 3,645² to 4,398.³ If the actual parking supply is on the higher end of this range of estimates than CSUMB may already have enough parking supply to accommodate either the aggressive or the moderate scenarios shown above. If CSUMB chose to adopt the aggressive scenario than new buildings could be constructed by removing surface lots without replacing lost parking stalls. An aggressive approach to managing campus parking supply, along with a robust TDM program, would therefore limit the amount of resources needed to construct additional surface parking during buildout of the Master Plan.

PARKING PRICING OPTIONS

There are several options for parking pricing that can be considered in conjunction with each parking supply scenario. These options are closely linked to the parking supply options presented above. For example, an aggressive parking supply alternative will also necessitate an aggressive approach to parking pricing.

Most CSUs charge for parking on a semester or quarter basis and have lower cost parking for evening and summer sessions when there is less overall demand for parking. CSUMB recently raised the price of parking permits to \$108 per semester for students and \$54 to \$58 per semester for employees. Current parking permit costs for other CSUs range anywhere from \$80 to over \$300 per semester. Some CSUs such as Chico, San Luis Obispo and San Jose charge more for on campus resident permits which discourage student auto ownership. Some universities offer location and time-based parking pricing such as MIT, UCLA and University of Colorado, Boulder. Because there are numerous ways to structure pricing to disincentivize driving the suggested pricing alternatives below are presented as ranges that would need to be refined as part of a future more detailed parking management and implementation strategy.

² California State University Financing and Treasury Department (July 2013). The ratio of 0.65 per FTE is from the CSU data as shown above in Figure 1.

³ California State University, Monterey Bay: Draft Parking Management Plan (2012).



TABLE 2: PARKING PRICING SCENARIOS PER SEMESTER

Scenario	Parking Ratio per FTE	Range of Permit Cost (Student)	Range of Permit Cost (Staff/Faculty)	Pricing and Management Strategies
Alternative 1: Aggressive Parking Management	0.30	\$425-500	\$200-250	<ul style="list-style-type: none"> • Higher prices for on-campus resident permits. • No vehicles for freshman on campus. • No on-campus permits for East Campus residents. • Tiered parking pricing based on distance to academic core. • Tiered pricing for limited days of week. (1 day, 2 days, etc.) • Increased citation costs.
Alternative 2: Moderate Parking Management	0.35	\$325-400	\$150-200	<ul style="list-style-type: none"> • Higher prices for on campus resident permits. • No vehicles for freshman on campus. • No on-campus permits for East Campus residents. • Tiered parking pricing based on distance to academic core.
Alternative 3: Typical CSU Parking Supply	0.40	\$200-250	\$100-150	<ul style="list-style-type: none"> • Higher prices for on campus resident permits. • No vehicles for freshman on campus. • Limited on-campus permits for East Campus residents.

Source: Fehr & Peers, 2015

SUMMARY

Fehr & Peers has provided these preliminary parking ratios and pricing schemes in order to engage stakeholders and University staff in a conversation about a proactive approach to parking. Subsequent to Master Plan adoption, CSUMB should develop a Parking Management Plan to guide and implement campus wide parking policies including pricing, permitting and enforcement. This would be best achieved through a Transportation and Parking Services (TAPS) department which would be charged with implementing the parking management strategies and managing parking revenue. Under this structure, parking revenue could be directed towards transportation systems that reinforce the long term sustainable transportation goals of the campus.

APPENDIX I: PARKING DEMAND AND SUPPLY CALCULATIONS



TABLE 11: CSUMB EXISTING AND FUTURE ACADEMIC PARKING DEMAND AND SUPPLY

Item	Value
Existing Peak Parking Demand (A)	2,396 spaces
Existing Students, Faculty and Staff Population (B)	7,886 FTE
Existing Parking Demand Rate (A/B = C)	0.313 spaces per FTE
Future Students, Faculty and Staff (D)	14,476 FTE
Future Base Parking Demand (D x C = E)	4,531 spaces
Circulation Factor (F)	0.05
Future Parking Supply (E x (1+F)=G)	4,758 spaces
Existing Parking Supply	3,730 spaces
Excess/Shortage Parking Supply	-1,028 spaces

Source: Fehr & Peers, June 2019.

TABLE 12: CSUMB EXISTING AND FUTURE RESIDENTIAL PARKING DEMAND AND SUPPLY

Item	Value
Existing Peak Parking Demand (A)	525 spaces
Existing Residential Students, Faculty and Staff Population (B)	2,600 Main Campus Residents
Existing Parking Demand Rate (A/B = C)	0.202 spaces per resident
Future Students, Faculty and Staff (D)	7,620 Main Campus Residents
Future Base Parking Demand (D x C = E)	1,539 spaces
Circulation Factor (F)	0.05
Future Parking Supply (E x (1+F)=G)	1,616 spaces
Existing Parking Supply	991 spaces
Excess/Shortage Parking Supply	-625 spaces

Source: Fehr & Peers, June 2019.

TABLE 13: FUTURE PARKING SUPPLY SUMMARY

Parking Summary	Academic	Residential	Total
Existing	3,730	991	4,721
Future Base on Land Area Allocated in MP Guidelines	4,451	1,200	5,651
Future Based on Existing Parking Demand	4,758	1,616	6,374

Source: Fehr & Peers, June 2019.

Table 15: CSUMB Main Campus External AM Vehicle Trips

Parking Areas	Students				Faculty/Staff			
	SOV	Carpool	Transit	Percent of total trips	SOV	Carpool	Transit	Percent of total trips
Parking Area 1	416 (28%)	0 (0%)	0 (0%)	416 (28%)	100 (14%)	0 (0%)	0 (0%)	100 (7%)
Parking Area 2	164 (11%)	67 (5%)	4 (0%)	235 (16%)	35 (5%)	31 (4%)	1 (0%)	67 (5%)
Parking Area 3	100 (7%)	93 (6%)	5 (0%)	198 (14%)	102 (15%)	44 (6%)	2 (0%)	148 (10%)
Parking Area 4	416 (28%)	0 (0%)	0 (0%)	416 (28%)	198 (28%)	0 (0%)	0 (0%)	198 (14%)
Parking Area 5	52 (4%)	0 (0%)	0 (0%)	52 (4%)	105 (15%)	0 (0%)	0 (0%)	105 (7%)
Parking Area 6	103 (7%)	0 (0%)	0 (0%)	103 (7%)	77 (11%)	0 (0%)	0 (0%)	77 (5%)
Parking Area 7	44 (3%)	0 (0%)	0 (0%)	44 (3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total	1,295 (88%)	160 (11%)	9 (1%)	1,464 (100%)	617 (89%)	75 (11%)	3 (0%)	695 (47%)

Notes:

1. Promontory is a residential only lot for students living on the Main Campus. Trips are only for travel off-campus and east-campus, trips into the campus are not expected to occur for students living on the Main Campus.

Source: Fehr & Peers, June 2019.

TABLE 16. PARKING DEMAND BY LOT

Parking Lot	Future Parking Supply based on Land Area Allocated in Master Plan ¹ [A]			Future Parking Supply Based on Existing Parking Demand for Use in TA ² [B]			Excess/ Supply Shortage [A-B]		
	Academic	Residential	Total	Academic	Residential	Total	Academic	Residential	Total
Parking Area 1	475 (11%)	775 (65%)	1,250 (22%)	1,190 (25%)	1,234 (76%)	2,424 (38%)	-715	-459	-1,174
Parking Area 2	1,188 (27%)	-	1,188 (21%)	714 (15%)	-	714 (11%)	474	-	474
Parking Area 3	463 (10%)	-	463 (8%)	760 (16%)	-	760 (12%)	-297	-	-297
Parking Area 4	1,450 (33%)	-	1,450 (26%)	1,380 (29%)	-	1,380 (22%)	70	-	70
Parking Area 5	500 (11%)	-	500 (9%)	333 (7%)	-	333 (5%)	167	-	167
Parking Area 6	375 (8%)	-	375 (7%)	381 (8%)	-	381 (6%)	-6	-	-6
Parking Area 7	-	425 (35%)	425 (8%)	-	382 (24%)	382 (6%)	-	43	43
Total	4,451 100%	1,200 100%	5,651 100%	4,758 100%	1,616 100%	6374 100%	-308	-416	-723

Notes:

1. Future Parking Supply estimated by Master Plan land are allocation provided by CSUMB on June 2018.
2. Future Parking Supply estimated by campus population growth based on estimated parking area size calculated using methodology described in **Chapter 2 and Chapter 7**.

Source: CSUMB, June 2018. Fehr & Peers, June 2019.

**APPENDIX J: CALIFORNIA STATE UNIVERSITY, MONTEREY BAY
HOUSING AND PARKING MANAGEMENT GUIDELINES**

Refer to Appendix C-2 of the CSUMB Master Plan EIR



California State University, Monterey Bay Housing and Transportation Demand Management Guideline

Introduction

The primary goals of this California State University, Monterey Bay (CSUMB) Housing and Transportation Demand Management (TDM) Guideline (Guideline) are to:

1. Insure that at least 60% of the student population lives on campus; and
2. Reduce vehicle traffic both on and off campus.

These goals will be met by implementing elements identified in the 2007 Campus Master Plan and TDM aspects of the associated Environmental Impact Report 2009 settlement agreement, the 2020 (draft) Campus Master Plan Guidelines, and an International Programs housing goal.

This Housing and TDM Requirement Guideline requires the following:

1. Freshman and sophomore students¹ are to live in on-campus housing.
2. 90% of International Program students² are to live in on-campus housing.
3. All freshman and sophomore on-campus residents³ are prohibited from parking or maintaining personal automobiles⁴ on campus, and purchasing parking permits.⁵

These measures will be implemented at a time determined by the President, based upon key milestones,⁶ and before 12,700 Full Time Equivalent Students are enrolled.

¹ **On-campus residency requirement exemptions** from this policy may include: living in the tri-county area prior to acceptance, marital, parental, military and health status. Exemption/waiver requests are reviewed on a case-by-case basis.

² **International Students** are full time undergraduate semester, year or degree seeking students. Not included within this directive are upper-division, graduate or students enrolled in extended education language programs.

³**Parking permit exception** - The following reasons will be considered for a parking waiver exception: 1) Economic need - when a student must rely on income from a job not served by public transportation; 2) Academic need - including off-campus service Learning, classes, research, or field study not served by public transportation; 3) Family need - i.e. continuing care of a sick or disabled immediate family member; 4) Frequent medical/dental appointments -whose location is not served by public transportation.

⁴ **Automobile** – Includes two in-line (motorcycle) or four-wheeled (car) automotive vehicle designed for passenger transportation.

⁵ **Parking permits** - Include all permit types

⁶ **Milestones** – Will be determined based on data indicating the campus' progress toward meeting its transportation and housing goals.

Directives and Rationale

1. Freshman and sophomore students will live on campus.

Rationale:

- **Precedent:** CSUMB has required full-time freshmen and sophomores to live on-campus since its inception in 1994 when the CSU acquired 1,253 East Campus Housing apartment style units and 1,811 beds on the Main Campus. This is consistent with research indicating that on-campus students are significantly more likely than their off-campus peers to succeed academically, to be involved in campus activities, to graduate, and to feel positive about their college experience. Furthermore, in 2018, the Monterey Bay Corporation passed a Student Housing policy⁷ which required full time freshmen and sophomores to live on-campus.
- **Master Plan goal to house 60% of students:** The last three versions of the campus Master Plan (2004, 2007, current draft) have included goals to house 60% of students on campus. The requirement takes advantage of a large housing stock, and adopted good planning practices to co-locate housing and jobs and school. As of the fall 2016 semester, approximately 60% of the enrolled 6,634 Full Time Equivalent Students resided in on-campus housing. As the campus continues to grow, this directive will maintain this percentage and will require commitment to ensure students remain a primary focus of future housing development.
- **Response to the housing crisis:** Providing on-campus housing reduces competition between students and residents for limited affordable housing. Furthermore, students coming to the Monterey Area from outside the area often have trouble finding off campus affordable housing.
- **TDM programs address transportation challenges** – Attending class while living on campus does not require car ownership. The campus currently provides, and is in the process of expanding, TDM programs (ex. car-share, scooter-share, universal transit access pass), which increasingly meet the mobility needs of those who cannot, or do not have the financial means or desire to own a car. Therefore, living on campus is a car-free option with alternative transportation programs that allow students to access off campus commitments and resources such as Service Learning or employment.

⁷ University Corporation at Monterey Bay Student Housing Policy 410-001-A
https://gallery.mailchimp.com/3a9bc2d0b4b7b35594002815a/files/5d12d933-02a5-4666-b3d8-7f8a22c6f50c/410_001A_Student_Housing_Policy2_draft_1_.pdf

2. 90% of International Program students will live on-campus

Rationale:

- **Precedent** – International Students (IS) have generally been guaranteed on-campus housing if they apply by posted deadlines. As of the fall of 2017, approximately 87%⁸ of IS enrolled at CSUMB already lived on campus.
- **International Programs housing goal:** International Programs has a goal to house 90% of full time undergraduate IS on campus.
- **Response to the housing crisis:** Acquiring off-campus housing can be especially challenging for IS living abroad, due to limited financial resources, language or cultural barriers, and lack of knowledge of the Monterey area.
- **Community:** Living on campus provides a built-in community with target resources close at hand, which help IS start their CSUMB career off on the right footing.
- **TDM programs address transportation challenges:** IS typically do not have access to an automobile once they arrive in the area. Living on campus provides access to campus TDM programs to meet their needs.

3. All freshman and sophomore student residents will be prohibited from bringing personal automobiles and motor vehicles to campus, and from purchasing parking permits.

Rationale:

- **TDM definition:** Managing demand is about providing travelers, regardless of whether they drive alone, with travel choices, such as work location, route, time of travel and mode. In the broadest sense, demand management is defined as providing travelers with effective choices to improve travel reliability.⁹
TDM requirement: The City of Marina versus the Board of Trustees of the California State University Stipulation to Discharge Preemptory Writ of Mandate, (9/14/09) requires CSUMB to implement TDM programs to reduce campus generated offsite vehicle trips.

⁸ Email from Brian Childs, Director of International Student and Scholar Services on 07/16/2018

⁹ US Department of Transportation – Organizing and Planning for Operations - https://ops.fhwa.dot.gov/plan4ops/trans_demand.htm

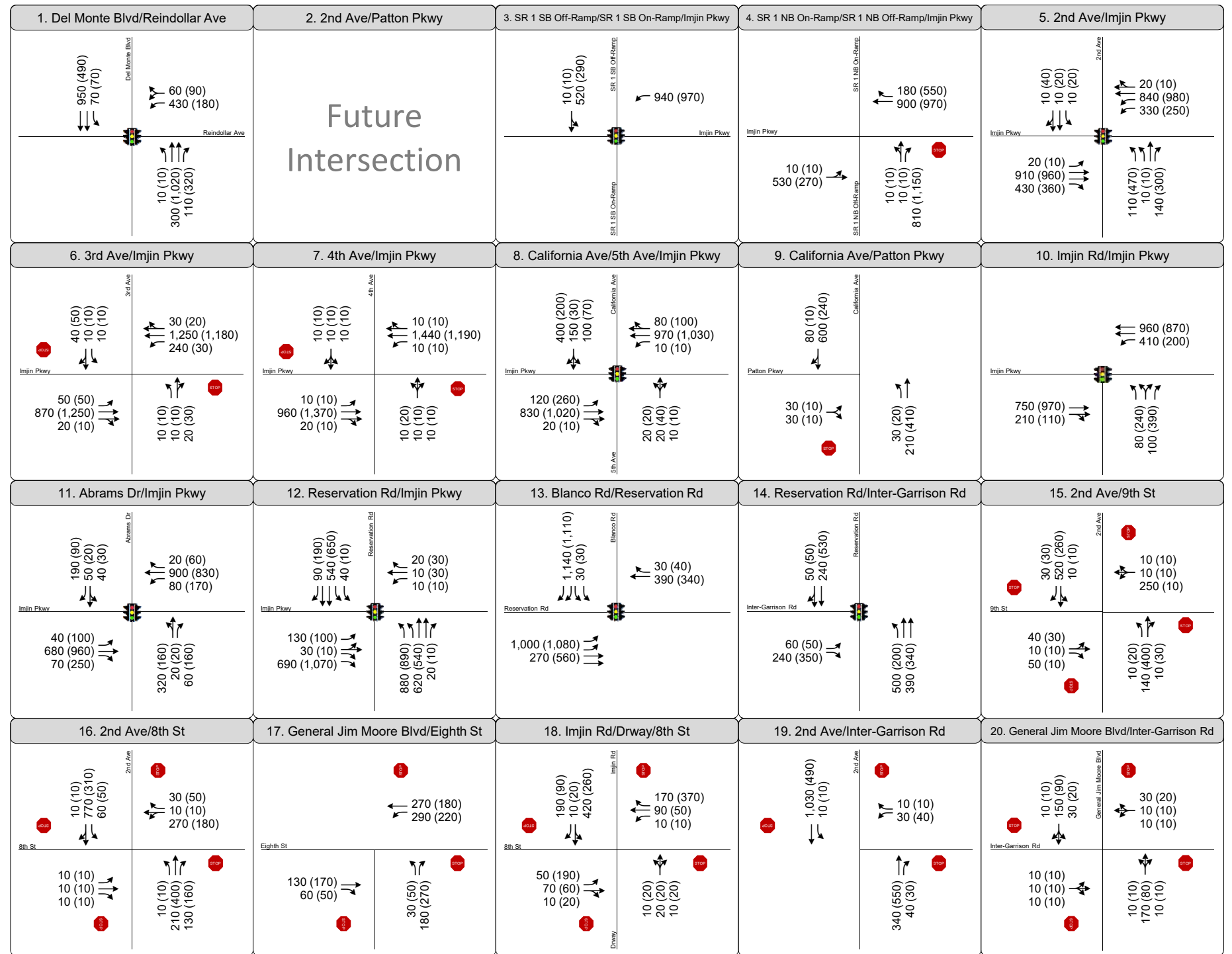
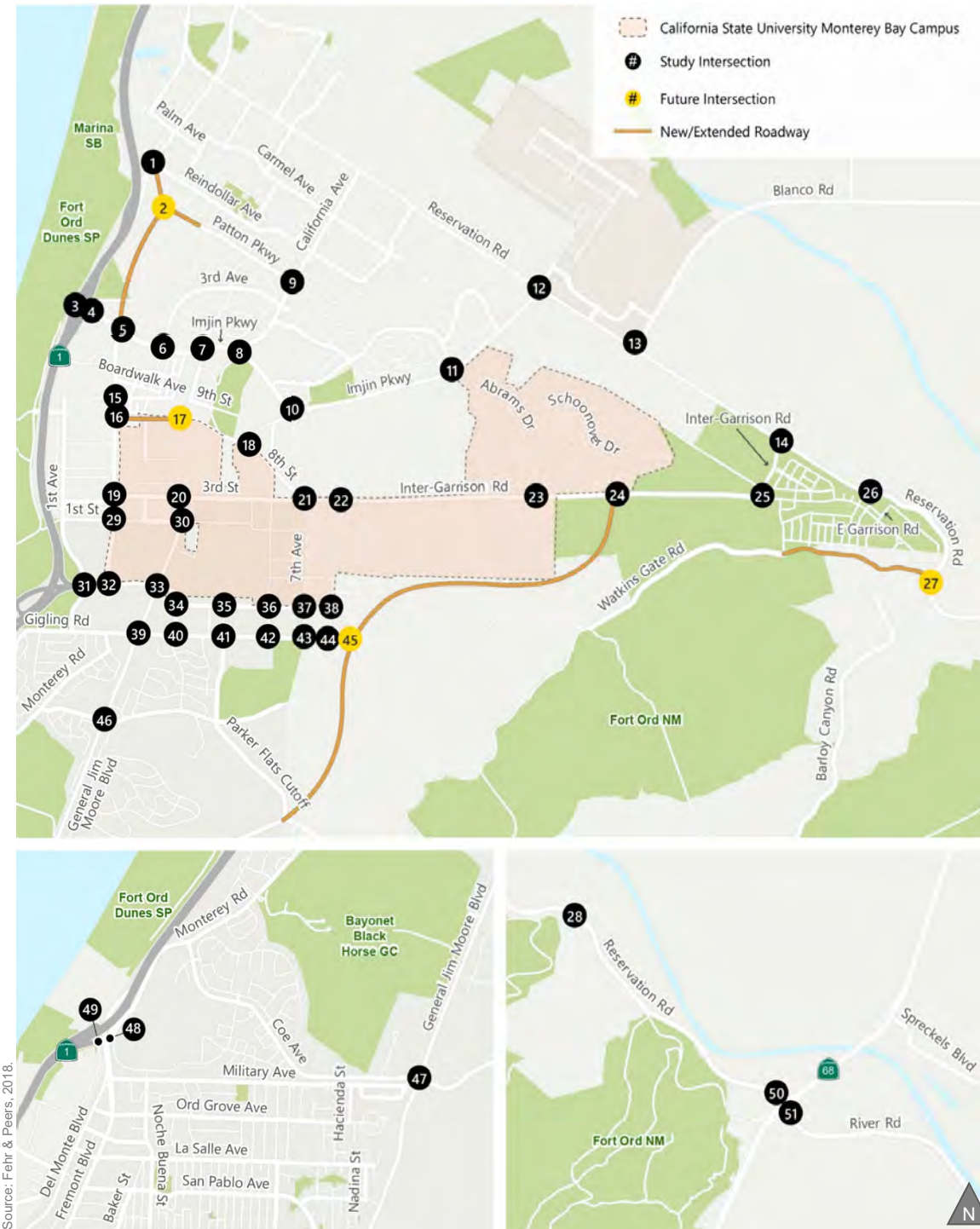
- **Cost effectiveness:** TDM programs can be more cost effective¹⁰ than increasing parking facilities.
- **Parking permit TDM strategy:** Parking permits encourage driving and do not incentivize sustainable travel modes. Parking management (restrictions, locations and pricing) is a TDM strategy that can reduce on- and off-campus traffic by requiring or encouraging people to choose other transportation modes (ride-share, car-share, bike-share, scooter-share, etc.). As the presence and visibility of sustainable transportation modes increase, so will the adoption of these programs as the primary modes of transportation.
- **Equity:** Resident students do not require a car to fulfill their academic commitments. Parking spaces should be made available to commuter students, staff and faculty, those with a disability or documented exemption/waiver from the parking permit guidelines requirements.
- **Land use, transportation and safety strategy:** The draft 2020 Master Plan places new buildings on existing centrally located parking lots reallocating space previously meant for car storage, to use by people in support of their academic success (academic buildings, pathways, gathering spaces areas etc.). Utilizing existing parking quantities efficiently throughout the buildout of the campus Master Plan will allow the campus to develop a car-free and safer central campus for walking and biking and protect our natural open spaces from being developed.

¹⁰ Innovative Parking Management Strategies for Universities: Accommodating Multiple Objectives in a Constrained Environment

https://www.researchgate.net/publication/305720913_Innovative_Parking_Management_Strategies_for_Universities_Accommodating_Multiple_Objectives_in_a_Constrained_Environment

APPENDIX K: INTERSECTION VOLUME FIGURES

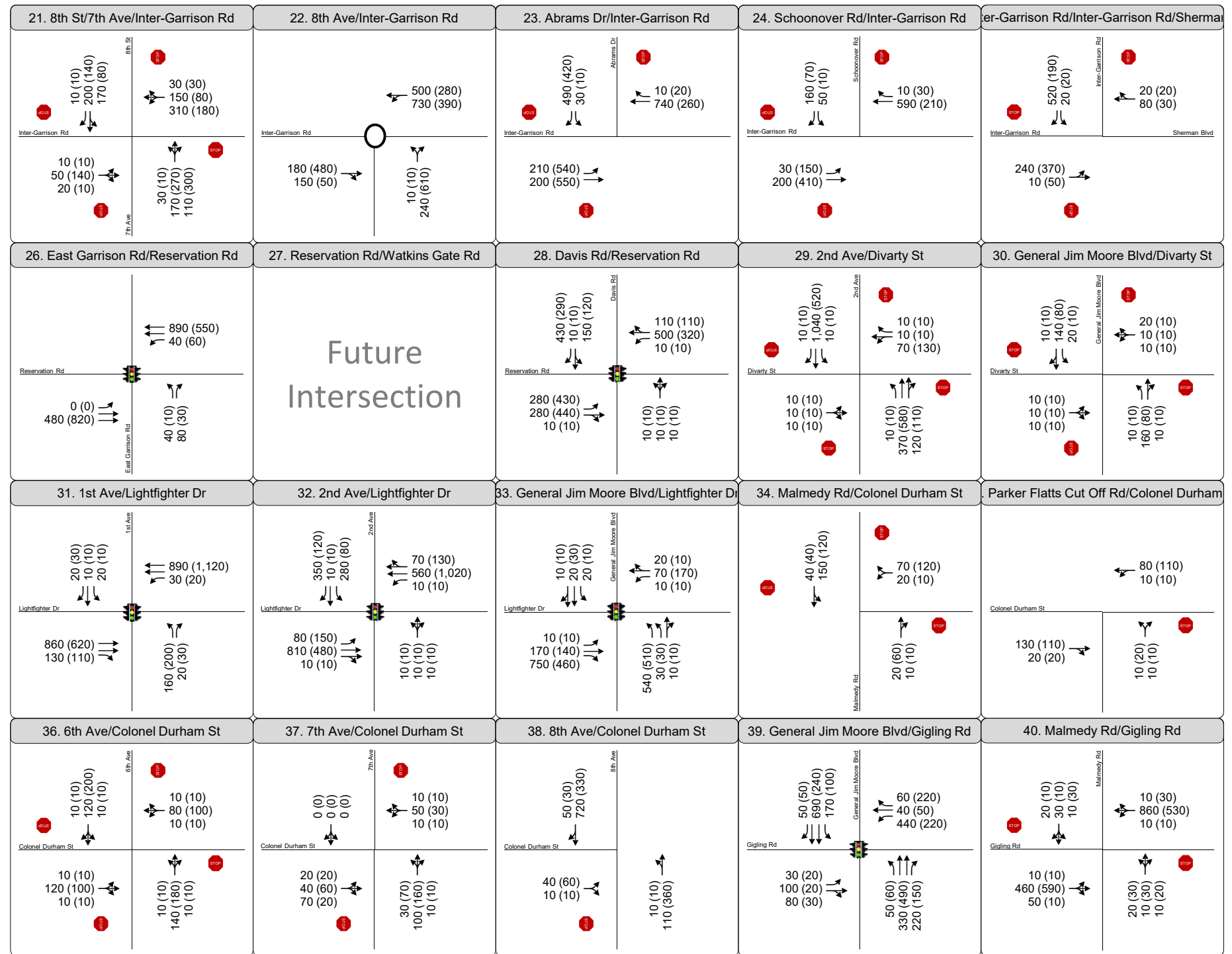
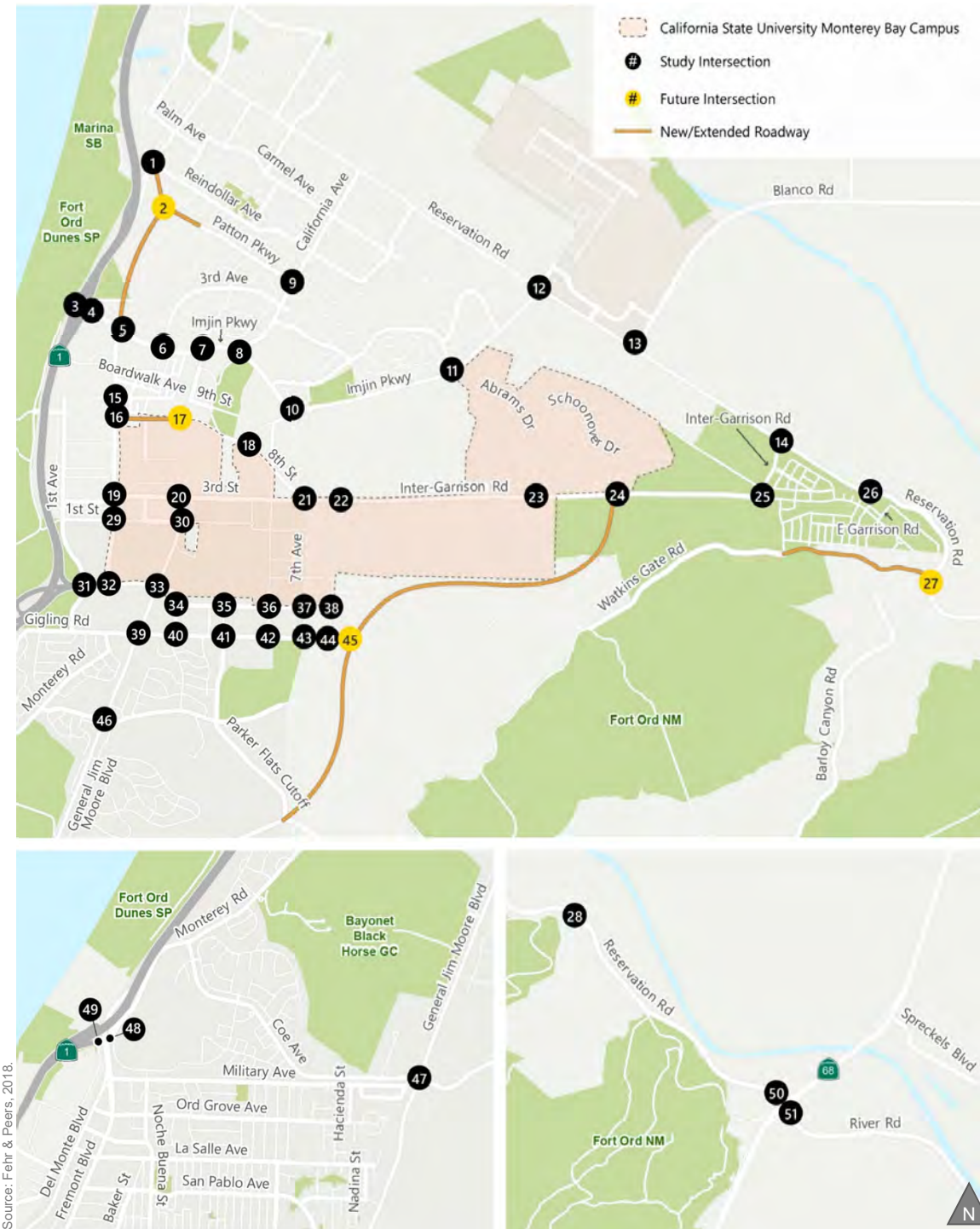




- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-1a
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing with Project Conditions

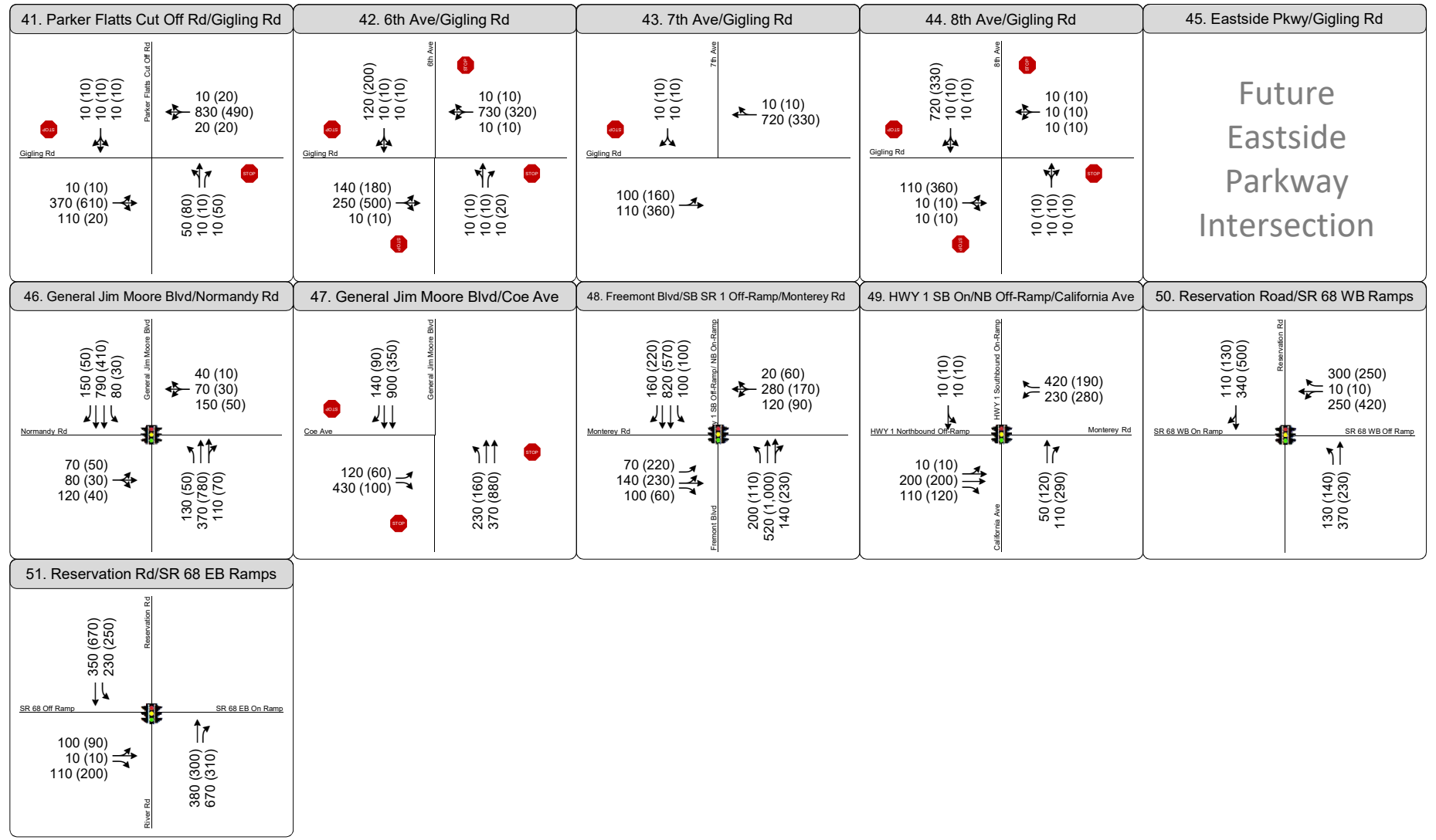
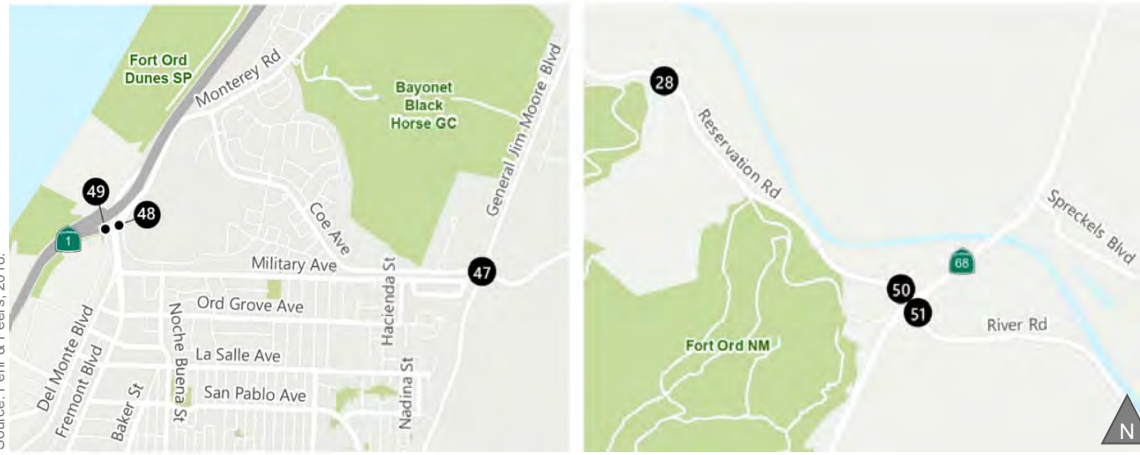
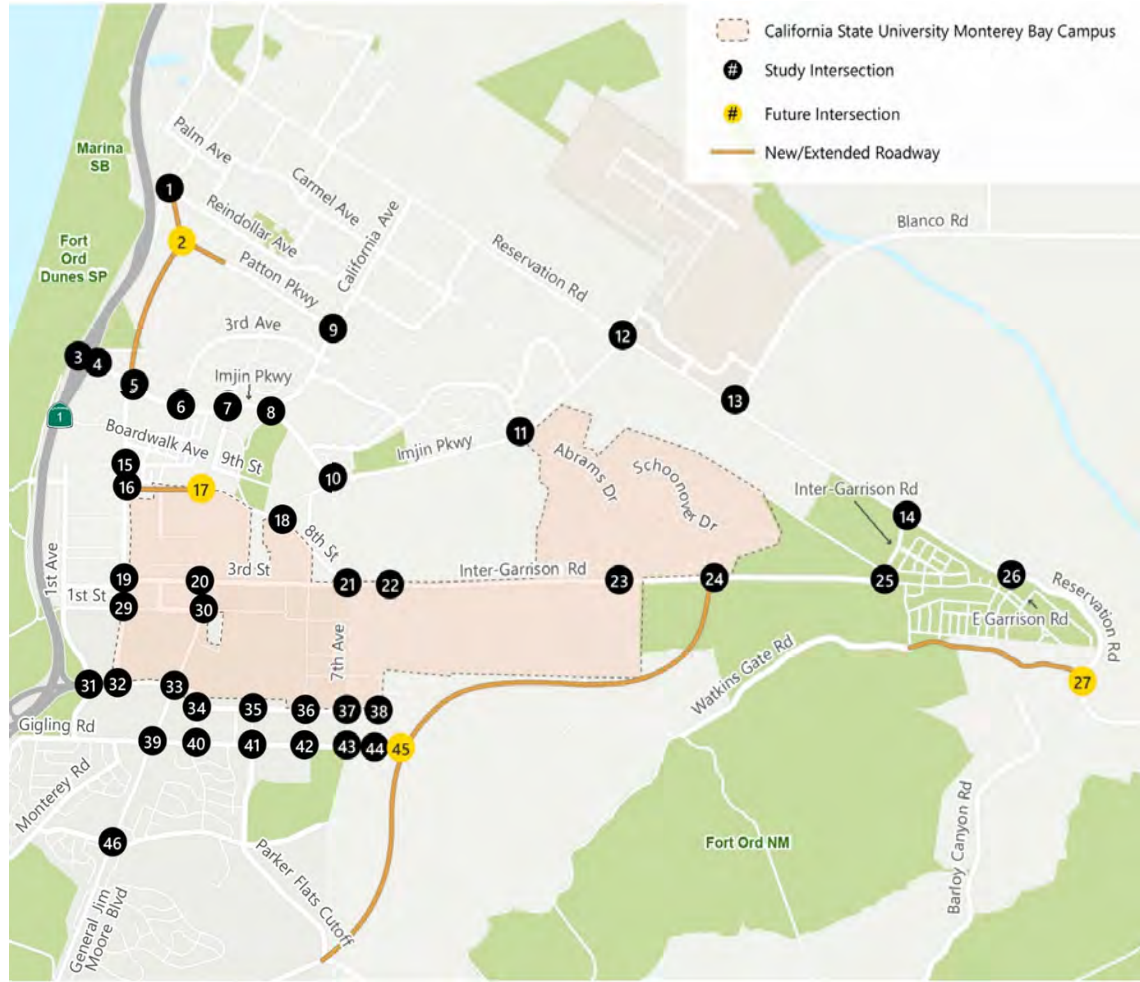




- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-1b
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing with Project Conditions

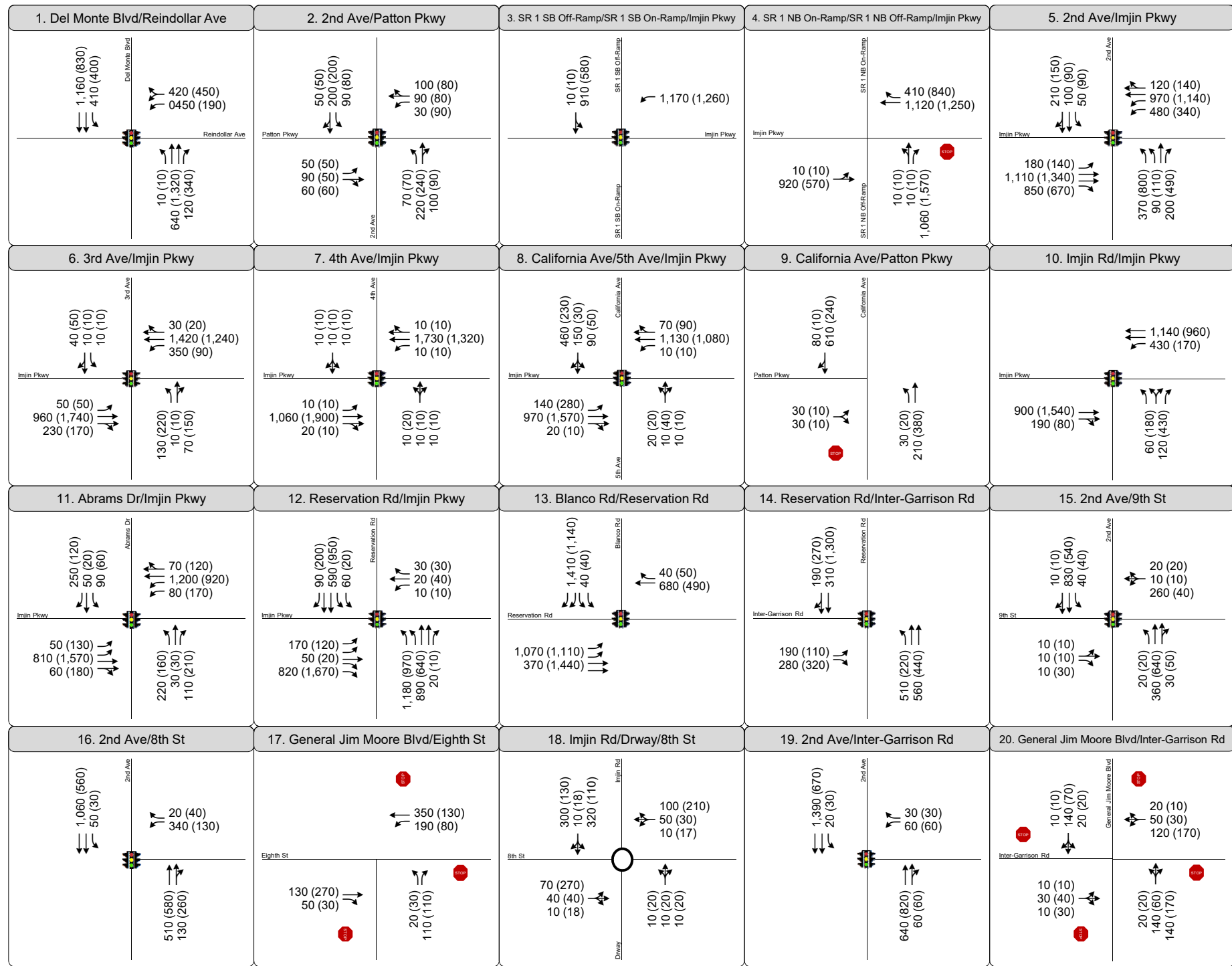
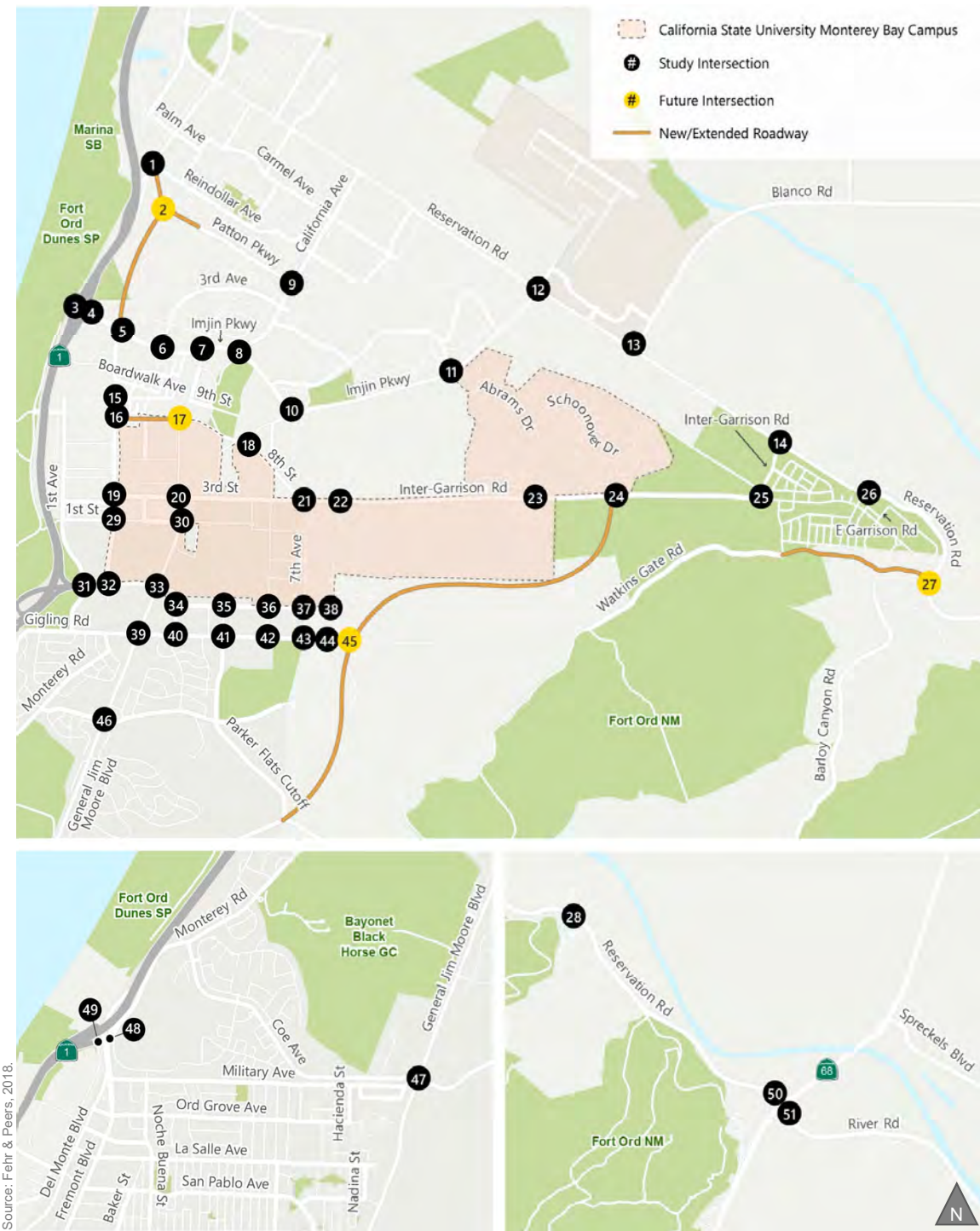




- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-1c
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Existing with Project Conditions



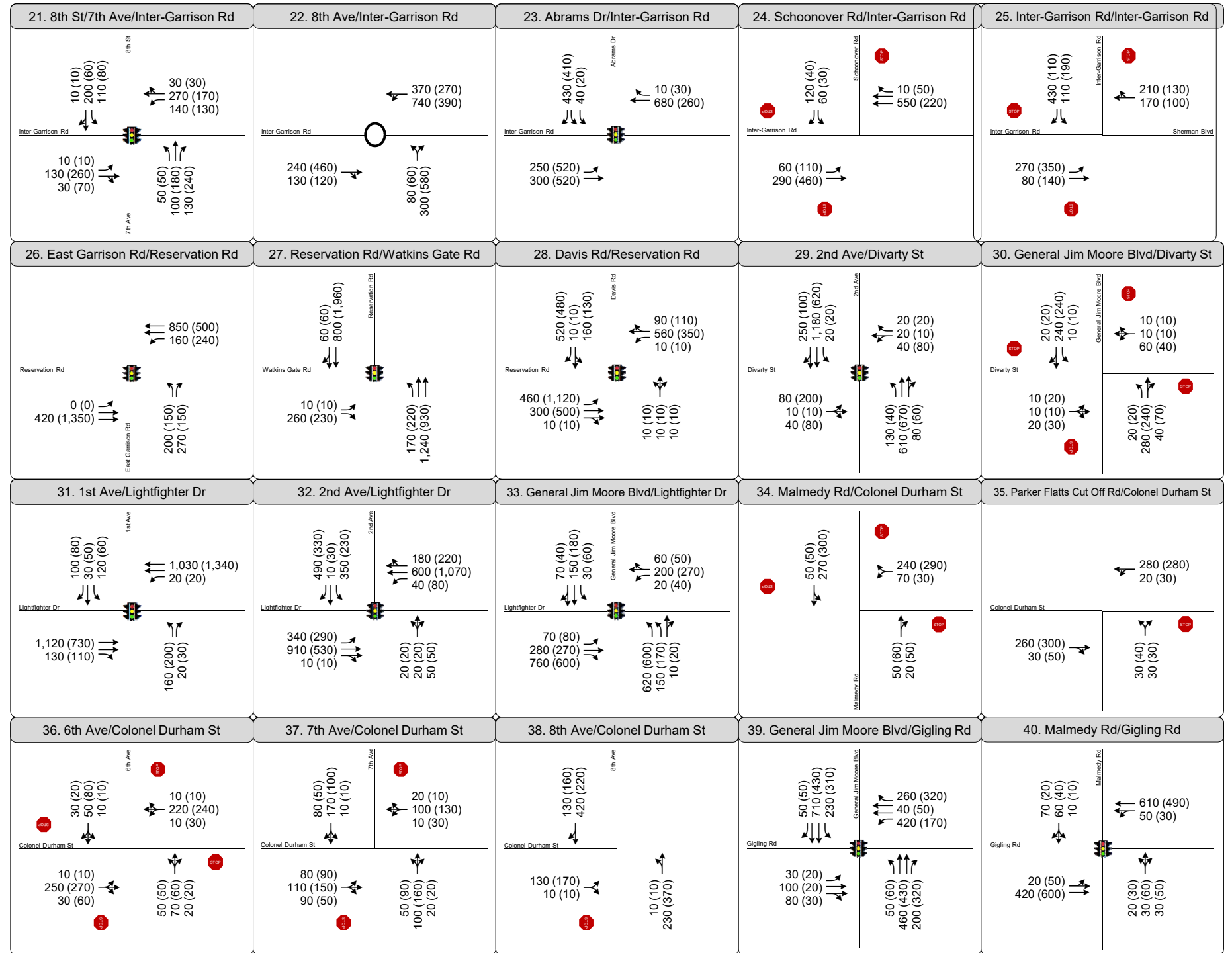
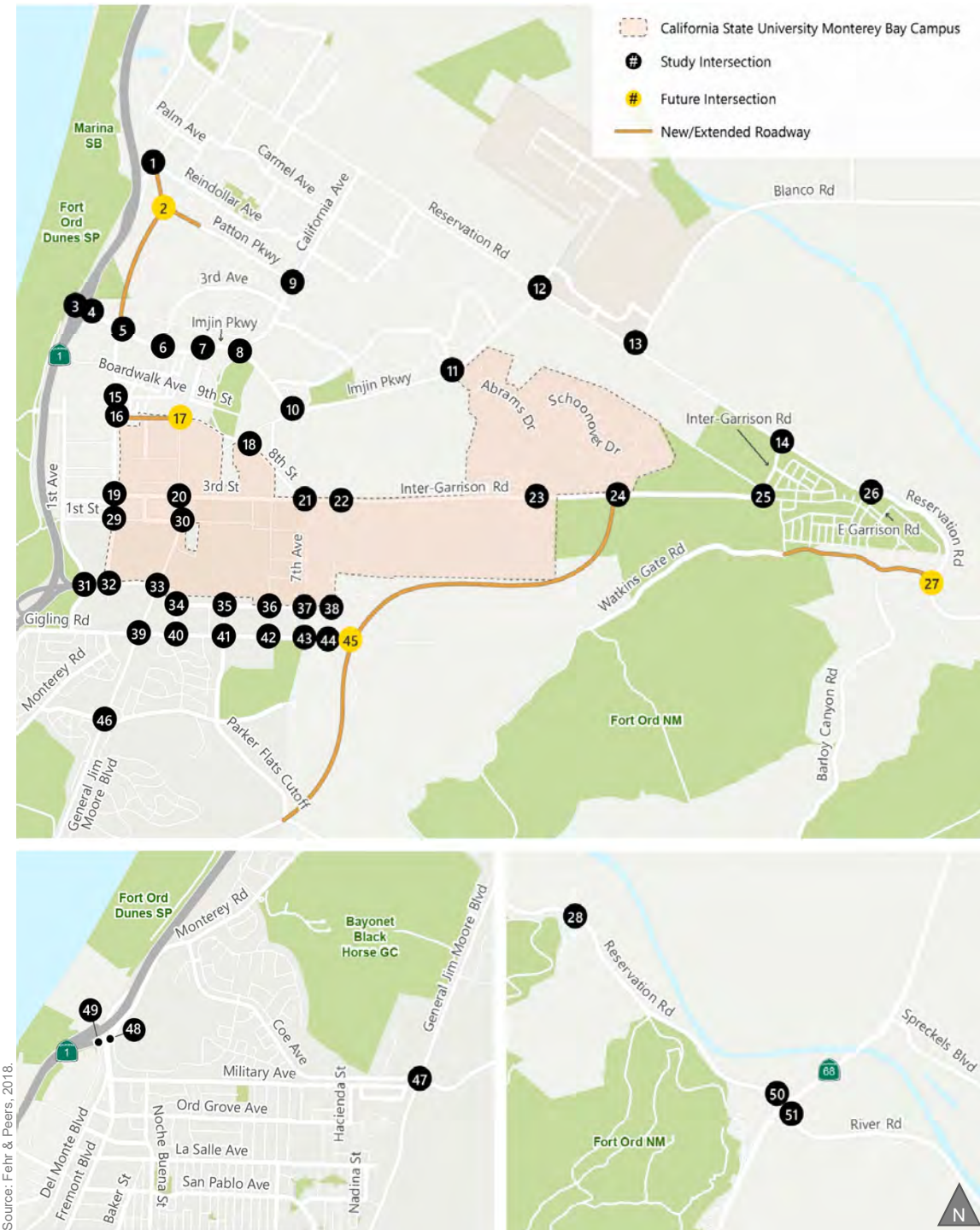


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

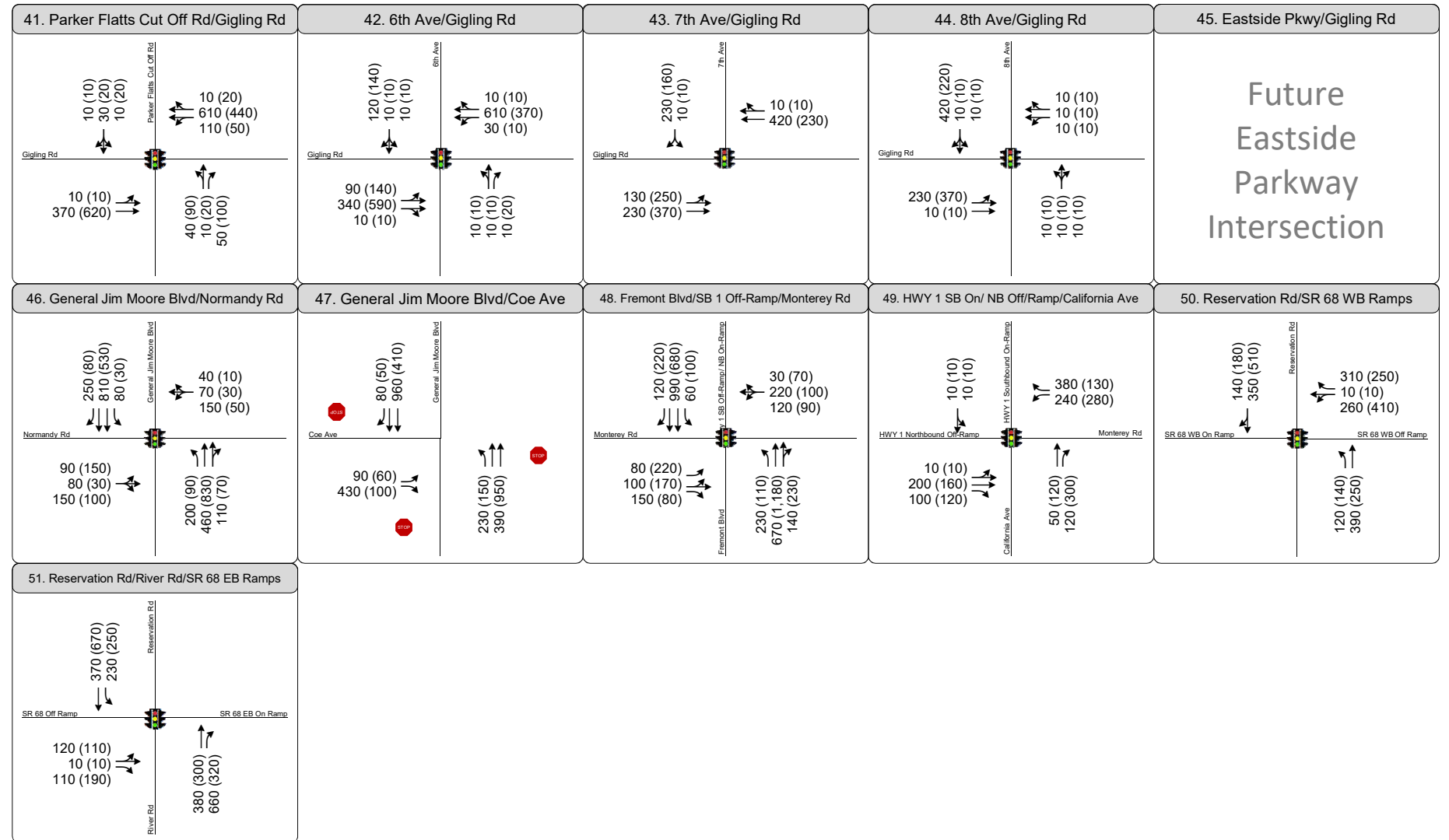
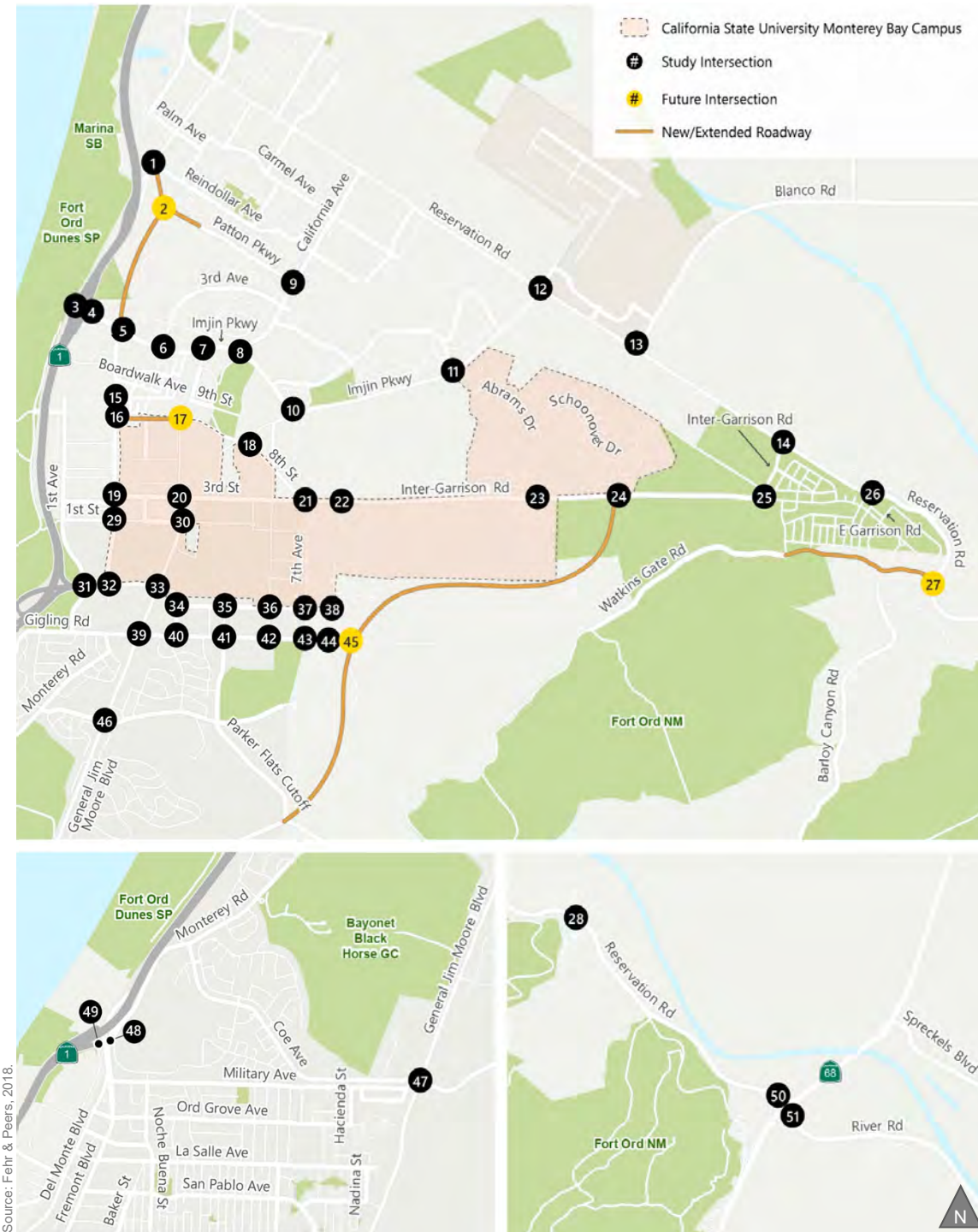
Figure K-2a
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative without Project and without Eastside Parkway Conditions





- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-2b
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative without Project and without Eastside Parkway Conditions

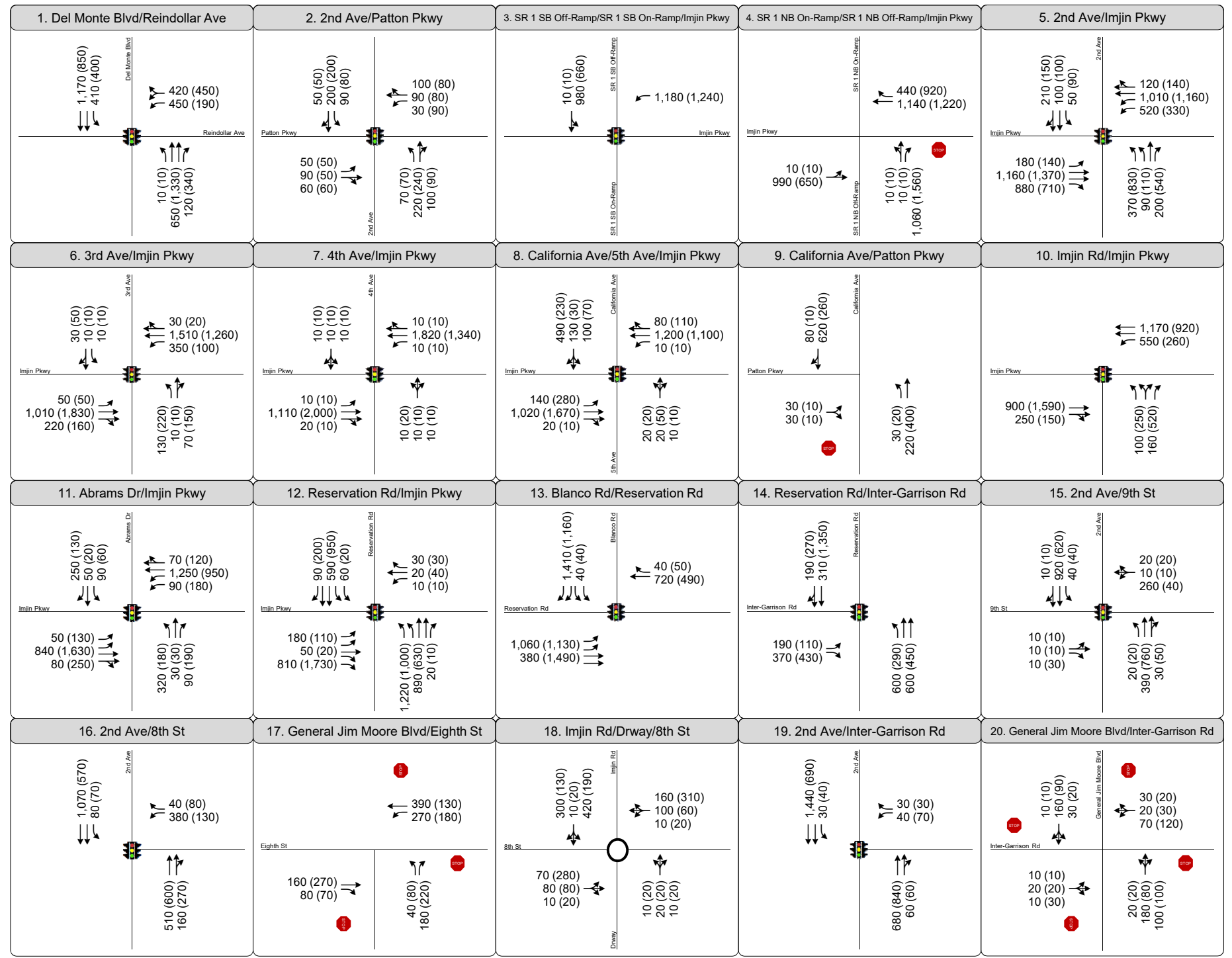
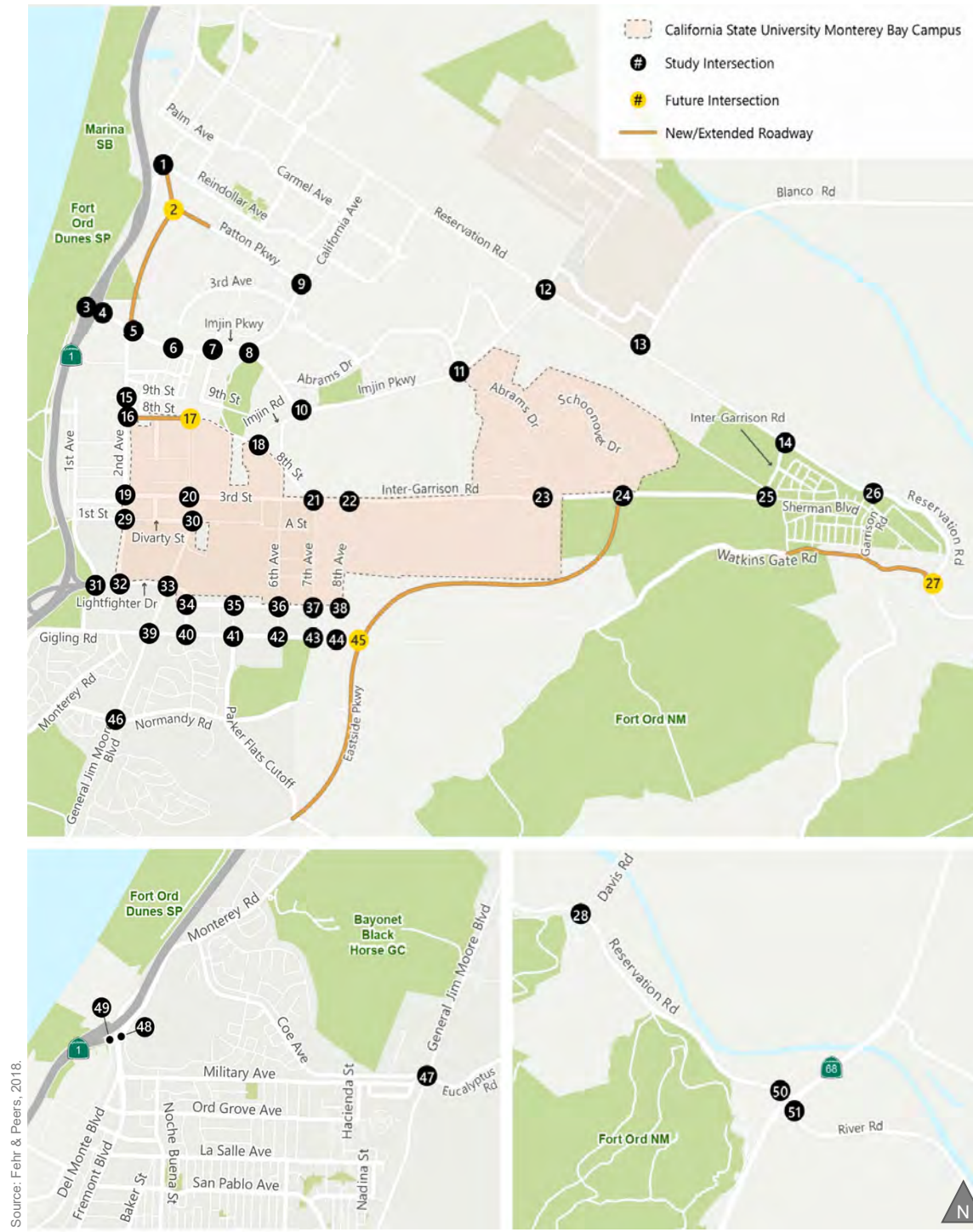


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-2C
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative without Project and without Eastside Parkway Conditions

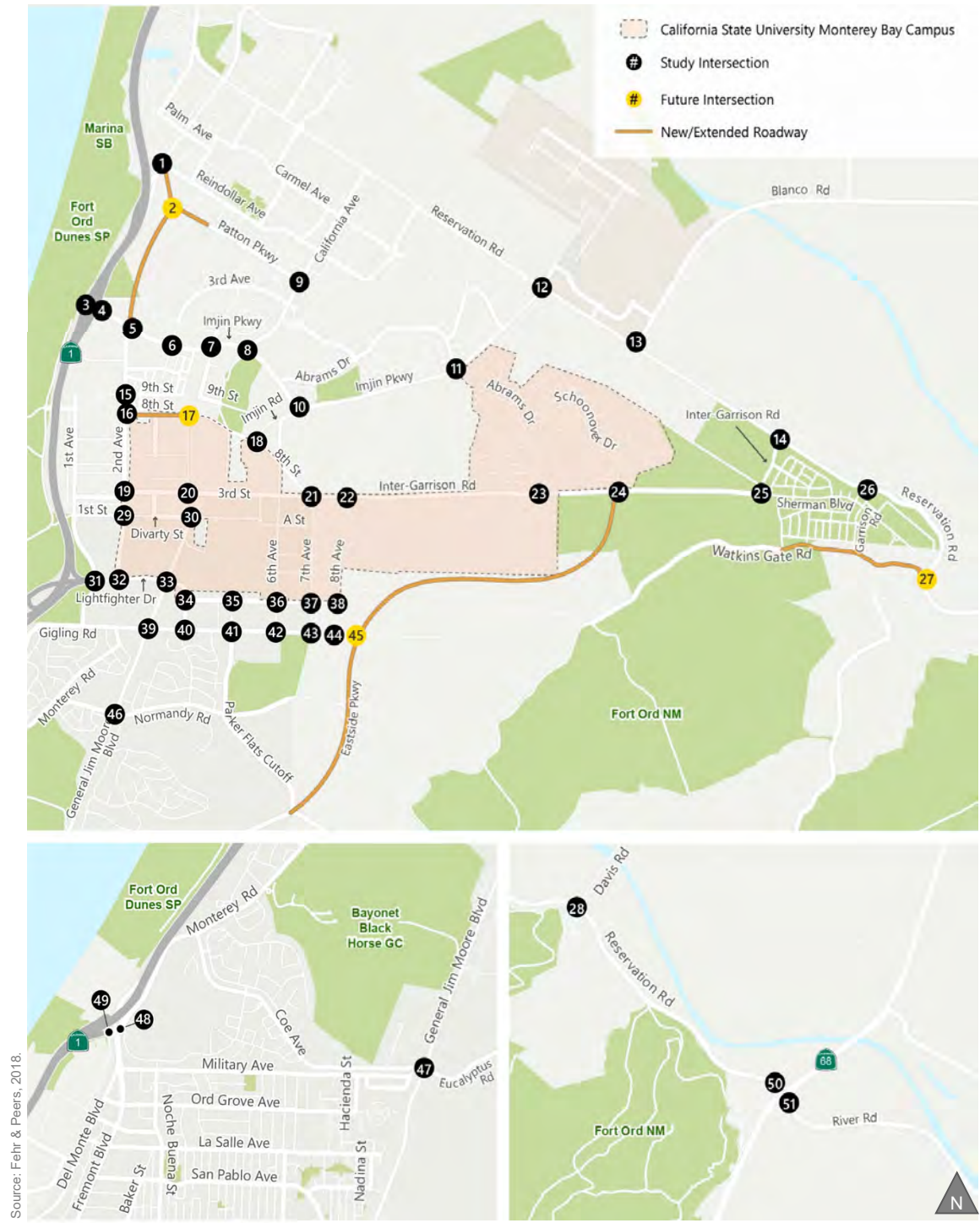




- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-3a
 Study Intersection Peak Hour Traffic Volumes and Lane Configurations
 Cumulative with Project and without Eastside Parkway Conditions





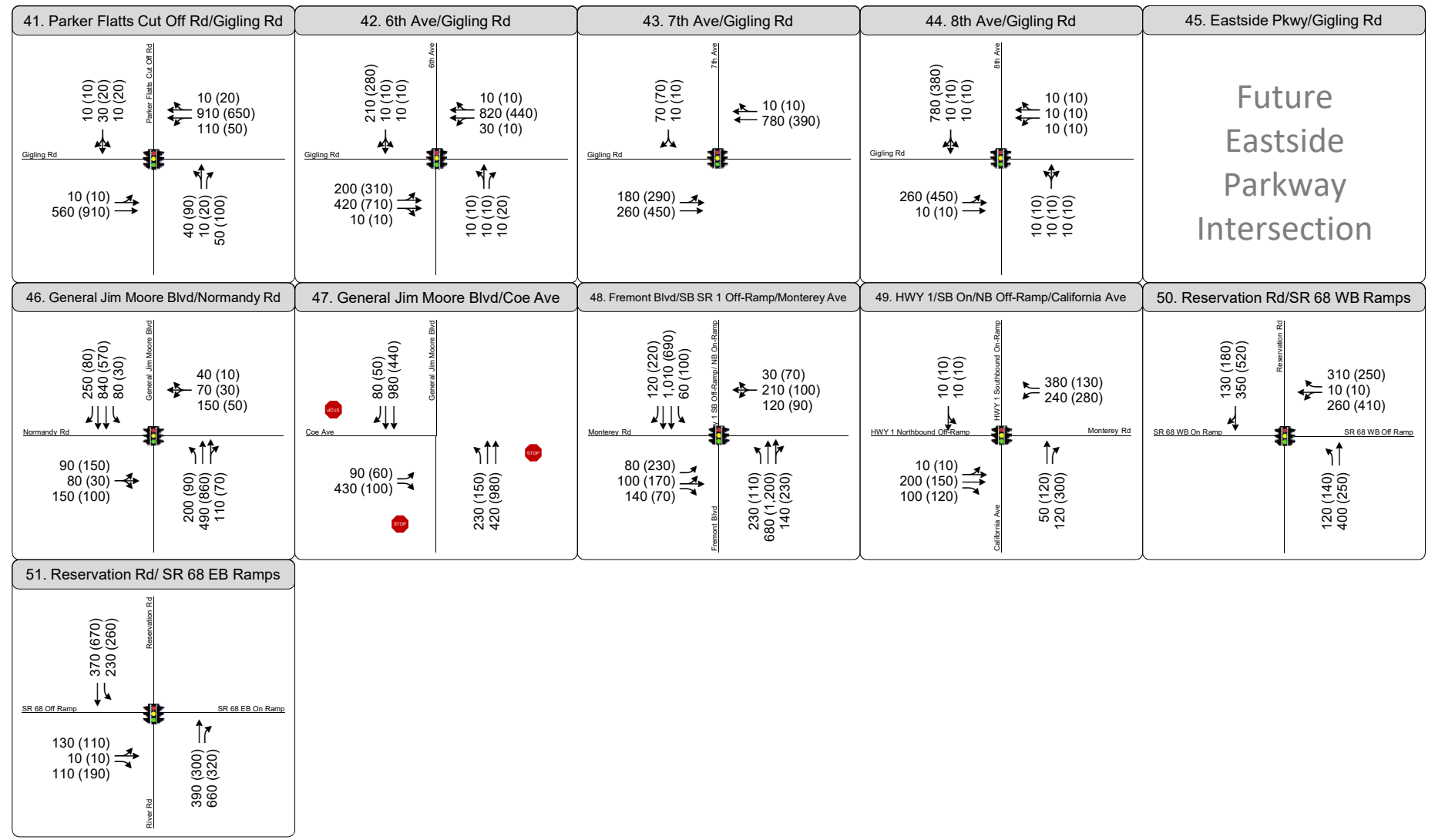
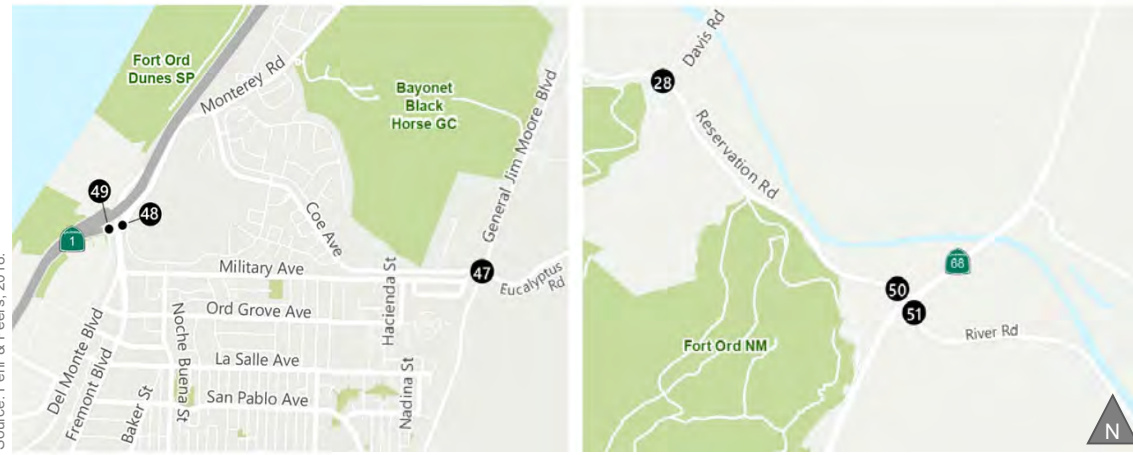
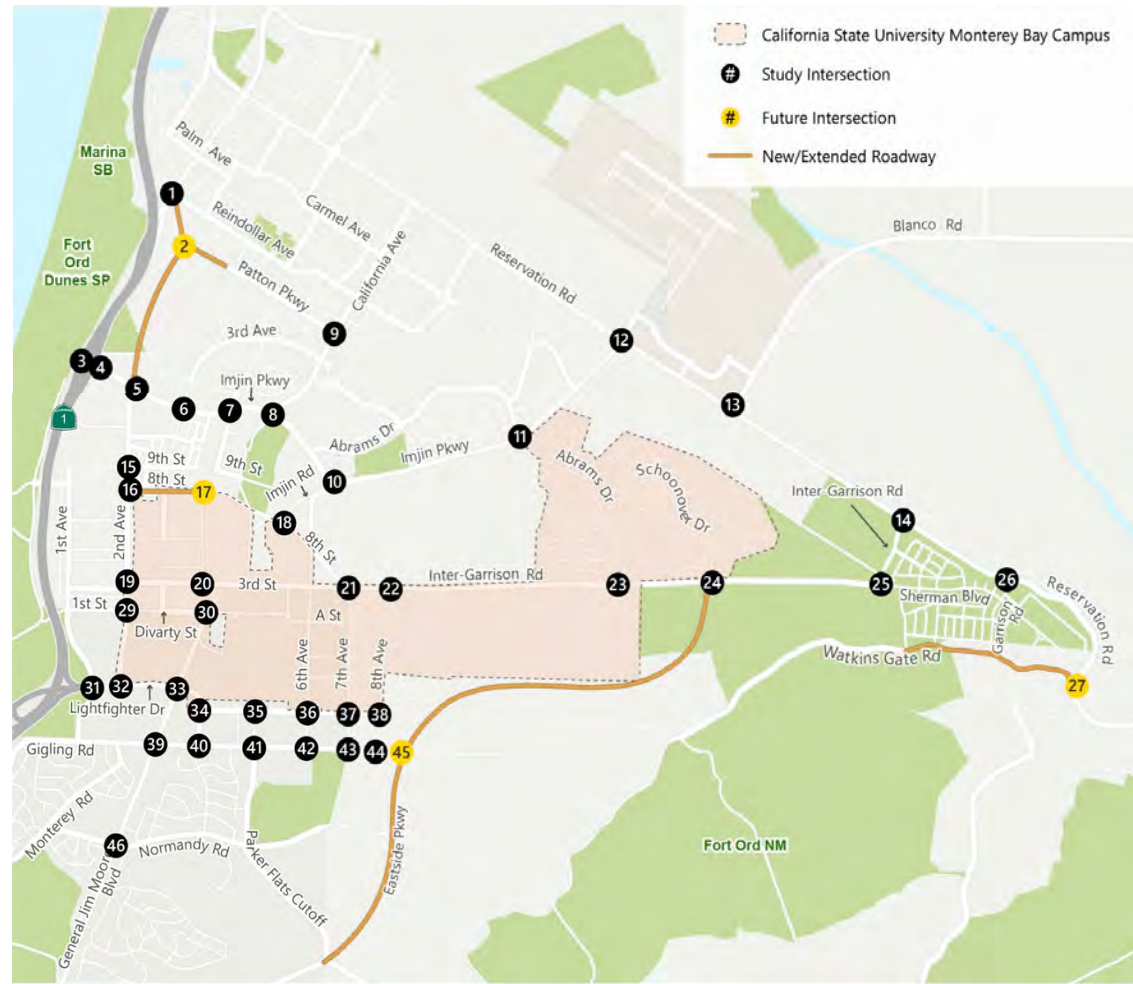
21. 8th St/7th Ave/Inter-Garrison Rd 	22. 8th Ave/Inter-Garrison Rd 	23. Abrams Dr/Inter-Garrison Rd 	24. Schoonover Rd/Inter-Garrison Rd 	25. Inter-Garrison Rd/Inter-Garrison Rd
26. East Garrison Rd/Reservation Rd 	27. Reservation Rd/Watkins Gate Rd 	28. Davis Rd/Reservation Rd 	29. 2nd Ave/Divarty St 	30. General Jim Moore Blvd/Divarty St
31. 1st Ave/Lightfighter Dr 	32. 2nd Ave/Lightfighter Dr 	33. General Jim Moore Blvd/Lightfighter Dr 	34. Malmedy Rd/Colonel Durham St 	35. Parker Flatts Cut Off Rd/Colonel Durham St
36. 6th Ave/Colonel Durham St 	37. 7th Ave/Colonel Durham St 	38. 8th Ave/Colonel Durham St 	39. General Jim Moore Blvd/Gigling Rd 	40. Malmedy Rd/Gigling Rd

LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-3b
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative with Project and without Eastside Parkway Conditions

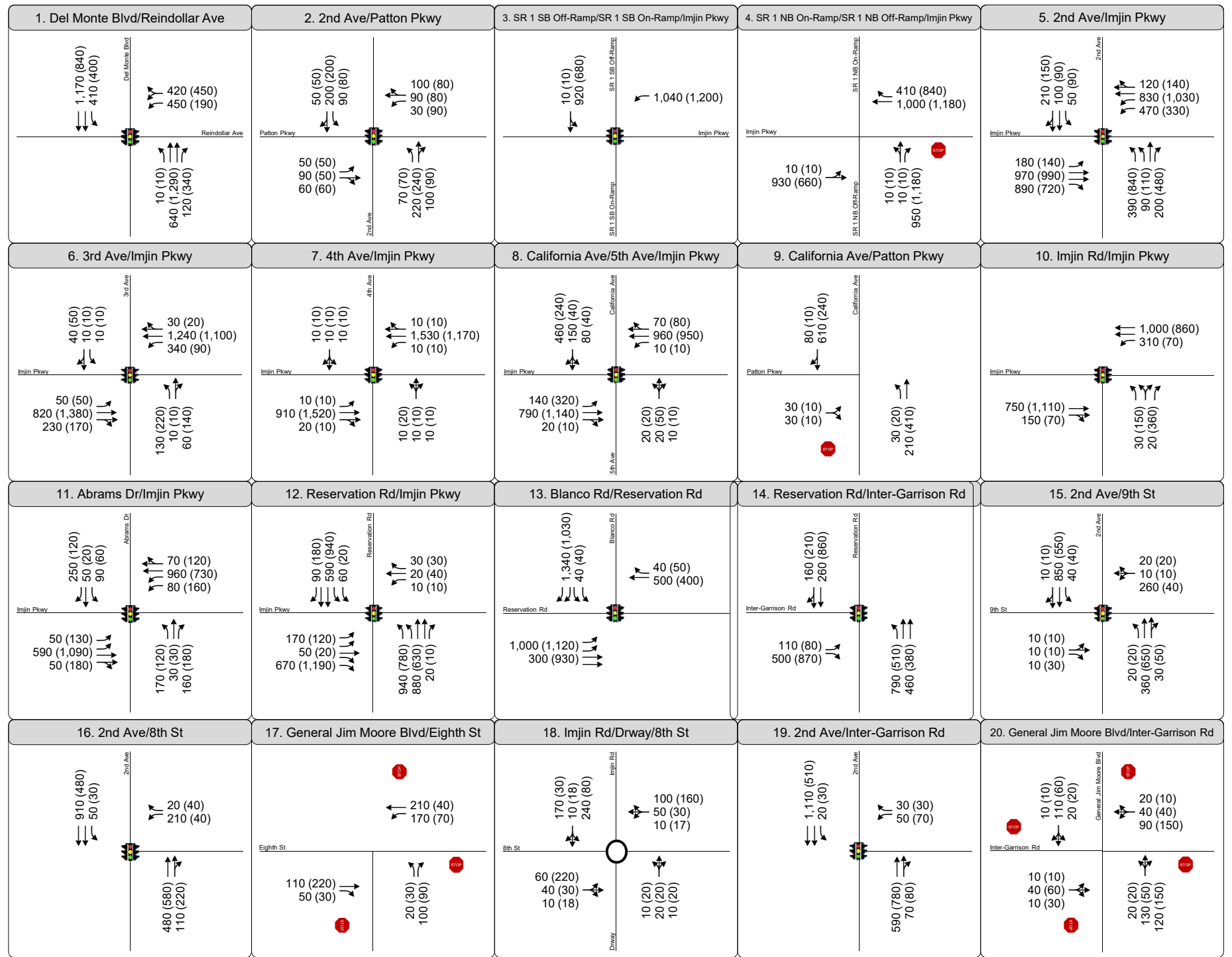
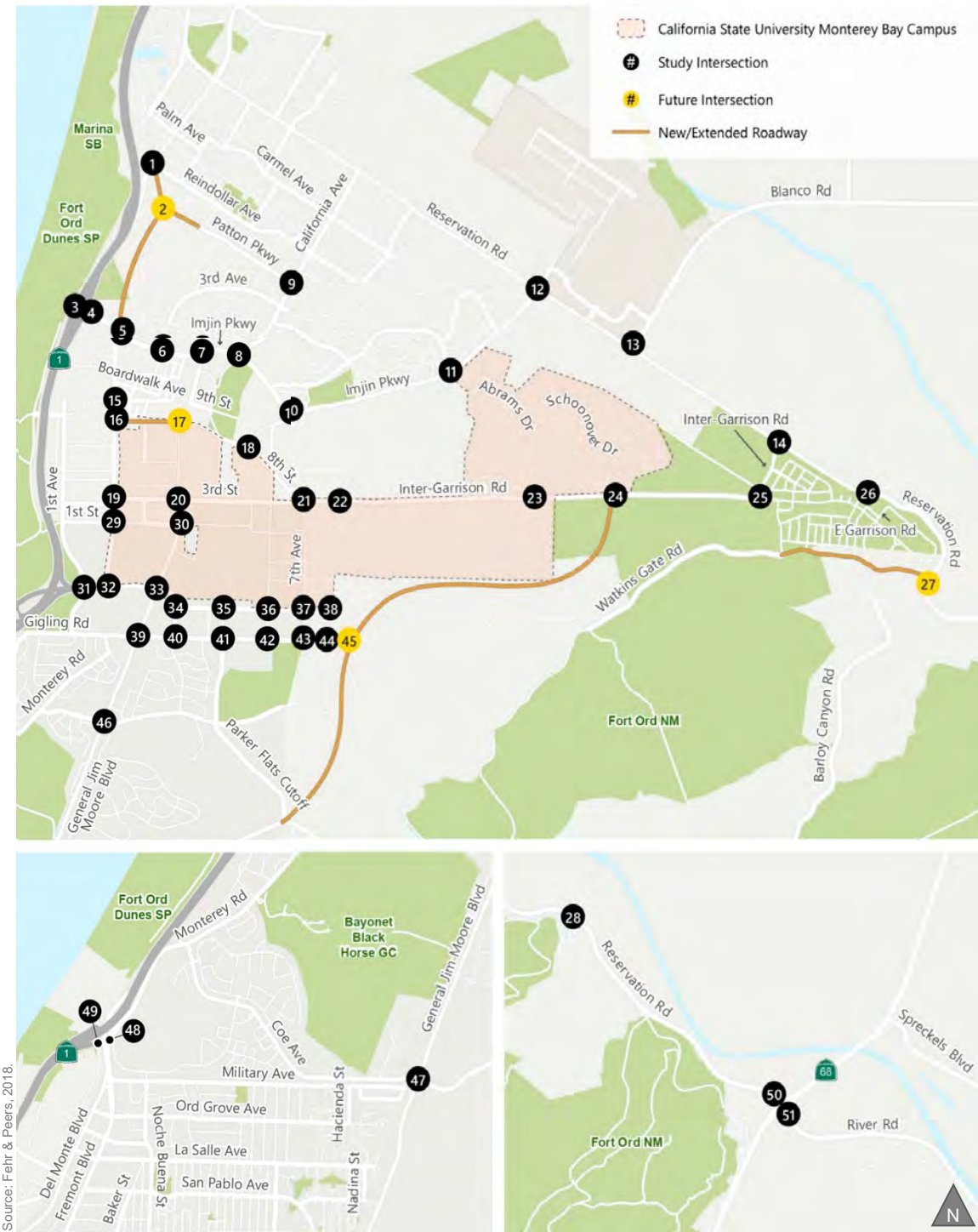




- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
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 - Signalized
 - Roundabout



Figure K-3c
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative with Project and without Eastside Parkway Conditions

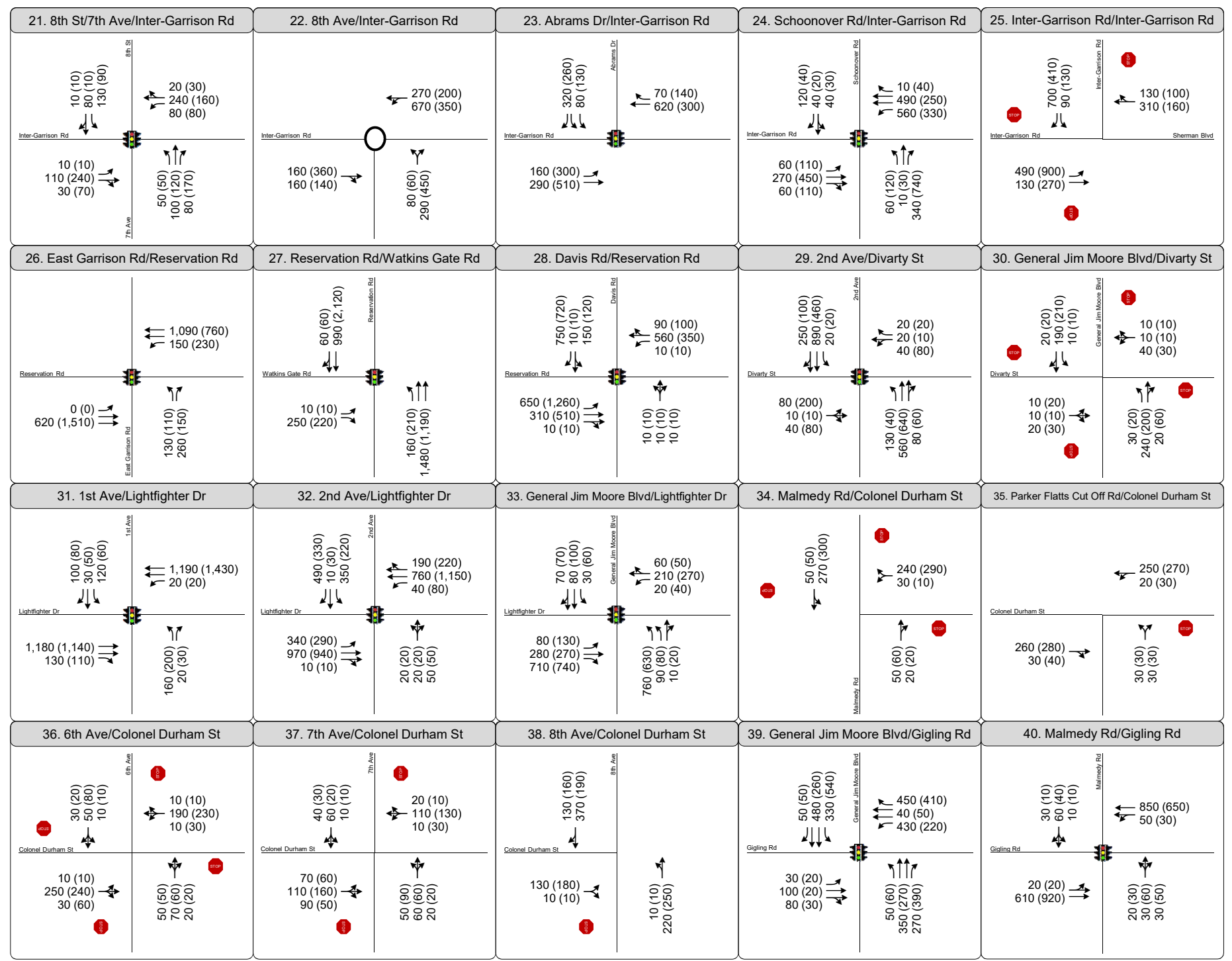
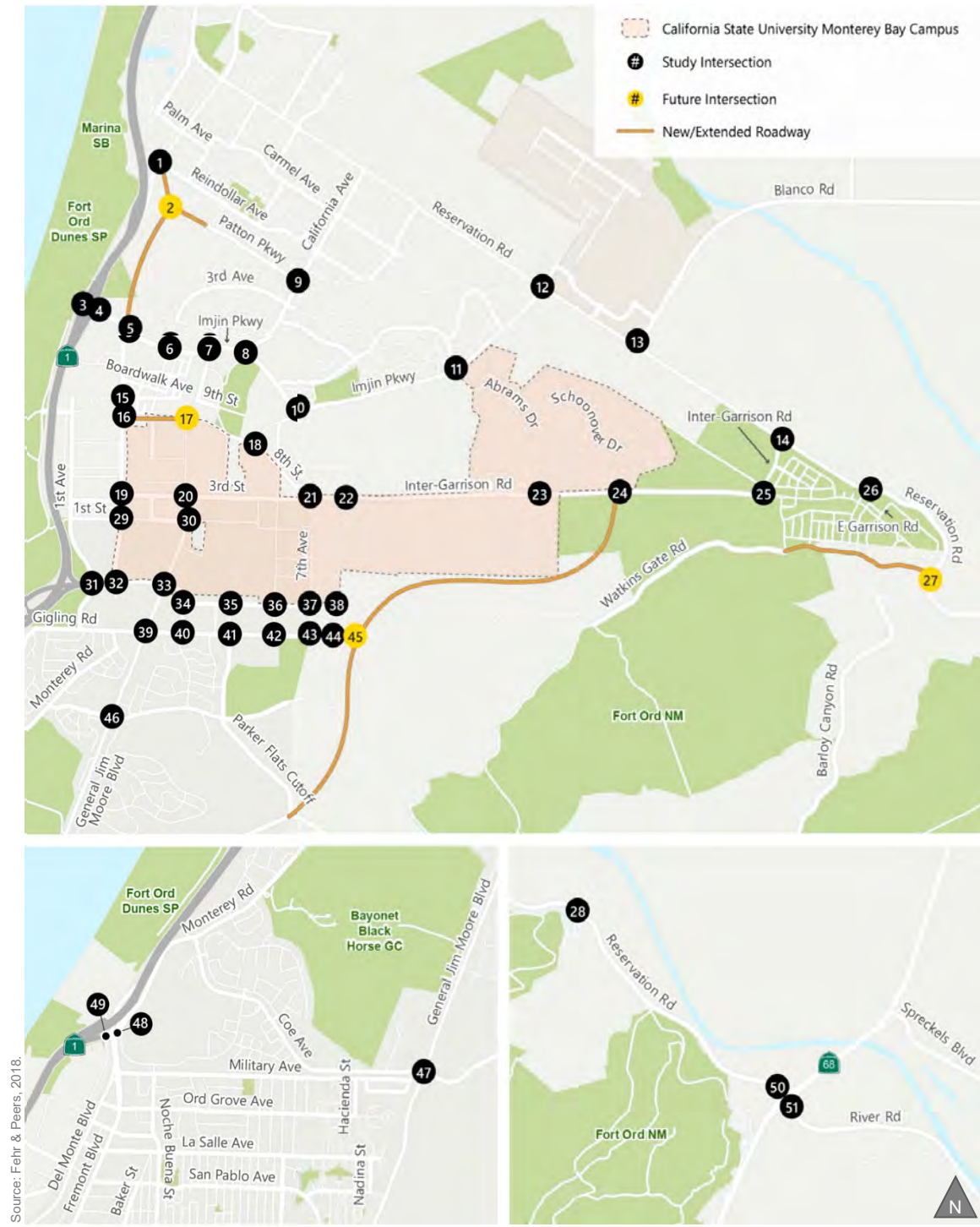


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-4a
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative without Project and with Eastside Parkway Conditions





- LEGEND**
- AM (PM) Peak Hour Traffic Volume
 - Lane Configuration
 - Stop Sign Controlled
 - Signalized
 - Roundabout

Figure K-4b
 Study Intersection Peak Hour Traffic Volumes and Lane Configurations
 Cumulative without Project and with Eastside Parkway Conditions



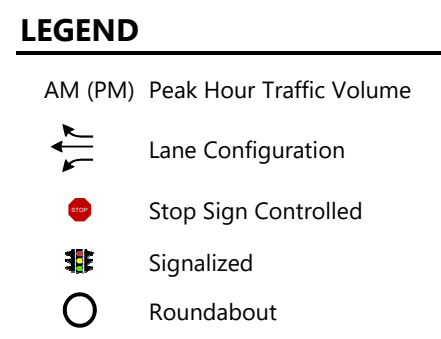
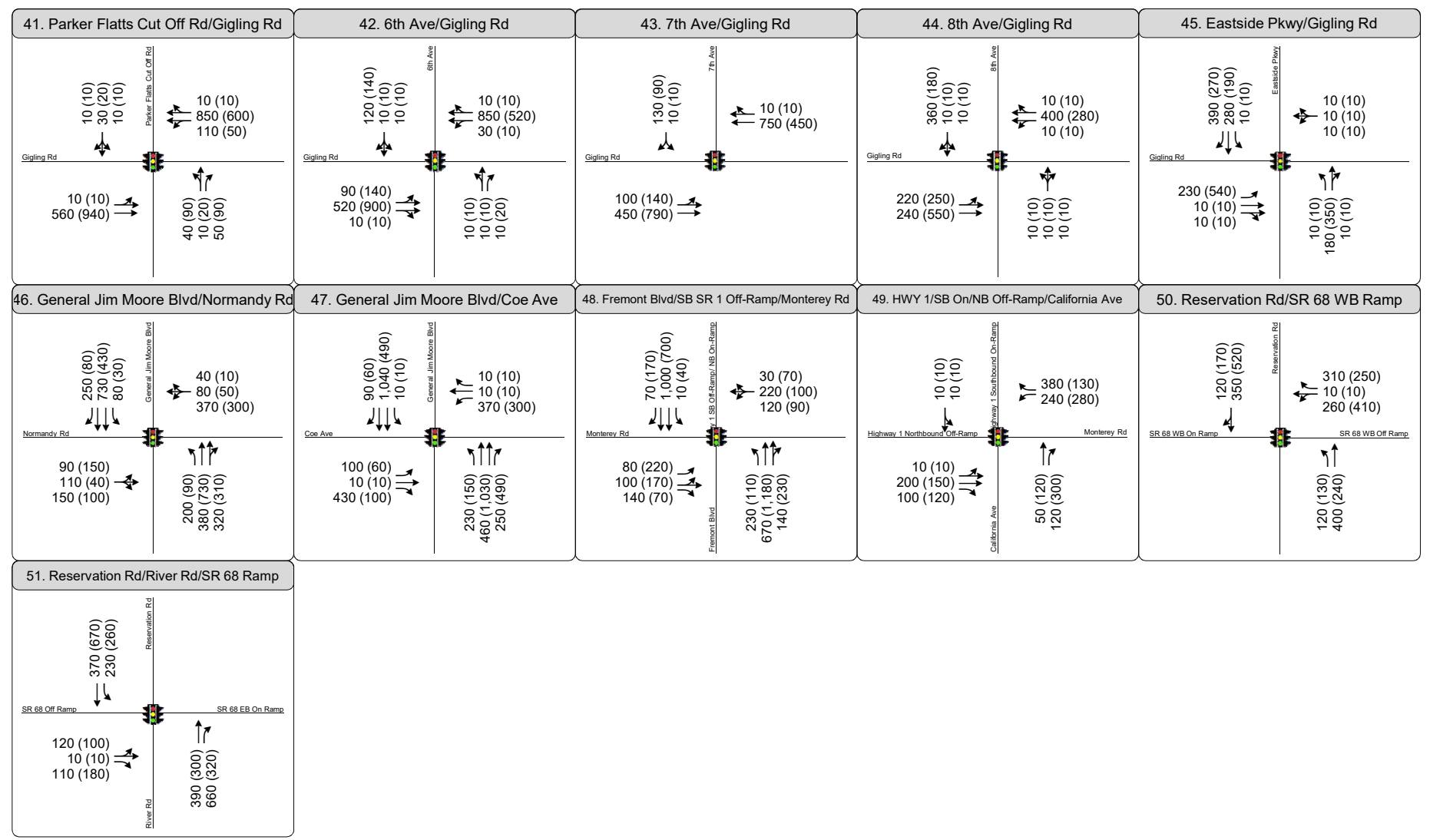
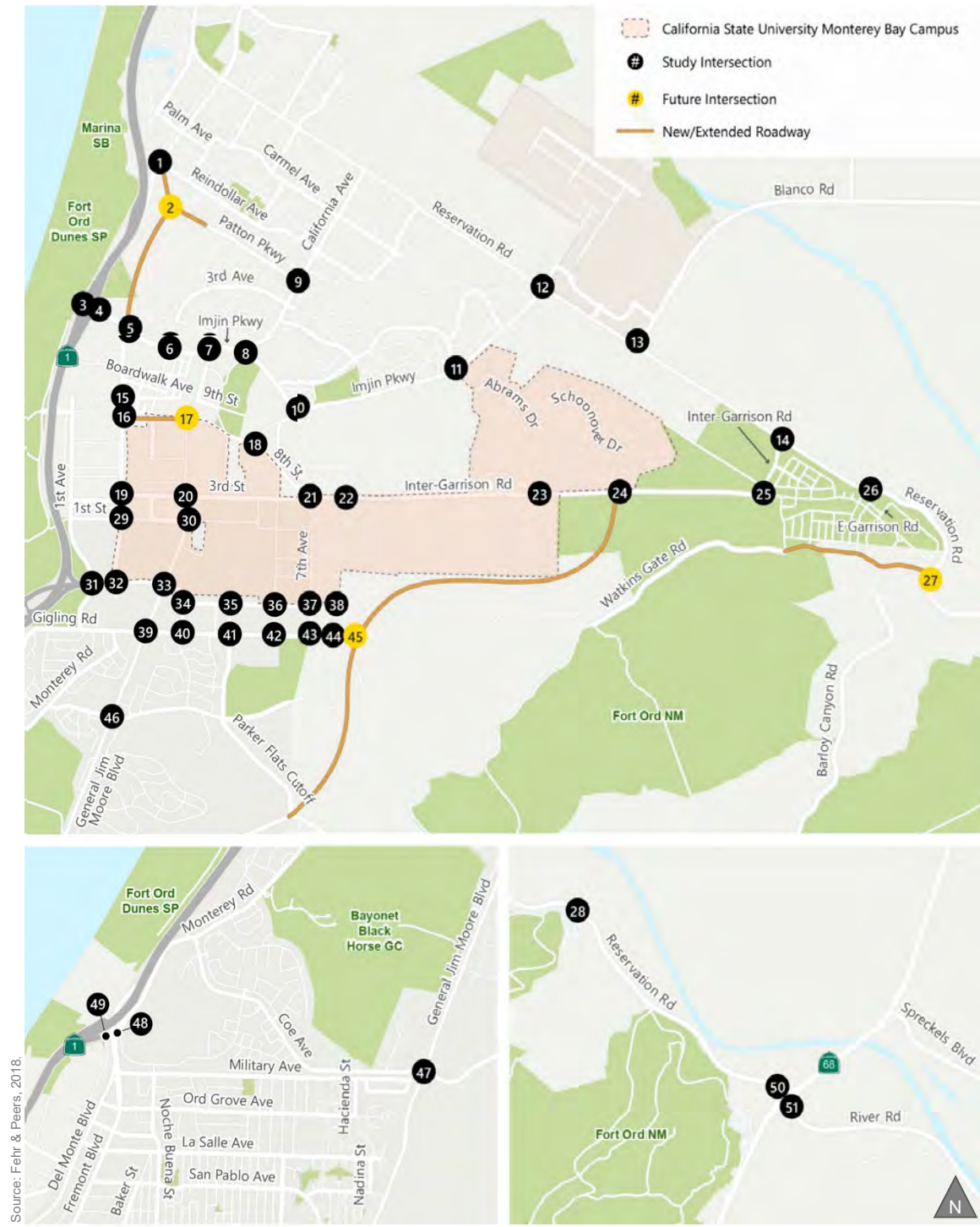
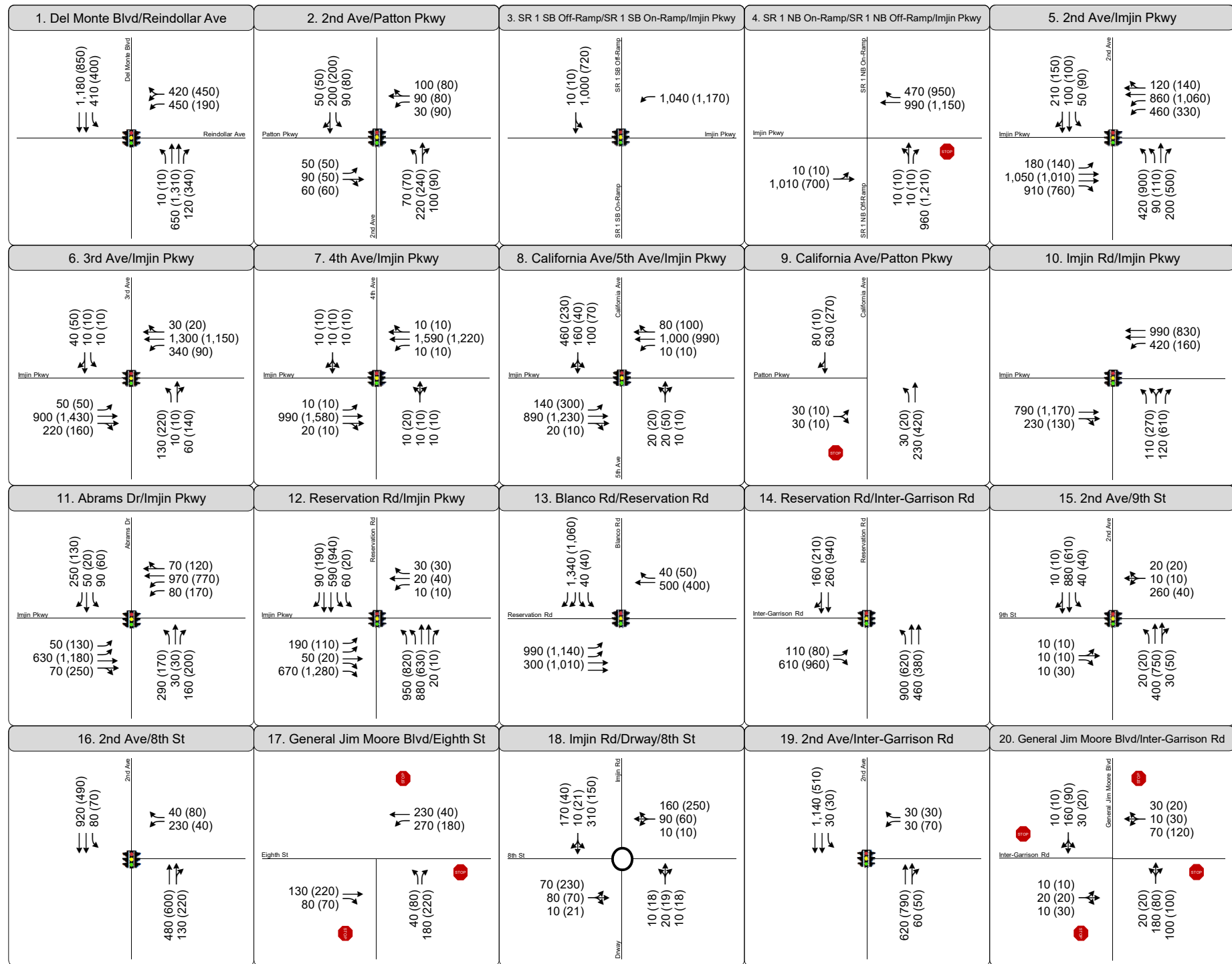
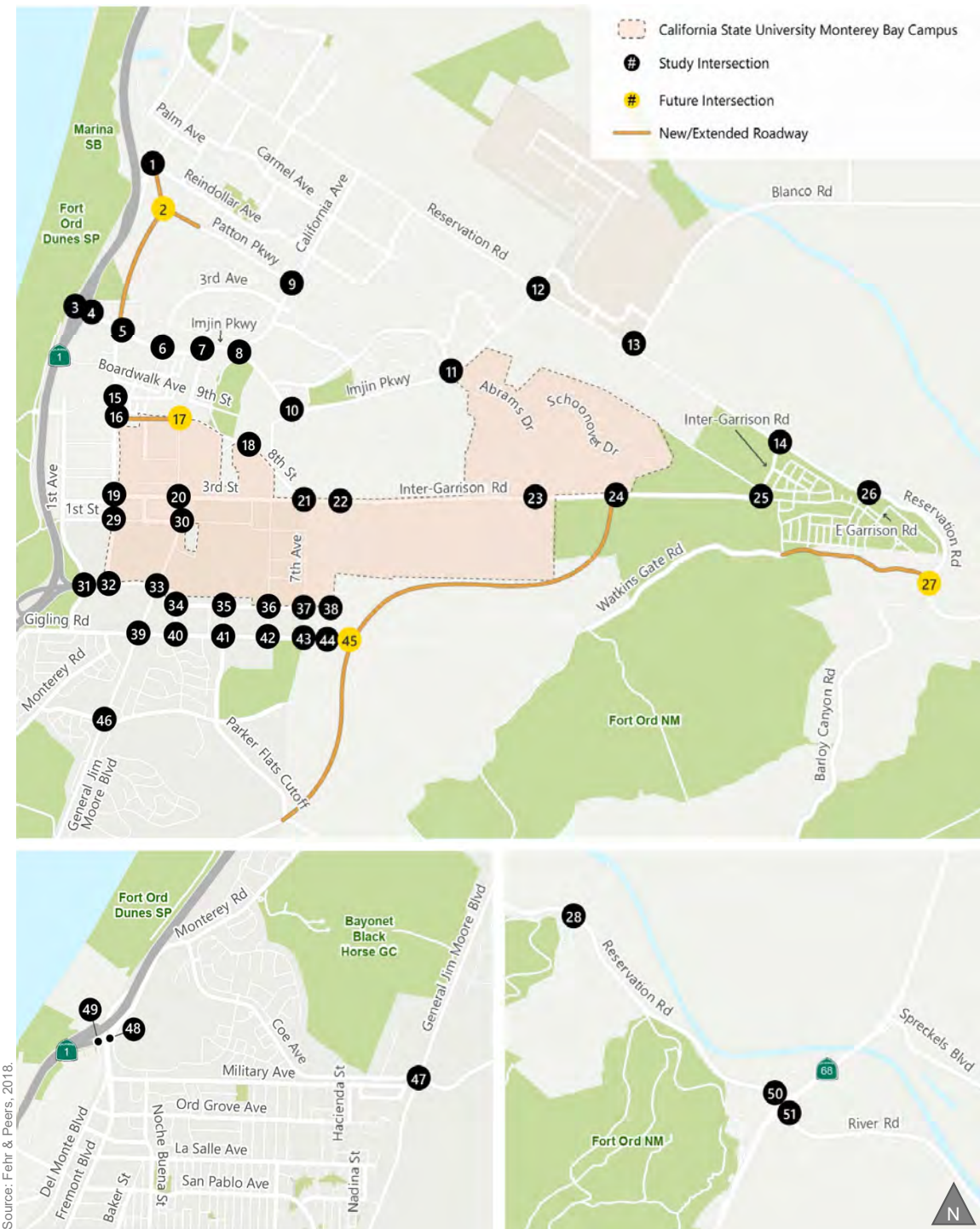


Figure K-4c
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative without Project and with Eastside Parkway Conditions

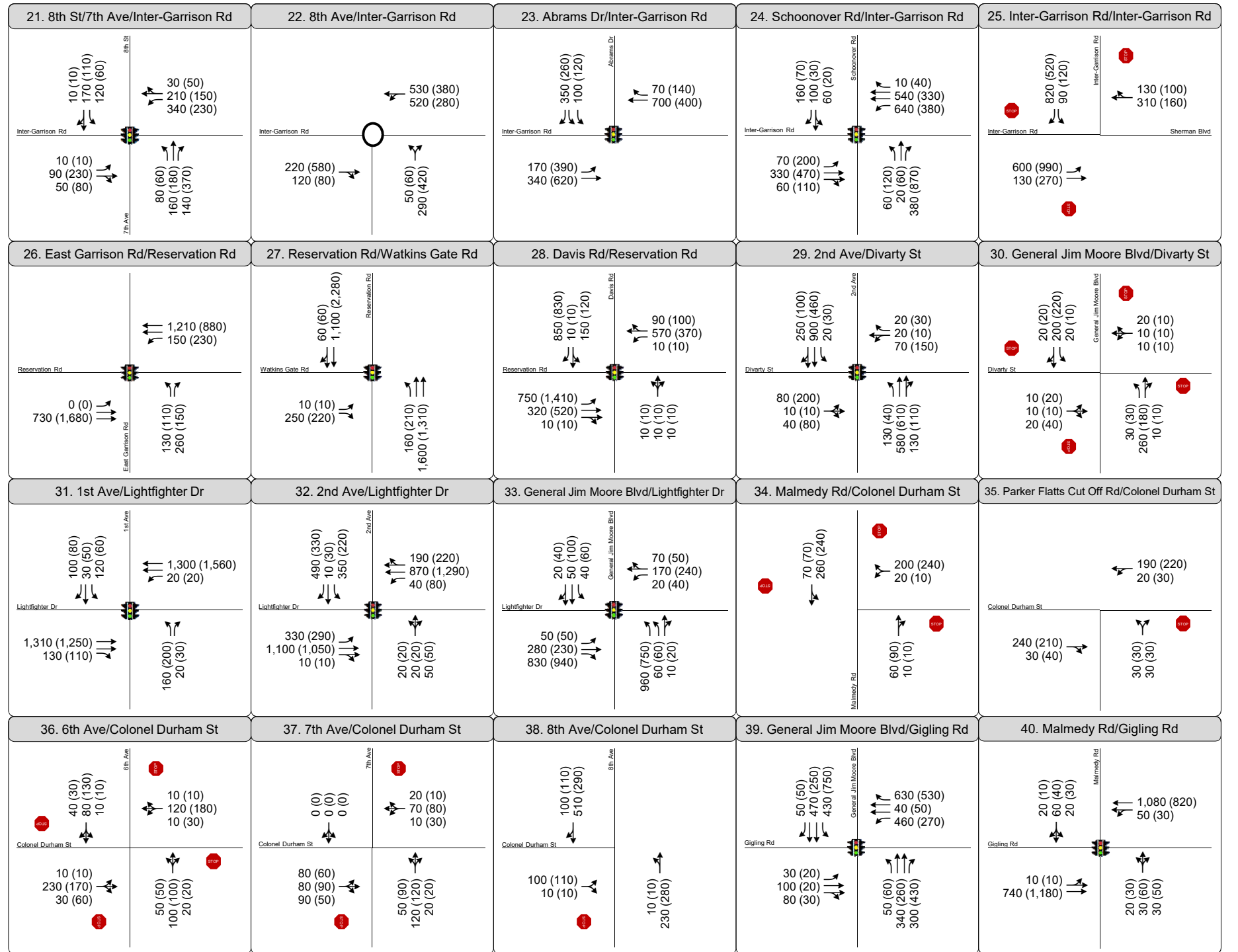
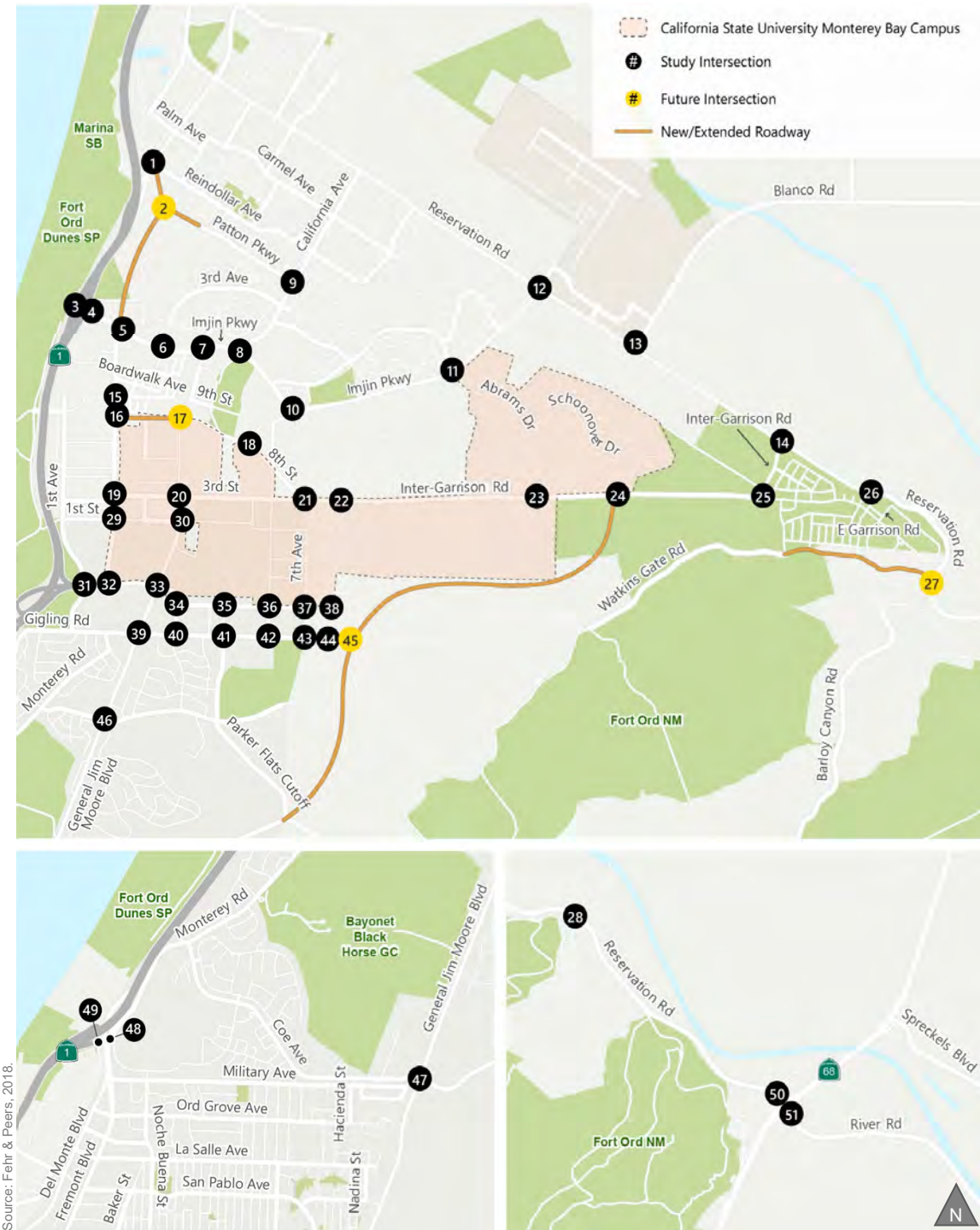


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-5a
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative with Project and with Eastside Parkway Conditions



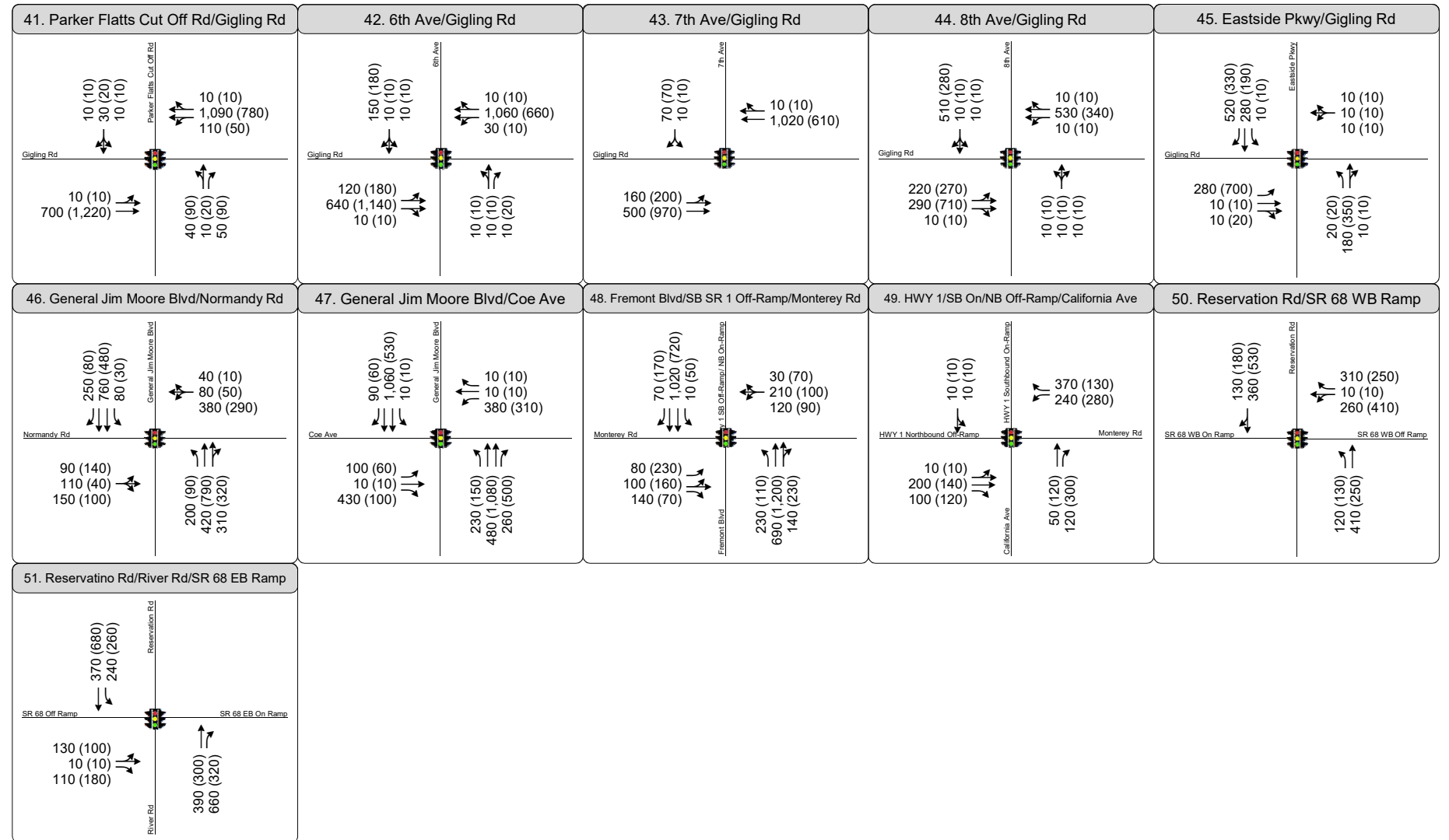
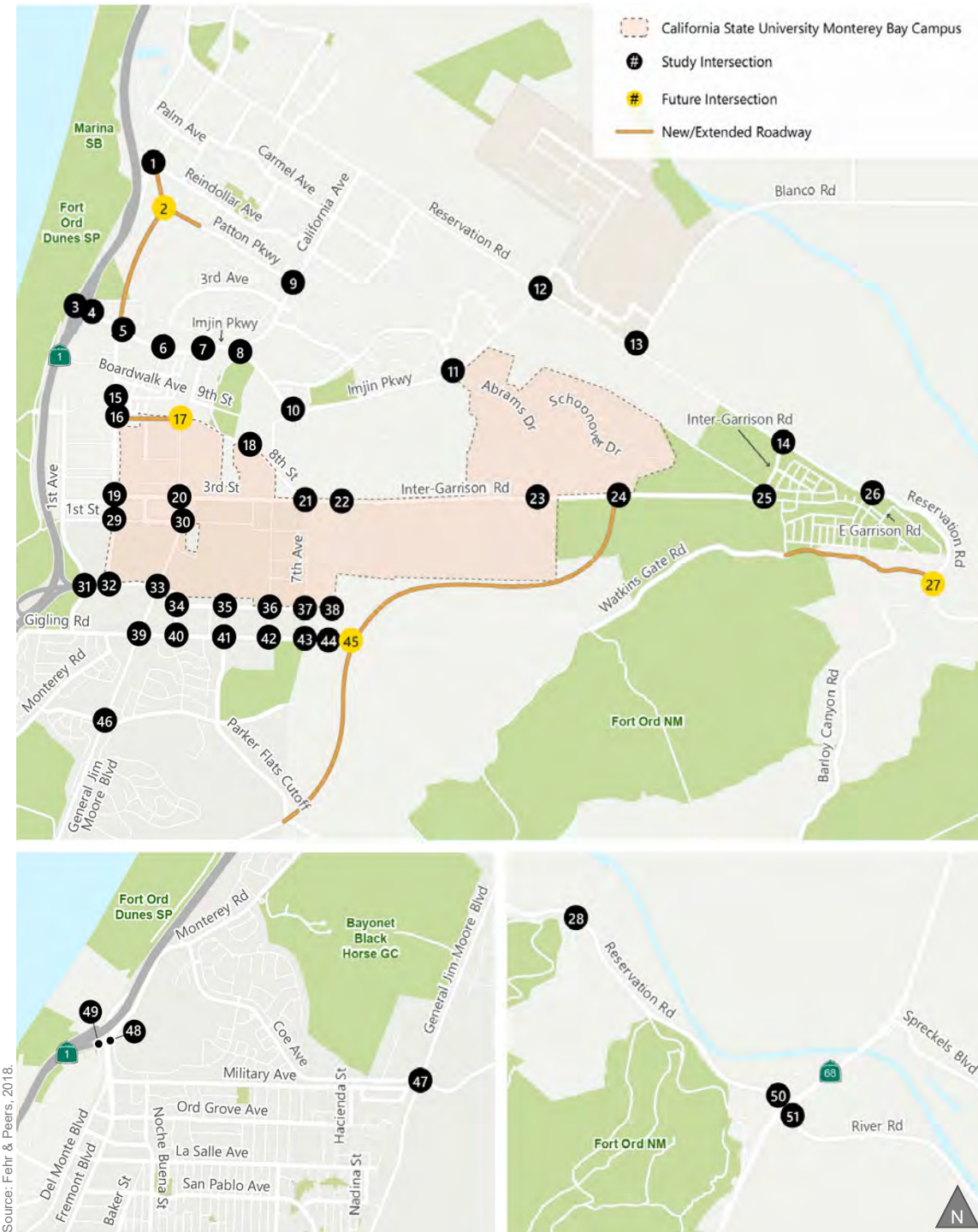


LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-5b
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative with Project and with Eastside Parkway Conditions





LEGEND

- AM (PM) Peak Hour Traffic Volume
- Lane Configuration
- Stop Sign Controlled
- Signalized
- Roundabout

Figure K-5c
Study Intersection Peak Hour Traffic Volumes and Lane Configurations
Cumulative with Project and with Eastside Parkway Conditions

APPENDIX L: INTERSECTION LEVEL OF SERVICE TABLES



EXISTING INTERSECTION LEVELS OF SERVICE

TABLE L-1: EXISTING INTERSECTION LEVEL OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
1	Del Monte Boulevard and Reindollar Avenue	4/25/2018	Signalized	M (D)	AM PM	11.6 8.9	B A
2	Second Avenue Extension and Patton Parkway	Future	Signalized	M (D)	AM PM	Future Intersection	
3	SR 1 Southbound Ramps and Imjin Parkway	5/3/2017	Signalized	M (D)	AM PM	36.6 17.2	D B
4	SR 1 Northbound Ramps and Imjin Parkway	5/3/2017	SSS	M (D)	AM PM	0.0 (0.1) 0.2 (26.7)	A (A) A (D)
5	Second Avenue and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	12.5 16.3	B B
6	Third Avenue and Imjin Parkway	4/27/2017	SSS	M (D)	AM PM	3.7 (103.6) 1.3 (43.2)	A (F) A (E)
7	Fourth Avenue and Imjin Parkway	5/3/2017	SSS	M (D)	AM PM	0.4 (88.9) 1.4 (>120)	A (F) A (F)
8	California Avenue and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	20.2 10.0	C A
9	California Avenue and Patton Parkway	4/25/2018	SSS	MC (D)	AM PM	1.4 (17.4) 0.4 (10.4)	A (C) A (B)
10	Imjin Road and Imjin Parkway	4/27/2017	Signalized	MC (D)	AM PM	7.4 7.6	A A
11	Abrams Drive and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	14.5 17.4	B B
12	Reservation Road and Imjin Parkway	4/27/2017	Signalized	M (D)	AM PM	22.5 32.9	C C
13	Blanco Road and Reservation Road	4/25/2018	Signalized	M / CSUMB (D)	AM PM	13.1 11.0	B B
14	Inter-Garrison Road and Reservation Road	4/27/2017	Signalized	M (D)	AM PM	10.4 10.2	B B
15	Second Avenue and Ninth Street	4/27/2017	AWSC	M (D)	AM PM	21.9 11.4	C B
16	Second Avenue and Eighth Street	4/27/2017	AWSC	M/ CSUMB (D)	AM PM	56.3 12.8	F B
17	Fourth Avenue and Eighth Street	Future	AWSC	MC / M / CSUMB (D)	AM PM	Project Intersection	
18	Imjin Road and Eighth Street	4/27/2017	AWSC	CSUMB (D)	AM PM	17.9 9.3	C A
19	Second Avenue and Inter-Garrison Road	4/27/2017	AWSC	MC / CSUMB (D)	AM PM	26.5 9.8	D A

TABLE L-1: EXISTING INTERSECTION LEVEL OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
20	General Jim Moore Boulevard and Inter-Garrison Road	4/25/2018	AWSC	MC (D)	AM PM	8.5 9.9	A A
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	4/25/2018	AWSC	MC (D)	AM PM	12.9 8.9	B A
22	Eighth Avenue and Inter-Garrison Road	4/25/2018	Roundabout	MC (D)	AM PM	32.1 8.6	D A
23	Abrams Drive and Inter-Garrison Road	4/27/2017	AWSC	MC (D)	AM PM	60.3 12.8	F B
24	Schoonover Road and Inter-Garrison Road	4/27/2017	AWSC	MC (D)	AM PM	20.8 11.1	C B
25	Inter-Garrison Road Connection and Inter-Garrison Road	4/27/2017	AWSC	M / CSUMB (D)	AM PM	11.8 11.1	B B
26	East Garrison Road and Reservation Road	4/25/2018	Signalized	M / CSUMB (D)	AM PM	5.0 5.6	A A
27	Reservation Road and Watkins Gate Road	Future	Signalized	S (C)	AM PM	Future Intersection	
28	Davis Road and Reservation Road	4/25/2018	Signalized	S (C)	AM PM	18.2 15.9	B B
29	Second Avenue and Divarty Street	4/27/2017	AWSC	S (C)	AM PM	31.1 9.4	D A
30	General Jim Moore Boulevard and Divarty Street	4/27/2017	AWSC	S (C)	AM PM	9.1 10.2	A B
31	First Avenue and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM PM	4.0 3.4	A A
32	Second Avenue and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM PM	18.3 14.2	B B
33	General Jim Moore Boulevard and Lightfighter Drive	4/27/2017	Signalized	S (C)	AM PM	20.0 22.6	B C
34	Malmedy Road and Colonel Durham Street	4/25/2018	AWSC	MC (D)	AM PM	9.9 8.3	A A
35	Parker Flatts Cut Off Road and Colonel Durham Street	4/25/2018	SSS	S (C)	AM PM	0.4 (10.9) 1.1 (10.1)	A (B) A (B)
36	Sixth Avenue and Colonel Durham Street	4/25/2018	AWSC	S (C)	AM PM	8.9 7.8	A A
37	Seventh Avenue and Colonel Durham Street	4/25/2018	SSS	S (C)	AM PM	6.6 (12.3) 7.0 (10.5)	A (B) A (B)
38	Eighth Avenue and Colonel Durham Street	4/25/2018	SSS	S (C)	AM PM	0.6 (14.5) 2.0 (13.9)	A (B) A (B)
39	General Jim Moore Boulevard and Gigling Road	4/27/2017	Signalized	S (C)	AM PM	25.9 14.8	C B
40	Malmedy Road and Gigling Road	4/25/2018	SSS	MC (D)	AM PM	3.7 (24.9) 2.0 (18.0)	A (C) A (C)

TABLE L-1: EXISTING INTERSECTION LEVEL OF SERVICE

#	Intersection	Count Date	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Delay ⁴	LOS ⁵
41	Parker Flatts Cut Off Road and Gigling Road	4/25/2018	SSS	MC (D)	AM PM	2.0 (23.6) 2.8 (17.6)	A (C) A (C)
42	Sixth Avenue and Gigling Road	4/25/2018	AWSC	S (C)	AM PM	13.3 10.2	B B
43	Seventh Avenue and Gigling Road	4/25/2018	SSS	S (C)	AM PM	2.1 (12.7) 0.9 (9.0)	A (B) A (A)
44	Eighth Avenue and Gigling Road	4/25/2018	AWSC	Cal / Sand City (C)	AM PM	9.9 10.3	A B
45	Eastside Parkway and Gigling Road	Future	AWSC	Cal / S (C)	AM PM	Future Intersection	
46	General Jim Moore Boulevard and Normandy Road	4/25/2018	Signalized	Cal / MC (C)	AM PM	22.0 9.9	C A
47	General Jim Moore Boulevard and Coe Avenue	4/25/2018	AWSC	Cal / MC (C)	AM PM	92.2 18.4	F C
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	4/25/2018	Signalized	M (D)	AM PM	65.8 50.5	E D
49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp	4/25/2018	Signalized	M (D)	AM PM	12.1 24.5	B C
50	Reservation Road and State Route 68 Westbound Ramps	4/25/2018	Signalized	M (D)	AM PM	13.6 33.0	B C
51	Reservation Road and State Route 68 Eastbound Ramps	4/25/2018	Signalized	M (D)	AM PM	11.4 12.2	B B

Notes: **Bold text** indicates intersection operates at unacceptable level of service.

- SSS = Side Street Stop Controlled, AWSC = All Way Stop Controlled, Signalized = Signalized intersection
- Intersection jurisdiction and associated LOS threshold applied.
 - City of Marina = M
 - City of Seaside = S
 - California State University Monterey Bay = CSUMB
 - Monterey County = MC
 - Caltrans = Cal
- AM = morning peak hour, PM = evening peak hour.
- Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."
- LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."

Source: Fehr & Peers, June 2019.

EXISTING WITH PROJECT INTERSECTION LEVELS OF SERVICE

The results of the LOS calculations indicate many of the study intersections will operate at levels of service meeting the applicable local jurisdiction’s LOS threshold under Existing with Project Conditions.

Intersections that exceed the applicable LOS thresholds are:

- Int 3. SR 1 Southbound Ramps and Imjin Parkway (AM peak hour)
- Int 4. SR 1 Northbound Ramps and Imjin Parkway (AM and PM peak hour)
- Int 6. Third Avenue and Imjin Parkway (AM peak hour)
- Int 7. Fourth Avenue and Imjin Parkway (AM and PM peak hour)
- Int 15. Second Avenue and Ninth Street (AM peak hour)
- Int 16. Second Avenue and Eighth Street (AM peak hour)
- Int 19. Second Avenue and Inter-Garrison Road (AM peak hour)
- Int 22. Eighth Avenue and Inter-Garrison Road (AM and PM peak hour)
- Int 23. Abrams Drive and Inter-Garrison Road (AM and PM peak hour)
- Int 24. Schoonover Road and Inter-Garrison Road (AM peak hour)
- Int 29. Second Avenue and Divarty Street (AM and PM peak hour)
- Int 40. Malmedy Road and Gigling Road (AM and PM peak hour)
- Int 41. Parker Flatts Cut Off Road and Gigling Road (AM and PM peak hour)
- Int 42. Sixth Avenue and Gigling Road (AM and PM peak hour)
- Int 44. Eighth Avenue and Gigling Road (AM peak hour)
- Int 47. General Jim Moore Boulevard and Coe Avenue (AM peak hour)
- Int 48. Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road (AM peak hour)

TABLE L-2: EXISTING INTERSECTION LEVEL OF SERVICE WITH AND WITHOUT PROJECT

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Existing		Existing with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
1	Del Monte Boulevard and Reindollar Avenue	Signalized	M (D)	AM PM	11.6 8.9	B A	11.9 9.0	B A
2	Second Avenue Extension and Patton Parkway	Signalized	M (D)	AM PM	Future Intersection			
3	SR 1 Southbound Ramps and Imjin Parkway	Signalized	M (D)	AM PM	36.6 17.2	D B	61.3 19.6	E B
4	SR 1 Northbound Ramps and Imjin Parkway	SSS	M (D)	AM PM	0.0 (0.1) 0.2 (26.7)	A (A) A (D)	0.6 (37.0) 0.5 (29.3)	A (E) A (D)
5	Second Avenue and Imjin Parkway	Signalized	M (D)	AM PM	12.5 16.3	B B	13.0 17.3	B B
6	Third Avenue and Imjin Parkway	SSS	M (D)	AM PM	3.7 (103.6) 1.3 (43.2)	A (F) A (E)	1.4 (2) 7.1 (> 120)	A (A) A (F)

TABLE L-2: EXISTING INTERSECTION LEVEL OF SERVICE WITH AND WITHOUT PROJECT

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Existing		Existing with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
7	Fourth Avenue and Imjin Parkway	SSS	M (D)	AM	0.4 (88.9)	A (F)	17.3	C (F)
				PM	1.4 (>120)	A (F)	(>120) 13.1 (>120)	B (F)
8	California Avenue and Imjin Parkway	Signalized	M (D)	AM PM	20.2 10.0	C A	26.1 11.5	C B
9	California Avenue and Patton Parkway	SSS	MC (D)	AM PM	1.4 (17.4) 0.4 (10.4)	A (C) A (B)	1.4 (18.6) 0.6 (12.5)	A (C) A (B)
10	Imjin Road and Imjin Parkway	Signalized	MC (D)	AM PM	7.4 7.6	A A	12.1 12.7	B B
11	Abrams Drive and Imjin Parkway	Signalized	M (D)	AM PM	14.5 17.4	B B	33.6 28.1	C C
12	Reservation Road and Imjin Parkway	Signalized	M (D)	AM PM	22.5 32.9	C C	22.5 40.1	C D
13	Blanco Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	13.1 11.0	B B	13.1 11.0	B B
14	Inter-Garrison Road and Reservation Road	Signalized	M (D)	AM PM	10.4 10.2	B B	14.6 13.8	B B
15	Second Avenue and Ninth Street	AWSC	M (D)	AM PM	21.9 11.4	C B	39.4 14.3	E B
16	Second Avenue and Eighth Street	AWSC	M/ CSUMB (D)	AM PM	56.3 12.8	F B	>120 23.3	F C
17	Fourth Avenue and Eighth Street	AWSC	MC / M / CSUMB (D)	AM PM	Project Intersection		12.5 12.3	B B
18	Imjin Road and Eighth Street	AWSC	CSUMB (D)	AM PM	17.9 9.3	C A	34.3 21.6	D C
19	Second Avenue and Inter-Garrison Road	AWSC	MC / CSUMB (D)	AM PM	26.5 9.8	D A	>120 22.3	F C
20	General Jim Moore Boulevard and Inter-Garrison Road	AWSC	MC (D)	AM PM	8.5 9.9	A A	8.9 7.9	A A
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	AWSC	MC (D)	AM PM	12.9 8.9	B A	98.4 114.3	F F
22	Eighth Avenue and Inter-Garrison Road	Round-about	MC (D)	AM PM	32.1 8.6	D A	51.6 25.9	F D
23	Abrams Drive and Inter-Garrison Road	AWSC	MC (D)	AM PM	60.3 12.8	F B	>120 78.8	F F
24	Schoonover Road and Inter-Garrison Road	AWSC	MC (D)	AM PM	20.8 11.1	C B	79.1 13.9	F B
25	Inter-Garrison Road Connection and Inter-Garrison Road	AWSC	M / CSUMB (D)	AM PM	11.8 11.1	B B	27.0 13.7	D B

TABLE L-2: EXISTING INTERSECTION LEVEL OF SERVICE WITH AND WITHOUT PROJECT

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Existing		Existing with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
26	East Garrison Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	5.0 5.6	A A	5.2 4.9	A A
27	Reservation Road and Watkins Gate Road	Signalized	S (C)	AM PM	Future Intersection			
28	Davis Road and Reservation Road	Signalized	S (C)	AM PM	18.2 15.9	B B	30.7 23.4	C C
29	Second Avenue and Divarty Street	AWSC	S (C)	AM PM	31.1 9.4	D A	>120 50.9	F F
30	General Jim Moore Boulevard and Divarty Street	AWSC	S (C)	AM PM	9.1 10.2	A B	8.8 8.0	A A
31	First Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	4.0 3.4	A A	4.1 3.8	A A
32	Second Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	18.3 14.2	B B	18.4 14.6	B B
33	General Jim Moore Boulevard and Lightfighter Drive	Signalized	S (C)	AM PM	20.0 22.6	B C	17.8 15.7	B B
34	Malmedy Road and Colonel Durham Street	AWSC	MC (D)	AM PM	9.9 8.3	A A	8.7 8.2	A A
35	Parker Flatts Cut Off Road and Colonel Durham Street	SSS	S (C)	AM PM	0.4 (10.9) 1.1 (10.1)	A (B) A (B)	1.1 (9.9) 1.3 (10)	A (A) A (A)
36	Sixth Avenue and Colonel Durham Street	AWSC	S (C)	AM PM	8.9 7.8	A A	9.9 10.6	A B
37	Seventh Avenue and Colonel Durham Street	SSS	S (C)	AM PM	6.6 (12.3) 7.0 (10.5)	A (B) A (B)	6.9 (11) 6.5 (13.9)	A (B) A (B)
38	Eighth Avenue and Colonel Durham Street	SSS	S (C)	AM PM	0.6 (14.5) 2.0 (13.9)	A (B) A (B)	1.3 (21.6) 1.6 (17.5)	A (C) A (C)
39	General Jim Moore Boulevard and Gigling Road	Signalized	S (C)	AM PM	25.9 14.8	C B	32.8 16.4	C B
40	Malmedy Road and Gigling Road	SSS	MC (D)	AM PM	3.7 (24.9) 2.0 (18.0)	A (C) A (C)	5.4 (91.7) 5.1 (51)	A (F) A (F)
41	Parker Flatts Cut Off Road and Gigling Road	SSS	MC (D)	AM PM	2.0 (23.6) 2.8 (17.6)	A (C) A (C)	8.9 (>120) 9.1 (78.5)	A (F) A (F)
42	Sixth Avenue and Gigling Road	AWSC	S (C)	AM PM	13.3 10.2	B B	86.8 55.1	F F
43	Seventh Avenue and Gigling Road	SSS	S (C)	AM PM	2.1 (12.7) 0.9 (9.0)	A (B) A (A)	1.5 (22.7) 1.9 (17.2)	A (C) A (C)
44	Eighth Avenue and Gigling Road	AWSC	Cal / Sand City (C)	AM PM	9.9 10.3	A B	32.8 13.6	D B
45	Eastside Parkway and Gigling Road	AWSC	Cal / S (C)	AM PM	Future Intersection			
46	General Jim Moore Boulevard and Normandy Road	Signalized	Cal / MC (C)	AM PM	22.0 9.9	C A	25.1 10.1	C B

TABLE L-2: EXISTING INTERSECTION LEVEL OF SERVICE WITH AND WITHOUT PROJECT

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Existing		Existing with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
47	General Jim Moore Boulevard and Coe Avenue	AWSC	Cal / MC (C)	AM PM	92.2 18.4	F C	103.2 23	F C
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	Signalized	M (D)	AM PM	65.8 50.5	E D	68.5 53.7	E D
49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp	Signalized	M (D)	AM PM	12.1 24.5	B C	15.6 26.5	B C
50	Reservation Road and State Route 68 Westbound Ramps	Signalized	M (D)	AM PM	13.6 33.0	B C	14.2 35.3	B D
51	Reservation Road and State Route 68 Eastbound Ramps	Signalized	M (D)	AM PM	11.4 12.2	B B	11.9 12.8	B B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency when the addition of Project traffic degrades the operations from acceptable level of service to unacceptable level of service; or when the addition of Project traffic further exacerbates unacceptable operations.

1. SSS = Side Street Stop Controlled, AWSC = All Way Stop Controlled, Signalized = Signalized intersection
2. Intersection jurisdiction and associated LOS threshold applied.
 - i. City of Marina = M
 - ii. City of Seaside = S
 - iii. California State University Monterey Bay = CSUMB
 - iv. Monterey County = MC
 - v. Caltrans = Cal
3. AM = morning peak hour, PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."
5. LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."

Source: Fehr & Peers, June 2019.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITHOUT EASTSIDE PARKWAY CONDITIONS INTERSECTION LEVELS OF SERVICE

The results of the LOS calculations indicate many of the study intersections will operate at levels of service meeting the applicable local jurisdiction's LOS threshold under Cumulative with Project and without Eastside Parkway Conditions. Intersections that exceed the applicable LOS thresholds under Cumulative with Project and without Eastside Parkway Conditions are:

- Int 1. Del Monte Boulevard and Reindollar Avenue (PM peak hour)
- Int 3. SR 1 Southbound Ramps and Imjin Parkway (AM and PM peak hour)
- Int 4. SR 1 Northbound Ramps and Imjin Parkway (AM and PM peak hour)
- Int 5. Second Avenue and Imjin Parkway (AM and PM peak hour)
- Int 10. Imjin Road and Imjin Parkway (PM peak hour)
- Int 12. Reservation Road and Imjin Parkway (PM peak hour)
- Int 14. Inter-Garrison Road and Reservation Road (AM and PM peak hour)
- Int 17. Fourth Avenue and Eighth Street (AM peak hour)
- Int 21. Eighth Street/Seventh Avenue and Inter-Garrison Road (AM peak hour)
- Int 22. Eighth Avenue and Inter-Garrison Road (AM and PM peak hour)
- Int 23. Abrams Drive and Inter-Garrison Road (AM and PM peak hour)
- Int 24. Schoonover Road and Inter-Garrison Road (AM and PM peak hour)
- Int 25. Inter-Garrison Road Connection and Inter-Garrison Road (AM peak hour)
- Int 28. Davis Road and Reservation Road (AM and PM peak hour)
- Int 32. Second Avenue and Lightfighter Drive (AM and PM peak hour)
- Int 33. General Jim Moore Boulevard and Lightfighter Drive (AM peak hour)
- Int 37. Seventh Avenue and Colonel Durham Street (PM peak hour)
- Int 38. Eighth Avenue and Colonel Durham Street (AM and PM peak hour)
- Int 39. General Jim Moore Boulevard and Gigling Road (AM and PM peak hour)
- Int 46. General Jim Moore Boulevard and Normandy Road (AM peak hour)
- Int 47. General Jim Moore Boulevard and Coe Avenue (AM and PM peak hour)
- Int 48. Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road (AM and PM peak hour)
- Int 50. Reservation Road and State Route 68 Westbound Ramps (PM peak hour)

TABLE L-3: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
1	Del Monte Boulevard and Reindollar Avenue	Signalized	M (D)	AM PM	33.8 69.1	C E	34.1 70.4	C E
2	Second Avenue Extension and Patton Parkway	Signalized	M (D)	AM PM	18.2 19.1	B B	18.2 19.1	B B
3	SR 1 Southbound Ramps and Imjin Parkway	Signalized	M (D)	AM PM	> 120 > 120	F F	> 120 > 120	F F
4	SR 1 Northbound Ramps and Imjin Parkway	SSS	M (D)	AM PM	1.1 (110.9) 0.9 (77.2)	A (F) A (F)	1.3 (> 120) 1 (84.9)	A (F) A (F)
5	Second Avenue and Imjin Parkway	Signalized	M (D)	AM PM	51.2 73.6	D E	59.9 81.2	E F
6	Third Avenue and Imjin Parkway	SSS	M (D)	AM PM	19.6 36.1	B D	20.2 45.7	C D
7	Fourth Avenue and Imjin Parkway	SSS	M (D)	AM PM	8.0 10.1	A B	9.2 11.7	A B
8	California Avenue and Imjin Parkway	Signalized	M (D)	AM PM	40.2 13.2	D B	52.1 15.7	D B
9	California Avenue and Patton Parkway	SSS	MC (D)	AM PM	1.4 (18.8) 0.6 (12.3)	A (C) A (B)	1.4 (19.3) 0.6 (12.7)	A (C) A (B)
10	Imjin Road and Imjin Parkway	Signalized	MC (D)	AM PM	14.4 24.7	B C	28.3 62.2	C E
11	Abrams Drive and Imjin Parkway	Signalized	M (D)	AM PM	15.3 17.4	B B	20.9 23.9	C C
12	Reservation Road and Imjin Parkway	Signalized	M (D)	AM PM	43.8 107.0	D F	48.4 119.7	D F
13	Blanco Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	26.1 11.1	C B	29.4 11.1	C B
14	Inter-Garrison Road and Reservation Road	Signalized	M (D)	AM PM	22.1 41.8	C D	43.3 80.4	D F
15	Second Avenue and Ninth Street	Signalized	M (D)	AM PM	12.7 9.5	B A	13.3 9.6	B A
16	Second Avenue and Eighth Street	Signalized	M/ CSUMB (D)	AM PM	12.0 7.2	B A	13.7 8.3	B A
17	Fourth Avenue and Eighth Street	AWSC	MC / M / CSUMB (D)	AM PM	11.7 102	B B	14.9 12.3	B B
18	Imjin Road and Eighth Street	Round-about	CSUMB (D)	AM PM	13.9 7.7	B A	25.7 10.4	D B
19	Second Avenue and Inter-Garrison Road	Signalized	MC / CSUMB (D)	AM PM	6.1 6.9	A A	5.6 7.4	A A
20	General Jim Moore Boulevard and Inter-Garrison Road	AWSC	MC (D)	AM PM	11.3 10.5	B B	10.5 9.5	B A

TABLE L-3: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	Signalized	MC (D)	AM	17.7	B	33.5	C
				PM	17.8	B	33.7	C
22	Eighth Avenue and Inter- Garrison Road	Round- about	MC (D)	AM	107.6	F	> 120	F
				PM	28.5	D	114.3	F
23	Abrams Drive and Inter- Garrison Road	Signalized	MC (D)	AM	33.4	C	76.9	E
				PM	32.6	C	74.1	E
24	Schoonover Road and Inter- Garrison Road	AWSC	MC (D)	AM	21.1	C	49.4	E
				PM	19.8	C	67.1	F
25	Inter-Garrison Road Connection and Inter- Garrison Road	AWSC	M / CSUMB (D)	AM	39.9	E	80.7	F
				PM	17.3	C	34.5	D
26	East Garrison Road and Reservation Road	Signalized	M / CSUMB (D)	AM	10.8	B	11.3	B
				PM	20.1	C	22.4	C
27	Reservation Road and Watkins Gate Road	Signalized	S (C)	AM	8.6	A	8.6	A
				PM	22.6	C	26.0	C
28	Davis Road and Reservation Road	Signalized	S (C)	AM	88.8	F	> 120	F
				PM	> 120	F	> 120	F
29	Second Avenue and Divarty Street	Signalized	S (C)	AM	16.5	B	19.3	B
				PM	13.5	B	15.5	B
30	General Jim Moore Boulevard and Divarty Street	AWSC	S (C)	AM	11.6	B	10.2	B
				PM	11.9	B	10.0	A
31	First Avenue and Lightfighter Drive	Signalized	S (C)	AM	7.3	A	7.5	A
				PM	5.4	A	5.4	A
32	Second Avenue and Lightfighter Drive	Signalized	S (C)	AM	66.7	E	63.7	E
				PM	44.0	D	42.2	D
33	General Jim Moore Boulevard and Lightfighter Drive	Signalized	S (C)	AM	33.7	C	79.6	E
				PM	24.4	C	29.1	C
34	Malmedy Road and Colonel Durham Street	AWSC	MC (D)	AM	14.6	B	13.1	B
				PM	13.0	B	12.1	B
35	Parker Flatts Cut Off Road and Colonel Durham Street	SSS	S (C)	AM	1.5 (13.9)	A (B)	1.7 (12.9)	A (B)
				PM	1.8 (15)	A (B)	1.9 (13.4)	A (B)
36	Sixth Avenue and Colonel Durham Street	AWSC	S (C)	AM	13.1	B	15.9	C
				PM	14.2	B	22.0	C
37	Seventh Avenue and Colonel Durham Street	SSS	S (C)	AM	18.3 (44.1)	C (E)	10.4 (16.4)	B (C)
				PM	97.6 (> 120)	F (F)	18.5 (38)	C (E)
38	Eighth Avenue and Colonel Durham Street	SSS	S (C)	AM	3.9 (25.1)	A (D)	6.3 (66.4)	A (F)
				PM	5.1 (26.1)	A (D)	4.7 (36.6)	A (E)
39	General Jim Moore Boulevard and Gigling Road	Signalized	S (C)	AM	30.6	C	51.8	D
				PM	22.5	C	56.0	E
40	Malmedy Road and Gigling Road	Signalized	MC (D)	AM	5.7	A	5.7	A
				PM	5.6	A	5.9	A

TABLE L-3: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵
41	Parker Flatts Cut Off Road and Gigling Road	Signalized	MC (D)	AM PM	5.3 5.9	A A	5.4 6.0	A A
42	Sixth Avenue and Gigling Road	Signalized	S (C)	AM PM	5.4 5.4	A A	7.7 8.8	A A
43	Seventh Avenue and Gigling Road	Signalized	S (C)	AM PM	6.5 5.6	A A	4.4 4.5	A A
44	Eighth Avenue and Gigling Road	Signalized	Cal / Sand City (C)	AM PM	7.7 6.9	A A	21.1 10.2	C B
45	Eastside Parkway and Gigling Road	AWSC	Cal / S (C)	AM PM	Future Intersection with Eastside Parkway			
46	General Jim Moore Boulevard and Normandy Road	Signalized	Cal / MC (C)	AM PM	38.2 11.8	D B	40.6 12.0	D B
47	General Jim Moore Boulevard and Coe Avenue	AWSC	Cal / MC (C)	AM PM	113.7 30.4	F D	> 120 35.2	F E
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	Signalized	M (D)	AM PM	89.2 59.5	F E	92.6 61.7	F E
49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp	Signalized	M (D)	AM PM	17.4 29.9	B C	17.4 30.7	B C
50	Reservation Road and State Route 68 Westbound Ramps	Signalized	M (D)	AM PM	14.7 38.5	B D	14.6 39.5	B D
51	Reservation Road and State Route 68 Eastbound Ramps	Signalized	M (D)	AM PM	12.3 12.2	B B	12.6 12.3	B B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency when the addition of Project traffic degrades the operations from acceptable level of service to unacceptable level of service; or when the addition of Project traffic further exacerbates unacceptable operations.

SSS = Side Street Stop Controlled, AWSC = All Way Stop Controlled, Signalized = Signalized intersection

1. Intersection jurisdiction and associated LOS threshold applied.
 - i. City of Marina = M
 - ii. City of Seaside = S
 - iii. California State University Monterey Bay = CSUMB
 - iv. Monterey County = MC
 - v. Caltrans = Cal
2. AM = morning peak hour, PM = evening peak hour.
3. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."
4. LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."

Source: Fehr & Peers, June 2019.

CUMULATIVE WITHOUT AND WITH PROJECT AND WITH EASTSIDE PARKWAY CONDITIONS INTERSECTION LEVELS OF SERVICE

TABLE L-4: CUMULATIVE WITH EASTSIDE PARKWAY INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control	Jurisdiction (LOS Standard) ¹	Peak Hour ²	Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ³	LOS ⁴	Delay ³	LOS ⁴
1	Del Monte Boulevard and Reindollar Avenue	Signalized	M (D)	AM PM	33.8 64.1	C E	34.1 67.2	C E
2	Second Avenue Extension and Patton Parkway	Future	M (D)	AM PM	18.2 19.1	B B	18.2 19.1	B B
3	SR 1 Southbound Ramps and Imjin Parkway	Signalized	M (D)	AM PM	> 120 > 120	F F	> 120 > 120	F F
4	SR 1 Northbound Ramps and Imjin Parkway	SSS	M (D)	AM PM	0.9 (87.8) 0.9 (80.1)	A (F) A (F)	1.1 (102.8) 0.9 (81.6)	A (F) A (F)
5	Second Avenue and Imjin Parkway	Signalized	M (D)	AM PM	55.3 54.8	E D	60.8 65.6	E E
6	Third Avenue and Imjin Parkway	SSS	M (D)	AM PM	15.6 17.8	B B	16.6 18.9	B B
7	Fourth Avenue and Imjin Parkway	SSS	M (D)	AM PM	7.4 7.6	A A	7.4 7.7	A A
8	California Avenue and Imjin Parkway	Signalized	M (D)	AM PM	32.0 12.5	C B	38.9 13.1	D B
9	California Avenue and Patton Parkway	SSS	MC (D)	AM PM	1.4 (18.8) 0.6 (12.5)	A (C) A (B)	1.4 (19.7) 0.6 (13)	A (C) A (B)
10	Imjin Road and Imjin Parkway	Signalized	MC (D)	AM PM	8.2 9.8	A A	14.0 19.5	B B
11	Abrams Drive and Imjin Parkway	Signalized	M (D)	AM PM	13.3 12.6	B B	17.5 15.0	B B
12	Reservation Road and Imjin Parkway	Signalized	M (D)	AM PM	25.7 55.6	C E	26.1 61.5	C E
13	Blanco Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	15.7 11.1	B B	15.6 10.9	B B
14	Inter-Garrison Road and Reservation Road	Signalized	M (D)	AM PM	117.8 > 120	F F	> 120 > 120	F F
15	Second Avenue and Ninth Street	Signalized	M (D)	AM PM	13.1 9.6	B A	13.2 9.6	B A
16	Second Avenue and Eighth Street	Signalized	M/ CSUMB (D)	AM PM	8.6 5.8	A A	9.6 7.1	A A
17	Fourth Avenue and Eighth Street	AWSC	MC / M / CSUMB (D)	AM PM	9.7 9.2	A A	12.0 11.3	B B

TABLE L-4: CUMULATIVE WITH EASTSIDE PARKWAY INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control	Jurisdiction (LOS Standard) ¹	Peak Hour ²	Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ³	LOS ⁴	Delay ³	LOS ⁴
18	Imjin Road and Eighth Street	Round- about	CSUMB (D)	AM PM	8.0 6.5	A A	10.3 8.2	B A
19	Second Avenue and Inter- Garrison Road	Signalized	MC / CSUMB (D)	AM PM	5.9 7.4	A A	5.3 7.4	A A
20	General Jim Moore Boulevard and Inter-Garrison Road	AWSC	MC (D)	AM PM	10.1 10.1	B B	10.4 9.5	B A
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	Signalized	MC (D)	AM PM	17.9 16.3	B B	27.4 25.1	C C
22	Eighth Avenue and Inter- Garrison Road	Round- about	MC (D)	AM PM	50.5 14.7	F B	65.8 22.0	F C
23	Abrams Drive and Inter- Garrison Road	Signalized	MC (D)	AM PM	11.8 8.6	B A	14.8 11.0	B B
24	Schoonover Road and Inter- Garrison Road	Signalized	MC (D)	AM PM	30.5 24.9	C C	44.0 27.6	D C
25	Inter-Garrison Road Connection and Inter- Garrison Road	AWSC	M / CSUMB (D)	AM PM	> 120 > 120	F F	> 120 > 120	F F
26	East Garrison Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	10.7 18.3	B B	11.2 20.9	B C
27	Reservation Road and Watkins Gate Road	Signalized	S (C)	AM PM	8.4 24.0	A C	8.6 32.1	A C
28	Davis Road and Reservation Road	Signalized	S (C)	AM PM	> 120 > 120	F F	> 120 > 120	F F
29	Second Avenue and Divarty Street	Signalized	S (C)	AM PM	13.5 13.2	B B	14.0 15.1	B B
30	General Jim Moore Boulevard and Divarty Street	AWSC	S (C)	AM PM	10.1 10.6	B B	10.2 10.0	B A
31	First Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	7.4 5.6	A A	7.8 5.7	A A
32	Second Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	63.8 39.2	E D	57.8 38.2	E D
33	General Jim Moore Boulevard and Lightfighter Drive	Signalized	S (C)	AM PM	71.6 33.0	E C	> 120 43.6	F D
34	Malmedy Road and Colonel Durham Street	AWSC	MC (D)	AM PM	13.1 12.3	B B	12.5 10.9	B B
35	Parker Flatts Cut Off Road and Colonel Durham Street	SSS	S (C)	AM PM	1.6 (13.6) 1.6 (13.7)	A (B) A (B)	1.7 (12.7) 1.7 (12.2)	A (B) A (B)
36	Sixth Avenue and Colonel Durham Street	AWSC	S (C)	AM PM	12.7 13.1	B B	12.3 12.3	B B

TABLE L-4: CUMULATIVE WITH EASTSIDE PARKWAY INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersect- ion Control	Jurisdiction (LOS Standard) ¹	Peak Hour ²	Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ³	LOS ⁴	Delay ³	LOS ⁴
37	Seventh Avenue and Colonel Durham Street	SSS	S (C)	AM PM	12.0 (19.8) 22 (36.5)	B (C) C (E)	10.0 (15.3) 12.4 (20.2)	A (C) B (C)
38	Eighth Avenue and Colonel Durham Street	SSS	S (C)	AM PM	3.7 (22.2) 4.7 (19.4)	A (C) A (C)	3.0 (25.4) 2.9 (18.6)	A (D) A (C)
39	General Jim Moore Boulevard and Gigling Road	Signalized	S (C)	AM PM	38.5 114.7	D F	65.3 >120	E F
40	Malmedy Road and Gigling Road	Signalized	MC (D)	AM PM	5.6 5.7	A A	5.7 5.9	A A
41	Parker Flatts Cut Off Road and Gigling Road	Signalized	MC (D)	AM PM	5.4 6.0	A A	5.5 6.1	A A
42	Sixth Avenue and Gigling Road	Signalized	S (C)	AM PM	5.5 5.6	A A	5.8 6.5	A A
43	Seventh Avenue and Gigling Road	Signalized	S (C)	AM PM	5.4 4.9	A A	4.3 4.6	A A
44	Eighth Avenue and Gigling Road	Signalized	Cal / Sand City (C)	AM PM	6.7 5.2	A A	7.0 5.5	A A
45	Eastside Parkway and Gigling Road	Signalized	Cal / S (C)	AM PM	12.1 17.2	B B	13.7 22.4	B C
46	General Jim Moore Boulevard and Normandy Road	Signalized	Cal / MC (C)	AM PM	65.3 18.7	E B	70.4 20.4	E C
47	General Jim Moore Boulevard and Coe Avenue	Signalized	Cal / MC (C)	AM PM	46.2 15.5	D B	48.4 16.3	D B
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	Signalized	M (D)	AM PM	91.9 57.6	F E	95.1 61.4	F E
49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp	Signalized	M (D)	AM PM	17.4 30.7	B C	17.4 31.6	B C
50	Reservation Road and State Route 68 Westbound Ramps	Signalized	M (D)	AM PM	14.4 37.2	B D	14.7 38.9	B D
51	Reservation Road and State Route 68 Eastbound Ramps	Signalized	M (D)	AM PM	12.4 12.1	B B	12.8 11.7	B B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency when the addition of Project traffic degrades the operations from acceptable level of service to unacceptable level of service; or when the addition of Project traffic further exacerbates unacceptable operations.

1. Intersection jurisdiction and associated LOS threshold applied.
 - i. City of Marina = M
 - ii. City of Seaside = S
 - iii. California State University Monterey Bay = CSUMB
 - iv. Monterey County = MC
 - v. Caltrans = Cal
2. AM = morning peak hour, PM = evening peak hour.

3. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."

4. LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."

Source: Fehr & Peers, June 2019.

TABLE L-5: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project		Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵
1	Del Monte Boulevard and Reindollar Avenue	Signalized	M (D)	AM PM	33.8 69.1	C E	34.1 70.4	C E	33.8 64.1	C E	34.1 67.2	C E
2	Second Avenue Extension and Patton Parkway	Future	M (D)	AM PM	18.2 19.1	B B	18.2 19.1	B B	18.2 19.1	B B	18.2 19.1	B B
3	SR 1 Southbound Ramps and Imjin Parkway	Signalized	M (D)	AM PM	> 120 > 120	F F	> 120 > 120	F F	> 120 > 120	F F	> 120 > 120	F F
4	SR 1 Northbound Ramps and Imjin Parkway	SSS	M (D)	AM PM	1.1 (110.9) 0.9 (77.2)	A (F) A (F)	1.3 (>120) 1 (84.9)	A (F) A (F)	0.9 (87.8) 0.9 (80.1)	A (F) A (F)	1.1 (102.8) 0.9 (81.6)	A (F) A (F)
5	Second Avenue and Imjin Parkway	Signalized	M (D)	AM PM	51.2 73.6	D E	59.9 81.2	E F	55.3 54.8	E D	60.8 65.6	E E
6	Third Avenue and Imjin Parkway	SSS	M (D)	AM PM	19.6 36.1	B D	20.2 45.7	C D	15.6 17.8	B B	16.6 18.9	B B
7	Fourth Avenue and Imjin Parkway	SSS	M (D)	AM PM	8.0 10.1	A B	9.2 11.7	A B	7.4 7.6	A A	7.4 7.7	A A
8	California Avenue and Imjin Parkway	Signalized	M (D)	AM PM	40.2 13.2	D B	52.1 15.7	D B	32.0 12.5	C B	38.9 13.1	D B
9	California Avenue and Patton Parkway	SSS	MC (D)	AM PM	1.4 (18.8) 0.6 (12.3)	A (C) A (B)	1.4 (19.3) 0.6 (12.7)	A (C) A (B)	1.4 (18.8) 0.6 (12.5)	A (C) A (B)	1.4 (19.7) 0.6 (13)	A (C) A (B)
10	Imjin Road and Imjin Parkway	Signalized	MC (D)	AM PM	14.4 24.7	B C	28.3 62.2	C E	8.2 9.8	A A	14.0 19.5	B B
11	Abrams Drive and Imjin Parkway	Signalized	M (D)	AM PM	15.3 17.4	B B	20.9 23.9	C C	13.3 12.6	B B	17.5 15.0	B B
12	Reservation Road and Imjin Parkway	Signalized	M (D)	AM PM	43.8 107.0	D F	48.4 119.7	D F	25.7 55.6	C E	26.1 61.5	C E

TABLE L-5: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project		Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵
13	Blanco Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	26.1 11.1	C B	29.4 11.1	C B	15.7 11.1	B B	15.6 10.9	B B
14	Inter-Garrison Road and Reservation Road	Signalized	M (D)	AM PM	22.1 41.8	C D	43.3 80.4	D F	117.8 >120	F F	>120 >120	F F
15	Second Avenue and Ninth Street	Signalized	M (D)	AM PM	12.7 9.5	B A	13.3 9.6	B A	13.1 9.6	B A	13.2 9.6	B A
16	Second Avenue and Eighth Street	Signalized	M/ CSUMB (D)	AM PM	12.0 7.2	B A	13.7 8.3	B A	8.6 5.8	A A	9.6 7.1	A A
17	Fourth Avenue and Eighth Street	AWSC	MC / M / CSUMB (D)	AM PM	11.7 102	B B	14.9 12.3	B B	9.7 9.2	A A	12.0 11.3	B B
18	Imjin Road and Eighth Street	Round-about	CSUMB (D)	AM PM	13.9 7.7	B A	25.7 10.4	D B	8.0 6.5	A A	10.3 8.2	B A
19	Second Avenue and Inter-Garrison Road	Signalized	MC / CSUMB (D)	AM PM	6.1 6.9	A A	5.6 7.4	A A	5.9 7.4	A A	5.3 7.4	A A
20	General Jim Moore Boulevard and Inter-Garrison Road	AWSC	MC (D)	AM PM	11.3 10.5	B B	10.5 9.5	B A	10.1 10.1	B B	10.4 9.5	B A
21	Eighth Street/Seventh Avenue and Inter-Garrison Road	Signalized	MC (D)	AM PM	17.7 17.8	B B	33.5 33.7	C C	17.9 16.3	B B	27.4 25.1	C C
22	Eighth Avenue and Inter-Garrison Road	Round-about	MC (D)	AM PM	107.6 28.5	F D	>120 114.3	F F	50.5 14.7	F B	65.8 22.0	F C
23	Abrams Drive and Inter-Garrison Road	Signalized	MC (D)	AM PM	33.4 32.6	C C	76.9 74.1	E E	11.8 8.6	B A	14.8 11.0	B B
24	Schoonover Road and Inter-Garrison Road	Signalized	MC (D)	AM PM	21.1 19.8	C C	49.4 67.1	E F	30.5 24.9	C C	44.0 27.6	D C
25	Inter-Garrison Road Connection and Inter-Garrison Road	AWSC	M / CSUMB (D)	AM PM	39.9 17.3	E C	80.7 34.5	F D	>120 >120	F F	>120 >120	F F

TABLE L-5: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project		Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵
26	East Garrison Road and Reservation Road	Signalized	M / CSUMB (D)	AM PM	10.8 20.1	B C	11.3 22.4	B C	10.7 18.3	B B	11.2 20.9	B C
27	Reservation Road and Watkins Gate Road	Signalized	S (C)	AM PM	8.6 22.6	A C	8.6 26.0	A C	8.4 24.0	A C	8.6 32.1	A C
28	Davis Road and Reservation Road	Signalized	S (C)	AM PM	88.8 >120	F F	>120 >120	F F	>120 >120	F F	>120 >120	F F
29	Second Avenue and Divarty Street	Signalized	S (C)	AM PM	16.5 13.5	B B	19.3 15.5	B B	13.5 13.2	B B	14.0 15.1	B B
30	General Jim Moore Boulevard and Divarty Street	AWSC	S (C)	AM PM	11.6 11.9	B B	10.2 10.0	B A	10.1 10.6	B B	10.2 10.0	B A
31	First Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	7.3 5.4	A A	7.5 5.4	A A	7.4 5.6	A A	7.8 5.7	A A
32	Second Avenue and Lightfighter Drive	Signalized	S (C)	AM PM	66.7 44.0	E D	63.7 42.2	E D	63.8 39.2	E D	57.8 38.2	E D
33	General Jim Moore Boulevard and Lightfighter Drive	Signalized	S (C)	AM PM	33.7 24.4	C C	79.6 29.1	E C	71.6 33.0	E C	>120 43.6	F D
34	Malmedy Road and Colonel Durham Street	AWSC	MC (D)	AM PM	14.6 13.0	B B	13.1 12.1	B B	13.1 12.3	B B	12.5 10.9	B B
35	Parker Flatts Cut Off Road and Colonel Durham Street	SSS	S (C)	AM PM	1.5 (13.9) 1.8 (15)	A (B) A (B)	1.7 (12.9) 1.9 (13.4)	A (B) A (B)	1.6 (13.6) 1.6 (13.7)	A (B) A (B)	1.7 (12.7) 1.7 (12.2)	A (B) A (B)
36	Sixth Avenue and Colonel Durham Street	AWSC	S (C)	AM PM	13.1 14.2	B B	15.9 22.0	C C	12.7 13.1	B B	12.3 12.3	B B
37	Seventh Avenue and Colonel Durham Street	SSS	S (C)	AM PM	18.3 (44.1) 97.6 (>120)	C (E) F (F)	10.4 (16.4) 18.5 (38)	B (C) C (E)	12.0 (19.8) 22.0 (36.5)	B (C) C (E)	10.0 (15.3) 12.4 (20.2)	A (C) B (C)

TABLE L-5: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project		Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵
38	Eighth Avenue and Colonel Durham Street	SSS	S (C)	AM	3.9 (25.1)	A (D)	6.3		3.7 (22.2)	A (C)	3.0 (25.4)	A (D)
				PM	5.1 (26.1)	A (D)	(66.4)	A (F)	4.7 (19.4)	A (C)	2.9 (18.6)	A (C)
							(36.6)					
39	General Jim Moore Boulevard and Gigling Road	Signalized	S (C)	AM	30.6	C	51.8	D	38.5	D	65.3	E
				PM	22.5	C	56.0	E	114.7	F	>120	F
40	Malmedy Road and Gigling Road	Signalized	MC (D)	AM	5.7	A	5.7	A	5.6	A	5.7	A
				PM	5.6	A	5.9	A	5.7	A	5.9	A
41	Parker Flatts Cut Off Road and Gigling Road	Signalized	MC (D)	AM	5.3	A	5.4	A	5.4	A	5.5	A
				PM	5.9	A	6.0	A	6.0	A	6.1	A
42	Sixth Avenue and Gigling Road	Signalized	S (C)	AM	5.4	A	7.7	A	5.5	A	5.8	A
				PM	5.4	A	8.8	A	5.6	A	6.5	A
43	Seventh Avenue and Gigling Road	Signalized	S (C)	AM	6.5	A	4.4	A	5.4	A	4.3	A
				PM	5.6	A	4.5	A	4.9	A	4.6	A
44	Eighth Avenue and Gigling Road	Signalized	Cal / Sand City (C)	AM	7.7	A	21.1	C	6.7	A	7.0	A
				PM	6.9	A	10.2	B	5.2	A	5.5	A
45	Eastside Parkway and Gigling Road	Signalized	Cal / S (C)	AM	Future Intersection with Eastside Parkway				12.1	B	13.7	12.1
				PM					17.2	B	22.4	17.2
46	General Jim Moore Boulevard and Normandy Road	Signalized	Cal / MC (C)	AM	38.2	D	40.6	D	65.3	E	70.4	E
				PM	11.8	B	12.0	B	18.7	B	20.4	C
47	General Jim Moore Boulevard and Coe Avenue	AWSC/Signalized	Cal / MC (C)	AM	113.7	F	>120	F	46.2	D	48.4	D
				PM	30.4	D	35.2	E	15.5	B	16.3	B
48	Fremont Boulevard - Southbound SR 1 Off-Ramp and Monterey Road	Signalized	M (D)	AM	89.2	F	92.6	F	91.9	F	95.1	F
				PM	59.5	E	61.7	E	57.6	E	61.4	E

TABLE L-5: CUMULATIVE INTERSECTION LEVEL OF SERVICE

#	Intersection	Intersection Control ¹	Jurisdiction (LOS Standard) ²	Peak Hour ³	Cumulative without Project		Cumulative with Project		Cumulative without Project and with Eastside Parkway		Cumulative with Project and with Eastside Parkway	
					Delay ⁴	LOS ⁵	Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵	Average Delay ⁴	LOS ⁵
49	California Avenue and Monterey Road - Northbound SR 1 Off-Ramp	Signalized	M (D)	AM	17.4	B	17.4	B	17.4	B	17.4	B
				PM	29.9	C	30.7	C	30.7	C	31.6	C
50	Reservation Road and State Route 68 Westbound Ramps	Signalized	M (D)	AM	14.7	B	14.6	B	14.4	B	14.7	B
				PM	38.5	D	39.5	D	37.2	D	38.9	D
51	Reservation Road and State Route 68 Eastbound Ramps	Signalized	M (D)	AM	12.3	B	12.6	B	12.4	B	12.8	B
				PM	12.2	B	12.3	B	12.1	B	11.7	B

Notes: **Bold text** indicates intersection operates at unacceptable level of service. **Bold and highlighted text** indicates an intersection deficiency when the addition of Project traffic degrades the operations from acceptable level of service to unacceptable level of service; or when the addition of Project traffic further exacerbates unacceptable operations.

1. SSS = Side Street Stop Controlled, AWSC = All Way Stop Controlled, Signalized = Signalized intersection
2. Intersection jurisdiction and associated LOS threshold applied.
 - i. City of Marina = M
 - ii. City of Seaside = S
 - iii. California State University Monterey Bay = CSUMB
 - iv. Monterey County = MC
 - v. Caltrans = Cal
3. AM = morning peak hour, PM = evening peak hour.
4. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2010 *Highway Capacity Manual* for signalized intersections and all-way stop-controlled intersections. For side-street stop-controlled intersections, average control delay and total delay for the worst movement are reported as "average control delay (worst movement total delay)."
5. LOS = Level of Service. LOS calculations conducted using the Synchro 10 analysis software packages, which apply the methods described in the 2010 *Highway Capacity Manual*. For side-street stop-controlled intersections, average control LOS and total LOS for the worst movement are reported as "average control LOS (worst movement total LOS)."

Source: Fehr & Peers, June 2019.

APPENDIX M: FREEWAY ANALYSIS



HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,705	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	890	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,642	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,821	pcphpl
Average passenger-car speed, S	62.5	mph
Volume-to-capacity ratio, v/c	0.77	
Density, D	29.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,418	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	365	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,469	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	735	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.31	
Density, D	11.3	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,055	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,252	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,104	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,701	pcphpl
Average passenger-car speed, S	63.7	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,088	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	549	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,213	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	738	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.31	
Density, D	11.3	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,560	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,373	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,591	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,864	pcphpl
Average passenger-car speed, S	62.0	mph
Volume-to-capacity ratio, v/c	0.79	
Density, D	30.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,859	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	752	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,028	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,009	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.43	
Density, D	15.5	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,778	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,389	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,645	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,882	pcphpl
Average passenger-car speed, S	61.7	mph
Volume-to-capacity ratio, v/c	0.80	
Density, D	30.5	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,177	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	819	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,294	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,098	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.47	
Density, D	16.9	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,843	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,011	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,095	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,047	pcphpl
Average passenger-car speed, S	59.1	mph
Volume-to-capacity ratio, v/c	0.87	
Density, D	34.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,629	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	685	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,752	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,376	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.59	
Density, D	21.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,172	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	302	veh
Trucks and buses	6.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.969	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,247	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	623	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.27	
Density, D	9.6	pcpmpl
Level of service, LOS	A	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,671	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	681	veh
Trucks and buses	2.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.989	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,755	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,378	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.59	
Density, D	21.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,725	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	469	veh
Trucks and buses	5.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.972	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,929	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.20	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.8	mph
Calculated free-flow speed, FFS	71.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	643	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.27	
Density, D	9.9	pcpmpl
Level of service, LOS	A	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,231	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,102	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,449	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,483	pcphpl
Average passenger-car speed, S	64.9	mph
Volume-to-capacity ratio, v/c	0.63	
Density, D	22.8	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,397	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	653	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,661	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	887	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.38	
Density, D	13.6	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,906	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,264	veh
Trucks and buses	1.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,102	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,701	pcphpl
Average passenger-car speed, S	63.7	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,708	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	725	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,955	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	985	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.42	
Density, D	15.2	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,728	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,206	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,870	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,623	pcphpl
Average passenger-car speed, S	64.3	mph
Volume-to-capacity ratio, v/c	0.69	
Density, D	25.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,355	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	643	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,613	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,307	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.56	
Density, D	20.1	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,745	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	965	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,900	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,950	pcphpl
Average passenger-car speed, S	60.7	mph
Volume-to-capacity ratio, v/c	0.83	
Density, D	32.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,790	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	918	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,757	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,878	pcphpl
Average passenger-car speed, S	61.8	mph
Volume-to-capacity ratio, v/c	0.80	
Density, D	30.4	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,420	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	366	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,471	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	736	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.31	
Density, D	11.3	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,430	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,059	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,317	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,439	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.61	
Density, D	22.1	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,110	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	555	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,236	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	745	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.32	
Density, D	11.5	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,530	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,364	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,554	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,851	pcphpl
Average passenger-car speed, S	62.1	mph
Volume-to-capacity ratio, v/c	0.79	
Density, D	29.8	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,820	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	742	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,987	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	996	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.42	
Density, D	15.3	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,850	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,410	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_P	1.00	
Flow rate, v_p	5,730	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,910	pcphpl
Average passenger-car speed, S	61.3	mph
Volume-to-capacity ratio, v/c	0.81	
Density, D	31.2	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,270	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	843	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_P	1.00	
Flow rate, v_p	3,390	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,130	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.48	
Density, D	17.4	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,890	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,024	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,145	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,072	pcphpl
Average passenger-car speed, S	58.6	mph
Volume-to-capacity ratio, v/c	0.88	
Density, D	35.4	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,700	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	703	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,827	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,413	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.60	
Density, D	21.7	pcmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,230	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	317	veh
Trucks and buses	6.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.969	
Driver population factor, f_P	1.00	
Flow rate, v_p	1,308	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	654	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.28	
Density, D	10.1	pcmppl
Level of service, LOS	A	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,790	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	712	veh
Trucks and buses	2.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.989	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,878	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,439	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.61	
Density, D	22.1	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,790	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	487	veh
Trucks and buses	5.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.972	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,002	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.20	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.8	mph
Calculated free-flow speed, FFS	71.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	667	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.28	
Density, D	10.3	pcpmpl
Level of service, LOS	A	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,360	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,135	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,585	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,528	pcphpl
Average passenger-car speed, S	64.8	mph
Volume-to-capacity ratio, v/c	0.65	
Density, D	23.6	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,410	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	657	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,675	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	892	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.38	
Density, D	13.7	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,880	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,258	veh
Trucks and buses	1.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,075	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,692	pcphpl
Average passenger-car speed, S	63.8	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.5	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,810	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	752	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,066	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,022	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.43	
Density, D	15.7	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,840	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,235	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,985	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,662	pcphpl
Average passenger-car speed, S	64.0	mph
Volume-to-capacity ratio, v/c	0.71	
Density, D	26.0	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing with Project
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,440	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	666	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,708	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,354	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.58	
Density, D	20.8	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Existing with Project
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,820	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	985	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,978	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,989	pcphpl
Average passenger-car speed, S	60.1	mph
Volume-to-capacity ratio, v/c	0.85	
Density, D	33.1	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,480	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	1,145	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,686	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,343	pcphpl
Average passenger-car speed, S	52.4	mph
Volume-to-capacity ratio, v/c	1.00	
Density, D	44.7	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,830	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	472	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,896	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	948	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.40	
Density, D	14.6	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,060	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,562	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,369	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,123	pcphpl
Average passenger-car speed, S	57.6	mph
Volume-to-capacity ratio, v/c	0.90	
Density, D	36.9	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,860	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	753	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,031	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,010	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.43	
Density, D	15.5	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,230	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,575	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,412	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,137	pcphpl
Average passenger-car speed, S	57.3	mph
Volume-to-capacity ratio, v/c	0.91	
Density, D	37.3	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,490	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	918	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,697	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,232	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.52	
Density, D	19.0	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,450	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,584	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,439	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,146	pcphpl
Average passenger-car speed, S	57.1	mph
Volume-to-capacity ratio, v/c	0.91	
Density, D	37.6	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,920	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,010	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,064	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,355	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.58	
Density, D	20.8	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,470	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,176	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,763	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,381	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.01	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,170	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	826	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,319	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	Actual		Maximum		Violation?
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,659	pcphpl
Average passenger-car speed, S	64.0	mph
Volume-to-capacity ratio, v/c	0.71	
Density, D	25.9	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,500	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	387	veh
Trucks and buses	6.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.969	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,596	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	798	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.34	
Density, D	12.3	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,970	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	758	veh
Trucks and buses	2.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.989	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,064	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,532	pcphpl
Average passenger-car speed, S	64.8	mph
Volume-to-capacity ratio, v/c	0.65	
Density, D	23.7	pcmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,410	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	655	veh
Trucks and buses	5.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.972	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,695	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.20	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.8	mph
Calculated free-flow speed, FFS	71.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	898	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.38	
Density, D	13.8	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,850	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,263	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,100	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,700	pcphpl
Average passenger-car speed, S	63.7	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,070	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	836	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,408	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,136	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.48	
Density, D	17.5	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,530	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,425	veh
Trucks and buses	1.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,750	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,917	pcphpl
Average passenger-car speed, S	61.2	mph
Volume-to-capacity ratio, v/c	0.82	
Density, D	31.3	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,480	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	932	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,797	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,266	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.54	
Density, D	19.5	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,380	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,372	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,541	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,847	pcphpl
Average passenger-car speed, S	62.2	mph
Volume-to-capacity ratio, v/c	0.79	
Density, D	29.7	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,970	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	811	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,296	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,648	pcphpl
Average passenger-car speed, S	64.1	mph
Volume-to-capacity ratio, v/c	0.70	
Density, D	25.7	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cumulative
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,290	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,106	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,468	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,234	pcphpl
Average passenger-car speed, S	55.1	mph
Volume-to-capacity ratio, v/c	0.95	
Density, D	40.5	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,460	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	1,138	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,659	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,329	pcphpl
Average passenger-car speed, S	52.8	mph
Volume-to-capacity ratio, v/c	0.99	
Density, D	44.2	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,870	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	482	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,937	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	969	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.41	
Density, D	14.9	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,050	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,559	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,356	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,119	pcphpl
Average passenger-car speed, S	57.7	mph
Volume-to-capacity ratio, v/c	0.90	
Density, D	36.7	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,910	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	766	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_P	1.00	
Flow rate, v_p	3,084	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,028	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.44	
Density, D	15.8	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,080	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,530	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,229	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,076	pcphpl
Average passenger-car speed, S	58.5	mph
Volume-to-capacity ratio, v/c	0.88	
Density, D	35.5	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,380	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	889	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,580	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,193	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.51	
Density, D	18.4	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,490	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,596	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,486	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,162	pcphpl
Average passenger-car speed, S	56.8	mph
Volume-to-capacity ratio, v/c	0.92	
Density, D	38.1	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,940	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,015	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,085	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,362	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.58	
Density, D	20.9	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,540	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,195	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,837	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,419	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.03	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,230	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	841	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_P	1.00	
Flow rate, v_p	3,381	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,691	pcphpl
Average passenger-car speed, S	63.8	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.5	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,480	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	381	veh
Trucks and buses	6.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.969	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,574	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	787	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.33	
Density, D	12.1	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,940	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	750	veh
Trucks and buses	2.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.989	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,033	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,516	pcphpl
Average passenger-car speed, S	64.8	mph
Volume-to-capacity ratio, v/c	0.65	
Density, D	23.4	pcmppl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,400	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	653	veh
Trucks and buses	5.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.972	
Driver population factor, f_p	1.00	
Flow rate, v_p	2,684	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.20	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.8	mph
Calculated free-flow speed, FFS	71.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	895	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.38	
Density, D	13.8	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,790	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,247	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,037	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,679	pcphpl
Average passenger-car speed, S	63.9	mph
Volume-to-capacity ratio, v/c	0.71	
Density, D	26.3	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,950	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	804	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,275	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,092	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.46	
Density, D	16.8	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,080	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,309	veh
Trucks and buses	1.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,282	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,761	pcphpl
Average passenger-car speed, S	63.2	mph
Volume-to-capacity ratio, v/c	0.75	
Density, D	27.9	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,440	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	921	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,753	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,251	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.53	
Density, D	19.2	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,360	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,367	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,521	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,840	pcphpl
Average passenger-car speed, S	62.3	mph
Volume-to-capacity ratio, v/c	0.78	
Density, D	29.6	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,000	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	819	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,329	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,665	pcphpl
Average passenger-car speed, S	64.0	mph
Volume-to-capacity ratio, v/c	0.71	
Density, D	26.0	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,330	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,116	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,509	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,255	pcphpl
Average passenger-car speed, S	54.6	mph
Volume-to-capacity ratio, v/c	0.96	
Density, D	41.3	pcmppl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,560	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	1,171	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,793	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,397	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.02	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,870	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	482	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,937	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	969	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.41	
Density, D	14.9	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,150	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,590	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_P	1.00	
Flow rate, v_p	6,482	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,161	pcphpl
Average passenger-car speed, S	56.8	mph
Volume-to-capacity ratio, v/c	0.92	
Density, D	38.0	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,920	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	768	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,095	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,032	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.44	
Density, D	15.9	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,250	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,581	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,437	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,146	pcphpl
Average passenger-car speed, S	57.1	mph
Volume-to-capacity ratio, v/c	0.91	
Density, D	37.6	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,450	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	908	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,654	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,218	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.52	
Density, D	18.7	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,550	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,613	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,557	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,186	pcphpl
Average passenger-car speed, S	56.2	mph
Volume-to-capacity ratio, v/c	0.93	
Density, D	38.9	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,010	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,034	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,157	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,386	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.59	
Density, D	21.3	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,540	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,195	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,837	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,419	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.03	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,240	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	844	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,392	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,696	pcphpl
Average passenger-car speed, S	63.8	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.6	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,520	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	392	veh
Trucks and buses	6.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.969	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,617	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	808	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.34	
Density, D	12.4	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,050	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	778	veh
Trucks and buses	2.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.989	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,146	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,573	pcphpl
Average passenger-car speed, S	64.6	mph
Volume-to-capacity ratio, v/c	0.67	
Density, D	24.4	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,440	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	663	veh
Trucks and buses	5.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.972	
Driver population factor, f_P	1.00	
Flow rate, v_p	2,729	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.20	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.8	mph
Calculated free-flow speed, FFS	71.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	910	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.39	
Density, D	14.0	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,940	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	1,286	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_P	1.00	
Flow rate, v_p	5,194	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,731	pcphpl
Average passenger-car speed, S	63.4	mph
Volume-to-capacity ratio, v/c	0.74	
Density, D	27.3	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,070	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	836	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,408	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,136	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.48	
Density, D	17.5	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,520	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,423	veh
Trucks and buses	1.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,740	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,913	pcphpl
Average passenger-car speed, S	61.3	mph
Volume-to-capacity ratio, v/c	0.81	
Density, D	31.2	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,580	vph
Peak-hour factor, PHF	0.93	
Peak 15-min volume, v_{15}	958	veh
Trucks and buses	3.8%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.982	
Driver population factor, f_P	1.00	
Flow rate, v_p	3,906	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,302	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.55	
Density, D	20.0	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,470	vph
Peak-hour factor, PHF	0.98	
Peak 15-min volume, v_{15}	1,395	veh
Trucks and buses	1.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.991	
Driver population factor, f_p	1.00	
Flow rate, v_p	5,634	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,878	pcphpl
Average passenger-car speed, S	61.8	mph
Volume-to-capacity ratio, v/c	0.80	
Density, D	30.4	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,040	vph
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v_{15}	830	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,373	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,687	pcphpl
Average passenger-car speed, S	63.8	mph
Volume-to-capacity ratio, v/c	0.72	
Density, D	26.4	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,350	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,121	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,530	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,265	pcphpl
Average passenger-car speed, S	54.4	mph
Volume-to-capacity ratio, v/c	0.96	
Density, D	41.6	pcmppl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,550	vph
Peak-hour factor, PHF	0.76	
Peak 15-min volume, v_{15}	1,168	veh
Trucks and buses	4.7%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.977	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,780	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,390	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.02	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Reservation Road and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	1,890	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	487	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	1,958	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.2	mph
Calculated free-flow speed, FFS	72.2	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	979	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.42	
Density, D	15.1	pcmppl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,150	vph
Peak-hour factor, PHF	0.81	
Peak 15-min volume, v_{15}	1,590	veh
Trucks and buses	3.9%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.981	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,482	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,161	pcphpl
Average passenger-car speed, S	56.8	mph
Volume-to-capacity ratio, v/c	0.92	
Density, D	38.0	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Imjin Parkway
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	2,940	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	774	veh
Trucks and buses	1.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.993	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,116	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,039	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.44	
Density, D	16.0	pcpmpl
Level of service, LOS	B	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,090	vph
Peak-hour factor, PHF	0.83	
Peak 15-min volume, v_{15}	1,533	veh
Trucks and buses	3.5%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.983	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,241	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,080	pcphpl
Average passenger-car speed, S	58.4	mph
Volume-to-capacity ratio, v/c	0.89	
Density, D	35.6	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Imjin Parkway and Lightfighter Drive
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,340	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	879	veh
Trucks and buses	1.3%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,538	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	3.7	mph
Calculated free-flow speed, FFS	71.7	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,179	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.50	
Density, D	18.1	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	5,580	vph
Peak-hour factor, PHF	0.86	
Peak 15-min volume, v_{15}	1,622	veh
Trucks and buses	3.2%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.984	
Driver population factor, f_p	1.00	
Flow rate, v_p	6,592	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,197	pcphpl
Average passenger-car speed, S	56.0	mph
Volume-to-capacity ratio, v/c	0.94	
Density, D	39.3	pcpmpl
Level of service, LOS	E	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Lightfighter Drive and Del Monte Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,030	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,039	veh
Trucks and buses	1.1%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.994	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,178	pcph
Number of lanes, N	3	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	1.33	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	4.1	mph
Calculated free-flow speed, FFS	71.3	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,393	pcphpl
Average passenger-car speed, S	65.0	mph
Volume-to-capacity ratio, v/c	0.59	
Density, D	21.4	pcpmpl
Level of service, LOS	C	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	AM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,600	vph
Peak-hour factor, PHF	0.95	
Peak 15-min volume, v_{15}	1,211	veh
Trucks and buses	2.4%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.988	
Driver population factor, f_P	1.00	
Flow rate, v_p	4,901	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,451	pcphpl
Average passenger-car speed, S	-	mph
Volume-to-capacity ratio, v/c	1.04	
Density, D	-	pcpmpl
Level of service, LOS	F	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Southbound SR 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	3,300	vph
Peak-hour factor, PHF	0.96	
Peak 15-min volume, v_{15}	859	veh
Trucks and buses	1.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.995	
Driver population factor, f_p	1.00	
Flow rate, v_p	3,455	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	5.0	ft
Total ramp density, TRD	2.17	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.6	mph
TRD adjustment	6.2	mph
Calculated free-flow speed, FFS	68.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	1,727	pcphpl
Average passenger-car speed, S	63.5	mph
Volume-to-capacity ratio, v/c	0.74	
Density, D	27.2	pcpmpl
Level of service, LOS	D	

HCM 2010: Freeway Basic Segment

Basic Operational Analysis

Project	CSUMB Master Plan EIR
Freeway	Northbound State Route 1
Segment	SR 1 between Del Monte Boulevard and Canyon Del Rey Boulevard
Alternative	Cuml w/ Eastside Pkwy w/ Proj
Time period	PM Peak Hour

Flow Inputs and Adjustments

Volume, V	4,420	vph
Peak-hour factor, PHF	0.97	
Peak 15-min volume, v_{15}	1,139	veh
Trucks and buses	2.0%	
Recreational vehicles	0.0%	
Terrain type	Level	
Grade		
Length		mi
Trucks and buses PCE, E_T	1.5	
Recreational vehicle PCE, E_R	1.2	
Heavy vehicle adjustment, f_{HV}	0.990	
Driver population factor, f_p	1.00	
Flow rate, v_p	4,603	pcph
Number of lanes, N	2	

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	>6	ft
Total ramp density, TRD	2.00	ramps/mi
Lane width adjustment, f_{LW}	0.0	mph
Lateral clearance adjustment, f_{LC}	0.0	mph
TRD adjustment	5.8	mph
Calculated free-flow speed, FFS	69.6	mph
Measured free-flow speed, FFS	65.0	mph
Free-flow speed curve	65	mph

Capacity Checks for Segments with Ramps

	<u>Actual</u>		<u>Maximum</u>		<u>Violation?</u>
Entering freeway volume		pcph		pcph	
Exiting freeway volume		pcph		pcph	
On-ramp volume		pcph		pcph	
Off-ramp volume		pcph		pcph	

LOS and Performance Measures

Flow rate, v_p	2,301	pcphpl
Average passenger-car speed, S	53.5	mph
Volume-to-capacity ratio, v/c	0.98	
Density, D	43.0	pcpmpl
Level of service, LOS	E	

APPENDIX N: INTERSECTION SIGNAL WARRANT ANALYSIS



Table N-1: PEAK HOUR SIGNAL WARRANT SUMMARY

	Intersection	Peak Hour ¹	Signal Warrant Met ²		
			Existing with Project Conditions ³	Year 2035 Cumulative with Project ³	Year 2035 Cumulative with Project with Eastside Parkway ³
4	SR 1 Northbound Ramps and Imjin Parkway	AM	No	No	No
		PM	No	No	No
6	This Avenue and Imjin Parkway	AM	No	N/A	N/A
		PM	No	N/A	N/A
7	Fourth Avenue and Imjin Parkway	AM	No	N/A	N/A
		PM	No	N/A	N/A
15	Second Avenue and Ninth Street	AM	No	Signalized	Signalized
		PM	No		
16	Second Avenue and Eighth Street	AM	Yes	Signalized	Signalized
		PM	Yes		
19	Second Avenue and Inter-Garrison Road	AM	No	Signalized	Signalized
		PM	No		
22	Eighth Avenue and Inter-Garrison Road	AM	Yes	Yes	Yes
		PM	Yes	Yes	Yes
23	Abrams Drive and Inter-Garrison Road	AM	Yes	Signalized	Signalized
		PM	Yes		
24	Schoonover Road and Inter-Garrison Road	AM	No	No	Signalized
		PM	No	No	
25	Inter-Garrison Road Connection and Inter-Garrison Road	AM	N/A	Yes	Yes
		PM	N/A	Yes	Yes
29	Second Avenue and Divarty Street	AM	No	Signalized	Signalized
		PM	Yes		
37	Seventh Avenue and Colonel Durham Street	AM	N/A	No	N/A
		PM	N/A	No	N/A
38	Eight Avenue and Colonel Durham Street	AM	N/A	No	N/A
		PM	N/A	No	N/A
40	Malmedy road and Gigling Road	AM	No	Signalized	Signalized
		PM	No		
41	Parker Flatts Cut Off Road and Gigling Road	AM	No	Signalized	Signalized
		PM	No		
42	Sixth Avenue and Gigling Road	AM	No	Signalized	Signalized
		PM	No		
47	General Jim Moore Boulevard and Coe Avenue	AM	Yes	Yes	Signalized
		PM	Yes	Yes	

Notes:

1. AM = morning peak hour, PM = evening peak hour.
2. California MUTCD Section 4C.04: Signal Warrant #3 – Peak Hour Warrant completed for unsignalized intersections.
3. "N/A" indicated intersections that did not have an LOS below it's designated LOS threshold in the corresponding scenario. "Signalized" indicates that intersection improvement for the corresponding scenario was to signalize.

Bold text indicates unsignalized warrant is met.

Source: Fehr & Peers, 2019

**APPENDIX O: INTERSECTION WITH IMPROVEMENTS LEVEL OF
SERVICE CALCULATIONS**



HCM 2010 Signalized Intersection Summary
 16: 2nd Avenue & 8th Street

Existing with Project, AM
 09/18/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	270	10	30	10	210	130	60	770	10
Future Volume (veh/h)	10	10	10	270	10	30	10	210	130	60	770	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1583	1583	1900	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	11	11	5	284	11	12	11	221	55	63	811	11
Adj No. of Lanes	1	1	1	0	1	1	0	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	20	20	20	2	2	2	1	1	1
Cap, veh/h	365	608	517	588	14	431	137	1061	254	603	1423	19
Arrive On Green	0.32	0.32	0.32	0.34	0.32	0.32	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1410	1900	1615	1136	44	1346	37	2693	645	1109	3611	49
Grp Volume(v), veh/h	11	11	5	295	0	12	152	0	135	63	401	421
Grp Sat Flow(s),veh/h/ln	1410	1900	1615	1180	0	1346	1795	0	1580	1109	1787	1872
Q Serve(g_s), s	0.2	0.1	0.1	6.9	0.0	0.2	0.0	0.0	1.8	1.3	5.5	5.5
Cycle Q Clear(g_c), s	7.3	0.1	0.1	7.0	0.0	0.2	1.7	0.0	1.8	3.0	5.5	5.5
Prop In Lane	1.00		1.00	0.96		1.00	0.07		0.41	1.00		0.03
Lane Grp Cap(c), veh/h	365	608	517	621	0	431	830	0	623	603	704	738
V/C Ratio(X)	0.03	0.02	0.01	0.48	0.00	0.03	0.18	0.00	0.22	0.10	0.57	0.57
Avail Cap(c_a), veh/h	1146	1659	1410	1281	0	1175	1410	0	1179	993	1334	1397
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	7.3	7.3	9.5	0.0	7.3	6.3	0.0	6.3	7.3	7.5	7.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.2	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	2.3	0.0	0.1	0.9	0.0	0.8	0.4	2.8	2.9
LnGrp Delay(d),s/veh	13.0	7.3	7.3	10.1	0.0	7.4	6.4	0.0	6.5	7.4	8.2	8.2
LnGrp LOS	B	A	A	B		A	A		A	A	A	A
Approach Vol, veh/h		27			307			287			885	
Approach Delay, s/veh		9.6			10.0			6.4			8.1	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.9		14.6		16.9		14.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		23.5		27.5		23.5		27.5				
Max Q Clear Time (g_c+I1), s		3.8		9.3		7.5		9.0				
Green Ext Time (p_c), s		1.5		0.0		4.8		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				8.2								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

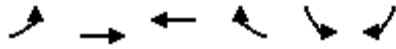
Existing with Project, AM
 09/18/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	T			T		T		
Traffic Volume (veh/h)	180	150	730	500	10	240		
Future Volume (veh/h)	180	150	730	500	10	240		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1520	1900	1900	1881	1845	1900		
Adj Flow Rate, veh/h	207	121	839	575	11	-29		
Adj No. of Lanes	1	0	0	1	0	0		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87		
Percent Heavy Veh, %	25	25	1	1	0	0		
Cap, veh/h	581	340	0	1214	0	491		
Arrive On Green	0.65	0.68	0.00	0.65	0.00	0.00		
Sat Flow, veh/h	901	526	0	1881	-941	2480		
Grp Volume(v), veh/h	0	328	0	575	0	0		
Grp Sat Flow(s),veh/h/ln	0	1427	0	1881	0	0		
Q Serve(g_s), s	0.0	1.3	0.0	2.0	0.0	0.0		
Cycle Q Clear(g_c), s	0.0	1.3	0.0	2.0	0.0	0.0		
Prop In Lane		0.37	0.00		-0.65	1.71		
Lane Grp Cap(c), veh/h	0	921	0	1214	0	0		
V/C Ratio(X)	0.00	0.36	0.00	0.47	0.00	0.00		
Avail Cap(c_a), veh/h	0	6580	0	10083	0	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	0.00	1.00	0.00	0.00		
Uniform Delay (d), s/veh	0.0	1.0	0.0	1.1	0.0	0.0		
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.3	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	1.1	0.0	0.0		
LnGrp Delay(d),s/veh	0.0	1.2	0.0	1.4	0.0	0.0		
LnGrp LOS		A		A				
Approach Vol, veh/h	328			575	0			
Approach Delay, s/veh	1.2			1.4	0.0			
Approach LOS	A			A				
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		0.0	0.0	12.7				12.7
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		33.0	5.0	58.5				68.0
Max Q Clear Time (g_c+I1), s		0.0	0.0	3.3				4.0
Green Ext Time (p_c), s		0.0	0.0	2.3				4.2
Intersection Summary								
HCM 2010 Ctrl Delay			1.4					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Existing with Project, AM
 09/18/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	210	200	740	10	30	490		
Future Volume (veh/h)	210	200	740	10	30	490		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	247	235	871	10	35	330		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	326	1225	1309	1113	772	355		
Arrive On Green	0.70	0.70	0.70	0.70	0.22	0.22		
Sat Flow, veh/h	593	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	247	235	871	10	35	330		
Grp Sat Flow(s),veh/h/ln	593	1759	1881	1599	1738	1599		
Q Serve(g_s), s	42.1	4.9	27.3	0.2	0.8	21.0		
Cycle Q Clear(g_c), s	69.3	4.9	27.3	0.2	0.8	21.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	326	1225	1309	1113	772	355		
V/C Ratio(X)	0.76	0.19	0.67	0.01	0.05	0.93		
Avail Cap(c_a), veh/h	415	1488	1591	1353	1119	515		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	28.6	5.5	8.9	4.8	31.8	39.7		
Incr Delay (d2), s/veh	4.2	0.0	0.5	0.0	0.0	15.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	7.2	2.4	14.2	0.1	0.4	10.8		
LnGrp Delay(d),s/veh	32.8	5.6	9.4	4.8	31.8	54.9		
LnGrp LOS	C	A	A	A	C	D		
Approach Vol, veh/h		482	881		365			
Approach Delay, s/veh		19.5	9.4		52.6			
Approach LOS		B	A		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		77.4		26.6		77.4		
Change Period (Y+Rc), s		5.0		3.5		5.0		
Max Green Setting (Gmax), s		88.0		33.5		88.0		
Max Q Clear Time (g_c+I1), s		71.3		23.0		29.3		
Green Ext Time (p_c), s		1.1		0.1		0.9		
Intersection Summary								
HCM 2010 Ctrl Delay			21.3					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Existing with Project, AM
 09/18/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	10	10	10	70	10	10	10	370	120	10	1040	10
Future Volume (veh/h)	10	10	10	70	10	10	10	370	120	10	1040	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	11	11	11	77	11	11	11	407	132	11	1143	11
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	163	132	93	389	46	303	20	1297	416	20	1786	17
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.01	0.49	0.49	0.01	0.49	0.49
Sat Flow, veh/h	286	700	493	1249	244	1613	1774	2636	846	1792	3627	35
Grp Volume(v), veh/h	33	0	0	88	0	11	11	272	267	11	563	591
Grp Sat Flow(s),veh/h/ln1479	0	0	1493	0	1613	1774	1770	1712	1792	1787	1875	
Q Serve(g_s), s	0.0	0.0	0.0	1.3	0.0	0.2	0.3	4.0	4.1	0.3	10.2	10.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.1	0.0	0.2	0.3	4.0	4.1	0.3	10.2	10.2
Prop In Lane	0.33		0.33	0.87		1.00	1.00		0.49	1.00		0.02
Lane Grp Cap(c), veh/h	388	0	0	435	0	303	20	871	843	20	880	923
V/C Ratio(X)	0.09	0.00	0.00	0.20	0.00	0.04	0.54	0.31	0.32	0.54	0.64	0.64
Avail Cap(c_a), veh/h	1125	0	0	1192	0	1142	223	2021	1955	225	2041	2142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh 14.7	0.0	0.0	15.2	0.0	14.5	21.5	6.7	6.7	21.5	8.2	8.2	
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	20.6	0.2	0.2	20.1	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.3	0.0	0.0	0.9	0.0	0.1	0.2	2.0	2.0	0.2	5.2	5.4	
LnGrp Delay(d),s/veh	14.8	0.0	0.0	15.4	0.0	14.6	42.1	6.9	6.9	41.6	9.0	9.0
LnGrp LOS	B			B		B	D	A	A	D	A	A
Approach Vol, veh/h		33			99			550			1165	
Approach Delay, s/veh		14.8			15.4			7.6			9.3	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.2	4.0	26.5		13.2	4.0	26.5				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		31.0	5.5	50.0		31.0	5.5	50.0				
Max Q Clear Time (g_c+1), s		2.8	2.3	12.2		4.1	2.3	6.1				
Green Ext Time (p_c), s		0.1	0.0	9.3		0.4	0.0	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay				9.2								
HCM 2010 LOS				A								

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue






















Existing with Project, AM
 09/18/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	120	430	230	370	900	140		
Future Volume (veh/h)	120	430	230	370	900	140		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863		
Adj Flow Rate, veh/h	133	197	256	411	1000	54		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Percent Heavy Veh, %	1	1	1	1	2	2		
Cap, veh/h	293	261	316	2222	1195	535		
Arrive On Green	0.16	0.16	0.18	0.62	0.34	0.34		
Sat Flow, veh/h	1792	1599	1792	3668	3632	1583		
Grp Volume(v), veh/h	133	197	256	411	1000	54		
Grp Sat Flow(s),veh/h/ln	1792	1599	1792	1787	1770	1583		
Q Serve(g_s), s	2.8	4.9	5.8	2.1	10.9	1.0		
Cycle Q Clear(g_c), s	2.8	4.9	5.8	2.1	10.9	1.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	293	261	316	2222	1195	535		
V/C Ratio(X)	0.45	0.75	0.81	0.18	0.84	0.10		
Avail Cap(c_a), veh/h	1860	1660	663	3882	2999	1342		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	15.8	16.7	16.6	3.4	12.8	9.5		
Incr Delay (d2), s/veh	0.4	1.7	1.9	0.0	0.6	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4	2.3	3.0	1.0	5.4	0.4		
LnGrp Delay(d),s/veh	16.2	18.4	18.5	3.4	13.4	9.5		
LnGrp LOS	B	B	B	A	B	A		
Approach Vol, veh/h	330			667	1054			
Approach Delay, s/veh	17.5			9.2	13.2			
Approach LOS	B			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.9	18.6				30.5		11.3
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	15.5	35.5				45.5		43.5
Max Q Clear Time (g_c+1), s	17.8	12.9				4.1		6.9
Green Ext Time (p_c), s	0.0	1.2				0.5		0.1
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
16: 2nd Avenue & 8th Street

Existing with Project, PM
09/18/2019

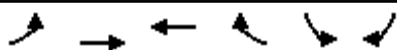
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	180	10	50	10	400	160	50	310	10
Future Volume (veh/h)	10	10	10	180	10	50	10	400	160	50	310	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1583	1583	1900	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	11	11	4	191	11	17	11	426	64	53	330	11
Adj No. of Lanes	1	1	1	0	1	1	0	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	20	20	20	2	2	2	1	1	1
Cap, veh/h	434	453	385	586	15	321	182	1042	154	548	1232	41
Arrive On Green	0.24	0.24	0.24	0.22	0.24	0.24	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1404	1900	1615	1112	64	1346	28	2986	442	911	3530	117
Grp Volume(v), veh/h	11	11	4	202	0	17	267	0	234	53	167	174
Grp Sat Flow(s),veh/h/ln	1404	1900	1615	1176	0	1346	1840	0	1616	911	1787	1860
Q Serve(g_s), s	0.2	0.1	0.0	3.5	0.0	0.2	0.0	0.0	2.4	1.0	1.5	1.5
Cycle Q Clear(g_c), s	3.7	0.1	0.0	3.6	0.0	0.2	2.4	0.0	2.4	3.4	1.5	1.5
Prop In Lane	1.00		1.00	0.95		1.00	0.04		0.27	1.00		0.06
Lane Grp Cap(c), veh/h	434	453	385	574	0	321	814	0	564	548	623	649
V/C Ratio(X)	0.03	0.02	0.01	0.35	0.00	0.05	0.33	0.00	0.41	0.10	0.27	0.27
Avail Cap(c_a), veh/h	1936	2485	2112	1858	0	1760	2419	0	2002	1359	2214	2305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.4	6.4	6.3	8.0	0.0	6.4	5.4	0.0	5.4	6.7	5.1	5.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	0.1	0.2	0.0	0.5	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	1.2	0.0	0.1	1.2	0.0	1.1	0.3	0.7	0.8
LnGrp Delay(d),s/veh	9.4	6.4	6.4	8.3	0.0	6.5	5.6	0.0	5.9	6.8	5.3	5.3
LnGrp LOS	A	A	A	A		A	A		A	A	A	A
Approach Vol, veh/h		26			219			501			394	
Approach Delay, s/veh		7.7			8.2			5.7			5.5	
Approach LOS		A			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		12.1		9.7		12.1		9.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.0		28.5		27.0		28.5				
Max Q Clear Time (g_c+I1), s		4.4		5.7		5.4		5.6				
Green Ext Time (p_c), s		2.9		0.0		2.1		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			6.2									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

Existing with Project, PM
 09/18/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	T			T		T		
Traffic Volume (veh/h)	480	50	390	280	10	610		
Future Volume (veh/h)	480	50	390	280	10	610		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1520	1900	1900	1881	1845	1900		
Adj Flow Rate, veh/h	495	40	402	289	10	311		
Adj No. of Lanes	1	0	0	1	0	0		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	25	25	1	1	0	0		
Cap, veh/h	630	51	0	854	13	401		
Arrive On Green	0.45	0.44	0.00	0.45	0.26	0.25		
Sat Flow, veh/h	1388	112	0	1881	49	1520		
Grp Volume(v), veh/h	0	535	0	289	322	0		
Grp Sat Flow(s),veh/h/ln	0	1500	0	1881	1574	0		
Q Serve(g_s), s	0.0	9.7	0.0	3.2	6.1	0.0		
Cycle Q Clear(g_c), s	0.0	9.7	0.0	3.2	6.1	0.0		
Prop In Lane		0.07	0.00		0.03	0.97		
Lane Grp Cap(c), veh/h	0	681	0	854	415	0		
V/C Ratio(X)	0.00	0.79	0.00	0.34	0.78	0.00		
Avail Cap(c_a), veh/h	0	1153	0	2774	938	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	7.4	0.0	5.6	11.1	0.0		
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.2	3.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	4.3	0.0	1.7	3.0	0.0		
LnGrp Delay(d),s/veh	0.0	9.4	0.0	5.8	14.3	0.0		
LnGrp LOS		A		A	B			
Approach Vol, veh/h	535			289	322			
Approach Delay, s/veh	9.4			5.8	14.3			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		12.9	0.0	19.0				19.0
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		19.0	18.0	24.5				47.0
Max Q Clear Time (g_c+I1), s		8.1	0.0	11.7				5.2
Green Ext Time (p_c), s		0.8	0.0	2.8				1.8
Intersection Summary								
HCM 2010 Ctrl Delay			9.9					
HCM 2010 LOS			A					
Notes								



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	540	550	260	20	10	420		
Future Volume (veh/h)	540	550	260	20	10	420		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	568	579	274	17	11	35		
Adj No. of Lanes	1	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	869	1154	1234	1049	150	69		
Arrive On Green	0.66	0.66	0.66	0.66	0.04	0.04		
Sat Flow, veh/h	1024	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	568	579	274	17	11	35		
Grp Sat Flow(s),veh/h/ln	1024	1759	1881	1599	1738	1599		
Q Serve(g_s), s	14.1	4.8	1.7	0.1	0.1	0.6		
Cycle Q Clear(g_c), s	15.7	4.8	1.7	0.1	0.1	0.6		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	869	1154	1234	1049	150	69		
V/C Ratio(X)	0.65	0.50	0.22	0.02	0.07	0.51		
Avail Cap(c_a), veh/h	2536	4018	4297	3652	3323	1529		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	5.1	2.5	2.0	1.7	13.0	13.2		
Incr Delay (d2), s/veh	0.3	0.1	0.0	0.0	0.1	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.9	2.3	0.8	0.0	0.0	0.3		
LnGrp Delay(d),s/veh	5.4	2.6	2.0	1.7	13.0	15.4		
LnGrp LOS	A	A	A	A	B	B		
Approach Vol, veh/h		1147	291		46			
Approach Delay, s/veh		4.0	2.0		14.8			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		23.5		4.7		23.5		
Change Period (Y+Rc), s		5.0		3.5		5.0		
Max Green Setting (Gmax), s		64.5		27.0		64.5		
Max Q Clear Time (g_c+I1), s		17.7		2.6		3.7		
Green Ext Time (p_c), s		0.8		0.0		0.2		
Intersection Summary								
HCM 2010 Ctrl Delay			3.9					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
 29: 2nd Avenue & Divarty Street

Existing with Project, PM
 09/18/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕		↕	↕	
Traffic Volume (veh/h)	10	10	10	130	10	10	10	580	110	10	520	10
Future Volume (veh/h)	10	10	10	130	10	10	10	580	110	10	520	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1667	1900	1900	1900	1900	1863	1863	1900	1881	1881	1900
Adj Flow Rate, veh/h	11	11	11	138	11	11	11	617	117	11	553	11
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	14	14	14	0	0	0	2	2	2	1	1	1
Cap, veh/h	206	169	120	517	34	393	21	1090	206	21	1316	26
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.01	0.37	0.37	0.01	0.37	0.37
Sat Flow, veh/h	293	692	492	1324	140	1613	1774	2969	562	1792	3584	71
Grp Volume(v), veh/h	33	0	0	149	0	11	11	367	367	11	276	288
Grp Sat Flow(s),veh/h/ln1477	0	0	0	1464	0	1613	1774	1770	1762	1792	1787	1868
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.2	0.2	5.9	6.0	0.2	4.1	4.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.9	0.0	0.2	0.2	5.9	6.0	0.2	4.1	4.1
Prop In Lane	0.33		0.33	0.93		1.00	1.00		0.32	1.00		0.04
Lane Grp Cap(c), veh/h	494	0	0	551	0	393	21	650	647	21	656	686
V/C Ratio(X)	0.07	0.00	0.00	0.27	0.00	0.03	0.54	0.57	0.57	0.53	0.42	0.42
Avail Cap(c_a), veh/h	1656	0	0	1728	0	1714	322	2078	2069	326	2099	2194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	0.0	0.0	11.3	0.0	10.3	17.6	9.0	9.0	17.6	8.5	8.5
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.0	0.0	19.9	0.8	0.8	19.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln0.3	0.0	0.0	0.0	1.2	0.0	0.1	0.2	3.0	3.0	0.2	2.1	2.2
LnGrp Delay(d),s/veh	10.5	0.0	0.0	11.6	0.0	10.3	37.5	9.8	9.8	37.0	8.9	8.9
LnGrp LOS	B			B		B	D	A	A	D	A	A
Approach Vol, veh/h		33			160			745			575	
Approach Delay, s/veh		10.5			11.5			10.2			9.4	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.7	3.9	18.1		13.7	3.9	18.1				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		38.0	6.5	42.0		38.0	6.5	42.0				
Max Q Clear Time (g_c+I1), s		2.6	2.2	6.1		4.9	2.2	8.0				
Green Ext Time (p_c), s		0.1	0.0	3.6		0.9	0.0	5.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue

Existing with Project, PM
 09/18/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	60	100	160	880	350	90		
Future Volume (veh/h)	60	100	160	880	350	90		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1863	1863		
Adj Flow Rate, veh/h	67	15	180	989	393	21		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	1	1	1	1	2	2		
Cap, veh/h	157	140	260	1927	734	328		
Arrive On Green	0.09	0.09	0.15	0.54	0.21	0.21		
Sat Flow, veh/h	1792	1599	1792	3668	3632	1583		
Grp Volume(v), veh/h	67	15	180	989	393	21		
Grp Sat Flow(s),veh/h/ln	1792	1599	1792	1787	1770	1583		
Q Serve(g_s), s	0.9	0.2	2.3	4.3	2.4	0.3		
Cycle Q Clear(g_c), s	0.9	0.2	2.3	4.3	2.4	0.3		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	157	140	260	1927	734	328		
V/C Ratio(X)	0.43	0.11	0.69	0.51	0.54	0.06		
Avail Cap(c_a), veh/h	3380	3017	409	5262	5210	2331		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	10.4	10.1	9.8	3.5	8.5	7.7		
Incr Delay (d2), s/veh	0.7	0.1	1.2	0.1	0.2	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.4	0.1	1.2	2.1	1.2	0.1		
LnGrp Delay(d),s/veh	11.1	10.3	11.0	3.6	8.7	7.7		
LnGrp LOS	B	B	B	A	A	A		
Approach Vol, veh/h	82			1169	414			
Approach Delay, s/veh	11.0			4.8	8.7			
Approach LOS	B			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.0	9.5				17.5		6.6
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	5.5	35.5				35.5		45.5
Max Q Clear Time (g_c+1), s	4.4	4.4				6.3		2.9
Green Ext Time (p_c), s	0.0	0.4				1.2		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			6.0					
HCM 2010 LOS			A					

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

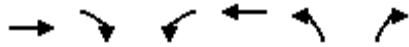
Cuml w/ Proj, AM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖↗	↖↗↖↗	↑↑↑	↖↗	↖↗↖↗	↑	↖↗	↖↗	↑↑	↖↗
Traffic Volume (veh/h)	180	1160	880	520	1010	120	370	90	200	50	100	210
Future Volume (veh/h)	180	1160	880	520	1010	120	370	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	1184	679	531	1031	122	378	92	82	51	102	209
Adj No. of Lanes	2	3	2	3	3	1	3	1	2	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	297	1489	816	690	1752	627	534	378	564	182	544	382
Arrive On Green	0.09	0.29	0.29	0.14	0.34	0.34	0.11	0.21	0.21	0.05	0.15	0.15
Sat Flow, veh/h	3442	5085	2787	5003	5085	1583	4860	1810	2701	3510	3610	1612
Grp Volume(v), veh/h	184	1184	679	531	1031	122	378	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1721	1695	1393	1668	1695	1583	1620	1810	1350	1755	1805	1612
Q Serve(g_s), s	3.0	12.4	13.2	5.9	9.7	2.9	4.4	2.5	1.4	0.8	1.4	6.6
Cycle Q Clear(g_c), s	3.0	12.4	13.2	5.9	9.7	2.9	4.4	2.5	1.4	0.8	1.4	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1489	816	690	1752	627	534	378	564	182	544	382
V/C Ratio(X)	0.62	0.80	0.83	0.77	0.59	0.19	0.71	0.24	0.15	0.28	0.19	0.55
Avail Cap(c_a), veh/h	392	2025	1110	906	2367	819	628	767	1145	236	1307	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	18.9	19.2	24.1	15.6	11.5	24.9	19.1	18.7	26.5	21.5	19.4
Incr Delay (d2), s/veh	0.8	1.1	3.0	2.0	0.1	0.1	2.1	0.1	0.0	0.3	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	6.0	5.3	2.8	4.5	1.3	2.0	1.2	0.5	0.4	0.7	3.0
LnGrp Delay(d),s/veh	26.4	20.0	22.2	26.1	15.7	11.5	27.1	19.2	18.8	26.8	21.6	19.9
LnGrp LOS	C	C	C	C	B	B	C	B	B	C	C	B
Approach Vol, veh/h		2047			1684			552			362	
Approach Delay, s/veh		21.3			18.7			24.5			21.3	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	22.3	9.9	13.3	9.5	25.3	6.5	16.7				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	10.5	23.1	7.5	21.0	6.6	27.0	3.9	24.6				
Max Q Clear Time (g_c+1), s	9.5	15.2	6.4	8.6	5.0	11.7	2.8	4.5				
Green Ext Time (p_c), s	0.1	1.8	0.0	0.1	0.0	1.6	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay					20.7							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cuml w/ Proj, AM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵↵	↑↑	↵↵	↵		
Traffic Volume (veh/h)	900	250	550	1170	100	160		
Future Volume (veh/h)	900	250	550	1170	100	160		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	947	250	579	1232	91	183		
Adj No. of Lanes	2	0	2	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	1216	320	736	2575	180	321		
Arrive On Green	0.44	0.44	0.22	0.73	0.10	0.10		
Sat Flow, veh/h	2866	730	3408	3597	1723	3076		
Grp Volume(v), veh/h	604	593	579	1232	91	183		
Grp Sat Flow(s),veh/h/ln	1770	1734	1704	1752	1723	1538		
Q Serve(g_s), s	16.3	16.4	9.0	8.0	2.8	3.2		
Cycle Q Clear(g_c), s	16.3	16.4	9.0	8.0	2.8	3.2		
Prop In Lane		0.42	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	776	760	736	2575	180	321		
V/C Ratio(X)	0.78	0.78	0.79	0.48	0.51	0.57		
Avail Cap(c_a), veh/h	1009	988	1005	3313	557	995		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	13.4	13.4	20.7	3.0	23.7	23.9		
Incr Delay (d2), s/veh	2.9	3.1	2.9	0.1	2.2	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.5	8.4	4.5	3.8	1.4	1.4		
LnGrp Delay(d),s/veh	16.3	16.5	23.7	3.2	25.9	25.5		
LnGrp LOS	B	B	C	A	C	C		
Approach Vol, veh/h	1197			1811	274			
Approach Delay, s/veh	16.4			9.7	25.6			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.6	29.0				45.6		10.3
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	10.5	31.9				52.9		18.1
Max Q Clear Time (g_c+M), s	18.4					10.0		5.2
Green Ext Time (p_c), s	1.1	6.2				10.9		0.8
Intersection Summary								
HCM 2010 Ctrl Delay			13.5					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	180	50	810	10	20	30	1220	890	20	60	590	90
Future Volume (veh/h)	180	50	810	10	20	30	1220	890	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	194	54	457	11	22	19	1312	957	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	3	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	472	256	1405	55	58	49	1265	2033	908	119	1228	376
Arrive On Green	0.14	0.14	0.14	0.04	0.04	0.04	0.37	0.57	0.57	0.03	0.24	0.24
Sat Flow, veh/h	3442	1863	2777	1560	1638	1382	3442	3539	1581	3442	5085	1557
Grp Volume(v), veh/h	194	54	457	11	22	19	1312	957	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1388	1560	1638	1382	1721	1770	1581	1721	1695	1557
Q Serve(g_s), s	4.9	2.5	9.3	0.7	1.3	1.3	35.0	15.0	0.4	1.8	10.3	1.6
Cycle Q Clear(g_c), s	4.9	2.5	9.3	0.7	1.3	1.3	35.0	15.0	0.4	1.8	10.3	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	472	256	1405	55	58	49	1265	2033	908	119	1228	376
V/C Ratio(X)	0.41	0.21	0.33	0.20	0.38	0.39	1.04	0.47	0.02	0.55	0.52	0.09
Avail Cap(c_a), veh/h	1265	684	2044	508	533	450	1265	2033	908	723	3203	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	36.5	14.0	44.6	44.9	44.9	30.1	11.8	8.7	45.3	31.3	28.0
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.7	1.5	1.9	35.5	0.5	0.0	1.5	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.3	3.6	0.3	0.6	0.5	22.8	7.4	0.2	0.9	4.9	0.7
LnGrp Delay(d),s/veh	37.8	36.7	14.0	45.3	46.4	46.8	65.7	12.3	8.7	46.7	32.2	28.3
LnGrp LOS	D	D	B	D	D	D	F	B	A	D	C	C
Approach Vol, veh/h		705			52			2285			733	
Approach Delay, s/veh		22.3			46.3			42.9			33.3	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	29.2		8.4	7.4	60.9		18.6				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+R), s	17.0	12.3		3.3	3.8	17.0		11.3				
Green Ext Time (p_c), s	0.0	10.6		0.1	0.0	15.4		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay				37.2								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

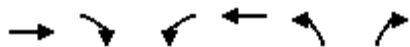
Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	190	370	600	600	310	190		
Future Volume (veh/h)	190	370	600	600	310	190		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	202	355	638	638	330	186		
Adj No. of Lanes	1	2	2	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	323	1146	796	2139	615	340		
Arrive On Green	0.18	0.18	0.23	0.60	0.28	0.28		
Sat Flow, veh/h	1757	2760	3442	3632	2273	1204		
Grp Volume(v), veh/h	202	355	638	638	264	252		
Grp Sat Flow(s),veh/h/ln	1757	1380	1721	1770	1752	1632		
Q Serve(g_s), s	5.5	4.4	9.0	4.5	6.6	6.8		
Cycle Q Clear(g_c), s	5.5	4.4	9.0	4.5	6.6	6.8		
Prop In Lane	1.00	1.00	1.00			0.74		
Lane Grp Cap(c), veh/h	323	1146	796	2139	494	460		
V/C Ratio(X)	0.62	0.31	0.80	0.30	0.53	0.55		
Avail Cap(c_a), veh/h	920	2084	1335	4120	2040	1900		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	19.4	10.1	18.7	4.9	15.6	15.7		
Incr Delay (d2), s/veh	2.0	0.2	0.7	0.1	1.7	1.9		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	1.7	4.3	2.2	3.4	3.3		
LnGrp Delay(d),s/veh	21.4	10.3	19.4	5.1	17.3	17.6		
LnGrp LOS	C	B	B	A	B	B		
Approach Vol, veh/h	557			1276	516			
Approach Delay, s/veh	14.3			12.2	17.5			
Approach LOS	B			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	6.6	20.9				37.6		14.0
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	28	60.0				60.0		27.0
Max Q Clear Time (g_c+M), s	8.8					6.5		7.5
Green Ext Time (p_c), s	0.9	5.8				8.1		2.0
Intersection Summary								
HCM 2010 Ctrl Delay			13.9					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

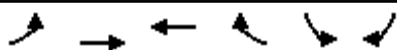
Cuml w/ Proj, AM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	240	250	750	570	50	410		
Future Volume (veh/h)	240	250	750	570	50	410		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1505	1881	1881	1881	1845	1900		
Adj Flow Rate, veh/h	276	169	862	655	57	230		
Adj No. of Lanes	1	0	2	1	0	0		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87		
Percent Heavy Veh, %	25	25	1	1	0	0		
Cap, veh/h	299	183	1029	1362	33	134		
Arrive On Green	0.34	0.34	0.30	0.72	0.10	0.10		
Sat Flow, veh/h	875	536	3476	1881	317	1280		
Grp Volume(v), veh/h	0	445	862	655	288	0		
Grp Sat Flow(s),veh/h/ln	0	1410	1738	1881	1603	0		
Q Serve(g_s), s	0.0	15.9	12.2	7.7	5.5	0.0		
Cycle Q Clear(g_c), s	0.0	15.9	12.2	7.7	5.5	0.0		
Prop In Lane		0.38	1.00		0.20	0.80		
Lane Grp Cap(c), veh/h	0	482	1029	1362	168	0		
V/C Ratio(X)	0.00	0.92	0.84	0.48	1.72	0.00		
Avail Cap(c_a), veh/h	0	484	1192	1451	168	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	16.6	17.3	3.1	23.5	0.0		
Incr Delay (d2), s/veh	0.0	23.4	4.8	0.3	345.7	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	9.3	6.4	3.9	18.5	0.0		
LnGrp Delay(d),s/veh	0.0	40.0	22.1	3.3	369.2	0.0		
LnGrp LOS		D	C	A	F			
Approach Vol, veh/h	445			1517	288			
Approach Delay, s/veh	40.0			14.0	369.2			
Approach LOS	D			B	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		10.0	20.1	22.5				42.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		5.5	18.0	18.0				40.5
Max Q Clear Time (g_c+I1), s		7.5	14.2	17.9				9.7
Green Ext Time (p_c), s		0.0	1.4	0.0				4.8
Intersection Summary								
HCM 2010 Ctrl Delay			64.6					
HCM 2010 LOS			E					
Notes								

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶↷	↑	↑	↶	↶↷	↶		
Traffic Volume (veh/h)	260	390	820	10	40	500		
Future Volume (veh/h)	260	390	820	10	40	500		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	306	459	965	6	47	370		
Adj No. of Lanes	2	1	1	1	2	1		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	337	1168	986	838	861	396		
Arrive On Green	0.10	0.66	0.52	0.52	0.25	0.25		
Sat Flow, veh/h	3250	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	306	459	965	6	47	370		
Grp Sat Flow(s),veh/h/ln	1625	1759	1881	1599	1738	1599		
Q Serve(g_s), s	9.0	11.4	48.3	0.2	1.0	21.8		
Cycle Q Clear(g_c), s	9.0	11.4	48.3	0.2	1.0	21.8		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	337	1168	986	838	861	396		
V/C Ratio(X)	0.91	0.39	0.98	0.01	0.05	0.93		
Avail Cap(c_a), veh/h	337	1178	996	847	974	448		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	42.7	7.4	22.4	11.0	27.6	35.5		
Incr Delay (d2), s/veh	26.4	0.1	23.2	0.0	0.0	24.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.3	5.5	31.3	0.1	0.5	20.0		
LnGrp Delay(d),s/veh	69.1	7.4	45.7	11.0	27.6	59.6		
LnGrp LOS	E	A	D	B	C	E		
Approach Vol, veh/h		765	971		417			
Approach Delay, s/veh		32.1	45.4		56.0			
Approach LOS		C	D		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		69.0		27.4	13.5	55.5		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		64.5		27.0	10.0	51.0		
Max Q Clear Time (g_c+I1), s		13.4		23.8	11.0	50.3		
Green Ext Time (p_c), s		0.4		0.0	0.0	0.2		
Intersection Summary								
HCM 2010 Ctrl Delay			42.7					
HCM 2010 LOS			D					

HCM 2010 Signalized Intersection Summary
 28: Davis Road & Reservation Road

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔	↕			↕			↕	↔
Traffic Volume (veh/h)	550	310	10	10	560	90	10	10	10	150	10	640
Future Volume (veh/h)	550	310	10	10	560	90	10	10	10	150	10	640
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	640	360	12	12	651	105	12	12	9	174	12	502
Adj No. of Lanes	2	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	684	2155	72	19	672	108	17	17	13	358	25	652
Arrive On Green	0.20	0.62	0.62	0.01	0.43	0.43	0.03	0.03	0.03	0.22	0.22	0.22
Sat Flow, veh/h	3442	3496	116	1774	1566	253	648	648	486	1649	114	1568
Grp Volume(v), veh/h	640	182	190	12	0	756	33	0	0	186	0	502
Grp Sat Flow(s),veh/h/ln	1721	1770	1842	1774	0	1818	1782	0	0	1762	0	1568
Q Serve(g_s), s	25.3	6.1	6.1	0.9	0.0	56.1	2.5	0.0	0.0	12.8	0.0	30.0
Cycle Q Clear(g_c), s	25.3	6.1	6.1	0.9	0.0	56.1	2.5	0.0	0.0	12.8	0.0	30.0
Prop In Lane	1.00		0.06	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	684	1091	1136	19	0	780	46	0	0	383	0	652
V/C Ratio(X)	0.94	0.17	0.17	0.63	0.00	0.97	0.71	0.00	0.00	0.49	0.00	0.77
Avail Cap(c_a), veh/h	748	1091	1136	385	0	790	387	0	0	383	0	652
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.4	11.3	11.3	68.0	0.0	38.5	66.7	0.0	0.0	47.3	0.0	34.6
Incr Delay (d2), s/veh	17.4	0.1	0.1	12.2	0.0	24.7	7.3	0.0	0.0	0.4	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	3.0	3.1	0.5	0.0	33.5	1.3	0.0	0.0	6.2	0.0	17.3
LnGrp Delay(d),s/veh	71.9	11.4	11.4	80.2	0.0	63.2	74.0	0.0	0.0	47.7	0.0	39.7
LnGrp LOS	E	B	B	F		E	E			D		D
Approach Vol, veh/h		1012			768			33			688	
Approach Delay, s/veh		49.7			63.5			74.0			41.8	
Approach LOS		D			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	90.1		35.0	31.3	64.2		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1), s	11.9	8.1		32.0	27.3	58.1		4.5				
Green Ext Time (p_c), s	0.0	3.3		0.0	0.2	1.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			52.1									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖	↖↗	↖↗		↖↗	↖↗		↖	↑↑	↖
Traffic Volume (veh/h)	50	280	880	20	170	70	810	70	10	40	50	20
Future Volume (veh/h)	50	280	880	20	170	70	810	70	10	40	50	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	56	315	0	22	191	77	910	79	10	45	56	22
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	190	423	359	88	475	185	1260	1011	126	84	403	267
Arrive On Green	0.06	0.23	0.00	0.03	0.20	0.20	0.25	0.32	0.32	0.05	0.11	0.11
Sat Flow, veh/h	3442	1863	1583	3312	2395	932	5052	3199	398	1774	3539	1575
Grp Volume(v), veh/h	56	315	0	22	134	134	910	44	45	45	56	22
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1625	1684	1787	1810	1774	1770	1575
Q Serve(g_s), s	0.7	7.4	0.0	0.3	3.2	3.4	7.7	0.8	0.8	1.2	0.7	0.6
Cycle Q Clear(g_c), s	0.7	7.4	0.0	0.3	3.2	3.4	7.7	0.8	0.8	1.2	0.7	0.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	190	423	359	88	338	322	1260	565	572	84	403	267
V/C Ratio(X)	0.29	0.75	0.00	0.25	0.40	0.42	0.72	0.08	0.08	0.54	0.14	0.08
Avail Cap(c_a), veh/h	366	714	607	353	653	623	1668	1058	1072	234	1394	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	16.9	0.0	22.4	16.4	16.5	16.1	11.3	11.3	21.9	18.7	16.4
Incr Delay (d2), s/veh	0.9	2.6	0.0	1.5	0.8	0.9	1.1	0.1	0.1	5.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.1	0.0	0.2	1.6	1.6	3.7	0.4	0.4	0.7	0.3	0.2
LnGrp Delay(d),s/veh	22.2	19.5	0.0	23.9	17.1	17.3	17.2	11.3	11.3	27.1	18.9	16.6
LnGrp LOS	C	B		C	B	B	B	B	B	C	B	B
Approach Vol, veh/h		371			290			999			123	
Approach Delay, s/veh		19.9			17.7			16.7			21.5	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.2	9.8	7.1	13.8	6.7	19.3	5.7	15.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	18.5	5.0	18.0	6.2	27.8	5.0	18.0				
Max Q Clear Time (g_c+1), s	19.7	2.7	2.7	5.4	3.2	2.8	2.3	9.4				
Green Ext Time (p_c), s	2.0	0.2	0.0	1.3	0.0	0.4	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖	↖	↗	↖	↖	↗	↖
Traffic Volume (veh/h)	30	100	80	510	40	410	50	410	280	310	650	50
Future Volume (veh/h)	30	100	80	510	40	410	50	410	280	310	650	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	586	46	0	57	471	0	356	747	0
Adj No. of Lanes	1	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	148	205	101	689	730	327	93	608	272	405	1226	548
Arrive On Green	0.09	0.09	0.09	0.20	0.21	0.00	0.05	0.17	0.00	0.23	0.35	0.00
Sat Flow, veh/h	1723	2232	1098	3442	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	34	87	88	586	46	0	57	471	0	356	747	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1611	1721	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	1.1	2.8	3.0	9.5	0.6	0.0	1.8	7.3	0.0	11.3	10.2	0.0
Cycle Q Clear(g_c), s	1.1	2.8	3.0	9.5	0.6	0.0	1.8	7.3	0.0	11.3	10.2	0.0
Prop In Lane	1.00		0.68	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	158	148	689	730	327	93	608	272	405	1226	548
V/C Ratio(X)	0.23	0.55	0.59	0.85	0.06	0.00	0.61	0.77	0.00	0.88	0.61	0.00
Avail Cap(c_a), veh/h	311	917	859	1214	2496	1117	170	1537	688	473	2131	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	25.2	25.3	22.4	18.6	0.0	27.0	23.1	0.0	21.7	15.7	0.0
Incr Delay (d2), s/veh	0.3	1.1	1.4	1.2	0.0	0.0	2.4	0.8	0.0	14.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	1.4	4.6	0.3	0.0	0.9	3.7	0.0	7.0	4.9	0.0
LnGrp Delay(d),s/veh	25.1	26.3	26.7	23.6	18.6	0.0	29.4	23.9	0.0	35.8	15.9	0.0
LnGrp LOS	C	C	C	C	B		C	C		D	B	
Approach Vol, veh/h		209			632			528			1103	
Approach Delay, s/veh		26.3			23.2			24.5			22.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	24.6	9.5	16.5	17.8	14.4	16.1	9.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	35.0	10.5	41.0	15.5	25.0	20.5	31.0				
Max Q Clear Time (g_c+1), s	13	12.2	3.1	2.6	13.3	9.3	11.5	5.0				
Green Ext Time (p_c), s	0.0	1.0	0.0	0.1	0.0	0.6	0.1	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue

Cuml w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	0	430	0	0	0	230	420	0	0	980	80
Future Volume (veh/h)	90	0	430	0	0	0	230	420	0	0	980	80
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900				1881	1881	0	0	1863	1863
Adj Flow Rate, veh/h	100	0	367				256	467	0	0	1089	28
Adj No. of Lanes	1	1	0				1	2	0	0	2	1
Peak Hour Factor	0.90	0.92	0.90				0.90	0.90	0.92	0.92	0.90	0.90
Percent Heavy Veh, %	1	2	1				1	1	0	0	2	2
Cap, veh/h	515	0	459				301	2064	0	0	1211	542
Arrive On Green	0.29	0.00	0.29				0.17	0.58	0.00	0.00	0.34	0.34
Sat Flow, veh/h	1792	0	1597				1792	3668	0	0	3632	1583
Grp Volume(v), veh/h	100	0	367				256	467	0	0	1089	28
Grp Sat Flow(s),veh/h/ln	1792	0	1597				1792	1787	0	0	1770	1583
Q Serve(g_s), s	2.8	0.0	14.2				9.2	4.2	0.0	0.0	19.5	0.8
Cycle Q Clear(g_c), s	2.8	0.0	14.2				9.2	4.2	0.0	0.0	19.5	0.8
Prop In Lane	1.00		1.00				1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	515	0	459				301	2064	0	0	1211	542
V/C Ratio(X)	0.19	0.00	0.80				0.85	0.23	0.00	0.00	0.90	0.05
Avail Cap(c_a), veh/h	1129	0	1007				417	2897	0	0	1806	808
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	22.0				26.9	6.8	0.0	0.0	20.8	14.7
Incr Delay (d2), s/veh	0.2	0.0	3.2				8.8	0.0	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	0.0	6.6				5.3	2.1	0.0	0.0	9.9	0.3
LnGrp Delay(d),s/veh	18.1	0.0	25.2				35.7	6.9	0.0	0.0	24.2	14.7
LnGrp LOS	B		C				D	A			C	B
Approach Vol, veh/h		467						723			1117	
Approach Delay, s/veh		23.7						17.1			23.9	
Approach LOS		C						B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	15.7	27.3				43.0		23.7				
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5				
Max Green Setting (Gmax), s	15.5	34.0				54.0		42.0				
Max Q Clear Time (g_c+M), s	15.2	21.5				6.2		16.2				
Green Ext Time (p_c), s	0.0	1.3				0.5		2.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

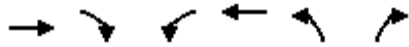
Cuml w/ Proj, PM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗↗	↖↖↖	↑↑↑	↗↗	↖↖↖	↑	↗↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	140	1370	710	330	1160	140	830	110	540	90	100	150
Future Volume (veh/h)	140	1370	710	330	1160	140	830	110	540	90	100	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	146	1427	516	344	1208	146	865	115	437	94	104	151
Adj No. of Lanes	2	3	2	3	3	1	3	1	2	2	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	242	1643	900	481	1773	640	989	478	714	194	418	300
Arrive On Green	0.07	0.32	0.32	0.10	0.35	0.35	0.20	0.26	0.26	0.06	0.12	0.12
Sat Flow, veh/h	3442	5085	2787	5003	5085	1583	4860	1810	2702	3510	3610	1611
Grp Volume(v), veh/h	146	1427	516	344	1208	146	865	115	437	94	104	151
Grp Sat Flow(s),veh/h/ln	1721	1695	1393	1668	1695	1583	1620	1810	1351	1755	1805	1611
Q Serve(g_s), s	2.8	18.1	10.5	4.6	13.9	4.1	11.8	3.4	9.7	1.8	1.8	5.8
Cycle Q Clear(g_c), s	2.8	18.1	10.5	4.6	13.9	4.1	11.8	3.4	9.7	1.8	1.8	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	1643	900	481	1773	640	989	478	714	194	418	300
V/C Ratio(X)	0.60	0.87	0.57	0.72	0.68	0.23	0.87	0.24	0.61	0.48	0.25	0.50
Avail Cap(c_a), veh/h	307	2028	1111	519	2102	742	1185	846	1263	292	1107	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	21.8	19.3	30.0	19.0	13.4	26.4	19.8	22.1	31.4	27.6	25.0
Incr Delay (d2), s/veh	0.9	3.1	0.2	3.5	0.5	0.1	5.8	0.1	0.3	0.7	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	8.9	4.1	2.3	6.6	1.8	5.8	1.7	3.6	0.9	0.9	2.6
LnGrp Delay(d),s/veh	31.8	24.9	19.5	33.5	19.5	13.5	32.2	19.9	22.4	32.1	27.7	25.5
LnGrp LOS	C	C	B	C	B	B	C	B	C	C	C	C
Approach Vol, veh/h		2089			1698			1417			349	
Approach Delay, s/veh		24.1			21.8			28.2			27.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	27.4	17.4	12.5	9.3	29.2	7.3	22.7				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	27.3	16.7	21.0	6.1	28.3	5.7	32.0					
Max Q Clear Time (g_c+1), s	20.1	13.8	7.8	4.8	15.9	3.8	11.7					
Green Ext Time (p_c), s	0.0	2.0	0.1	0.1	0.0	1.9	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				24.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 10: Imjin Road & Imjin Parkway

Cuml w/ Proj, PM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵↵	↑↑	↵↵	↵		
Traffic Volume (veh/h)	1590	150	260	920	250	520		
Future Volume (veh/h)	1590	150	260	920	250	520		
Number	2	12	1	6	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1845	1845	1810	1810		
Adj Flow Rate, veh/h	1674	145	274	968	263	547		
Adj No. of Lanes	2	0	2	2	1	2		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	3	3	5	5		
Cap, veh/h	1798	154	348	2446	344	615		
Arrive On Green	0.54	0.54	0.10	0.70	0.20	0.20		
Sat Flow, veh/h	3393	283	3408	3597	1723	3076		
Grp Volume(v), veh/h	889	930	274	968	263	547		
Grp Sat Flow(s),veh/h/ln	1770	1813	1704	1752	1723	1538		
Q Serve(g_s), s	40.5	42.2	6.9	10.1	12.7	15.2		
Cycle Q Clear(g_c), s	40.5	42.2	6.9	10.1	12.7	15.2		
Prop In Lane		0.16	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	964	988	348	2446	344	615		
V/C Ratio(X)	0.92	0.94	0.79	0.40	0.76	0.89		
Avail Cap(c_a), veh/h	980	1004	376	2506	355	633		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	18.3	18.7	38.6	5.5	33.2	34.3		
Incr Delay (d2), s/veh	13.6	16.1	10.0	0.1	9.3	14.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	23.2	25.3	3.7	4.9	6.9	7.7		
LnGrp Delay(d),s/veh	32.0	34.8	48.6	5.6	42.5	48.7		
LnGrp LOS	C	C	D	A	D	D		
Approach Vol, veh/h	1819			1242	810			
Approach Delay, s/veh	33.4			15.1	46.7			
Approach LOS	C			B	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	3.5	52.4				65.9		22.1
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	48.7					62.9		18.1
Max Q Clear Time (g_c+1), s	44.2					12.1		17.2
Green Ext Time (p_c), s	0.1	3.8				7.7		0.3
Intersection Summary								
HCM 2010 Ctrl Delay			30.3					
HCM 2010 LOS			C					
Notes								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑	↖↗	↖	↑	↖	↖↗	↑↑	↖	↖↗	↑↑↑	↖
Traffic Volume (veh/h)	110	20	1730	10	40	30	1000	630	10	20	950	200
Future Volume (veh/h)	110	20	1730	10	40	30	1000	630	10	20	950	200
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	124	22	1511	11	45	21	1124	708	4	22	1067	159
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	3	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	842	456	1362	68	72	61	842	1946	869	56	1636	501
Arrive On Green	0.24	0.24	0.24	0.04	0.04	0.04	0.24	0.55	0.55	0.02	0.32	0.32
Sat Flow, veh/h	3442	1863	2781	1560	1638	1383	3442	3539	1581	3442	5085	1559
Grp Volume(v), veh/h	124	22	1511	11	45	21	1124	708	4	22	1067	159
Grp Sat Flow(s),veh/h/ln	1721	1863	1390	1560	1638	1383	1721	1770	1581	1721	1695	1559
Q Serve(g_s), s	4.0	1.3	35.0	1.0	3.9	2.1	35.0	16.1	0.2	0.9	25.8	11.0
Cycle Q Clear(g_c), s	4.0	1.3	35.0	1.0	3.9	2.1	35.0	16.1	0.2	0.9	25.8	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	842	456	1362	68	72	61	842	1946	869	56	1636	501
V/C Ratio(X)	0.15	0.05	1.11	0.16	0.63	0.35	1.34	0.36	0.00	0.39	0.65	0.32
Avail Cap(c_a), veh/h	842	456	1362	338	355	300	842	1946	869	481	2132	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	41.3	36.6	65.9	67.3	66.4	54.0	18.1	14.5	69.7	41.7	36.7
Incr Delay (d2), s/veh	0.0	0.0	60.2	0.4	3.3	1.3	158.9	0.3	0.0	1.6	1.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	38.3	0.4	1.8	0.8	35.2	8.0	0.1	0.4	12.2	4.9
LnGrp Delay(d),s/veh	42.4	41.3	96.8	66.3	70.6	67.7	213.0	18.4	14.5	71.3	42.9	37.7
LnGrp LOS	D	D	F	E	E	E	F	B	B	E	D	D
Approach Vol, veh/h		1657			77			1836			1248	
Approach Delay, s/veh		92.0			69.2			137.5			42.7	
Approach LOS		F			E			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	52.2		11.3	6.4	84.9		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+R), s	37.0	27.8		5.9	2.9	18.1		37.0				
Green Ext Time (p_c), s	0.0	18.2		0.2	0.0	10.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			96.2									
HCM 2010 LOS			F									
Notes												

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	430	290	450	1350	270		
Future Volume (veh/h)	110	430	290	450	1350	270		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	134	479	354	549	1646	311		
Adj No. of Lanes	1	2	2	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	318	838	422	2543	1636	300		
Arrive On Green	0.18	0.18	0.12	0.72	0.55	0.55		
Sat Flow, veh/h	1757	2760	3442	3632	3052	542		
Grp Volume(v), veh/h	134	479	354	549	953	1004		
Grp Sat Flow(s),veh/h/ln	1757	1380	1721	1770	1752	1749		
Q Serve(g_s), s	7.3	15.9	10.9	5.6	57.9	60.0		
Cycle Q Clear(g_c), s	7.3	15.9	10.9	5.6	57.9	60.0		
Prop In Lane	1.00	1.00	1.00			0.31		
Lane Grp Cap(c), veh/h	318	838	422	2543	969	967		
V/C Ratio(X)	0.42	0.57	0.84	0.22	0.98	1.04		
Avail Cap(c_a), veh/h	437	1025	634	2543	969	967		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.4	31.9	46.6	5.1	23.8	24.3		
Incr Delay (d2), s/veh	0.9	0.6	3.9	0.1	25.1	39.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.7	6.1	5.4	2.8	34.6	39.3		
LnGrp Delay(d),s/veh	40.3	32.5	50.5	5.2	48.9	63.6		
LnGrp LOS	D	C	D	A	D	F		
Approach Vol, veh/h	613			903	1957			
Approach Delay, s/veh	34.2			22.9	56.4			
Approach LOS	C			C	E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	18.0	66.4				84.4		24.1
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	28	60.0				60.0		27.0
Max Q Clear Time (g_c+M), s	12.5	62.0				7.6		17.9
Green Ext Time (p_c), s	0.4	0.0				6.7		1.8
Intersection Summary								
HCM 2010 Ctrl Delay			43.8					
HCM 2010 LOS			D					
Notes								

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

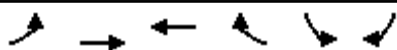
Cuml w/ Proj, PM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑		↔	↑	↔			
Traffic Volume (veh/h)	640	140	430	410	50	750		
Future Volume (veh/h)	640	140	430	410	50	750		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1520	1900	1881	1881	1845	1900		
Adj Flow Rate, veh/h	660	131	443	423	52	492		
Adj No. of Lanes	1	0	2	1	0	0		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	25	25	1	1	0	0		
Cap, veh/h	545	108	481	1158	48	451		
Arrive On Green	0.44	0.44	0.14	0.62	0.32	0.32		
Sat Flow, veh/h	1232	245	3476	1881	151	1431		
Grp Volume(v), veh/h	0	791	443	423	545	0		
Grp Sat Flow(s),veh/h/ln	0	1477	1738	1881	1585	0		
Q Serve(g_s), s	0.0	57.5	16.4	14.5	41.0	0.0		
Cycle Q Clear(g_c), s	0.0	57.5	16.4	14.5	41.0	0.0		
Prop In Lane		0.17	1.00		0.10	0.90		
Lane Grp Cap(c), veh/h	0	653	481	1158	500	0		
V/C Ratio(X)	0.00	1.21	0.92	0.37	1.09	0.00		
Avail Cap(c_a), veh/h	0	653	481	1158	500	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	36.3	55.3	12.4	44.5	0.0		
Incr Delay (d2), s/veh	0.0	108.7	23.1	0.2	67.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	43.1	9.4	7.6	27.2	0.0		
LnGrp Delay(d),s/veh	0.0	145.0	78.3	12.6	111.6	0.0		
LnGrp LOS		F	E	B	F			
Approach Vol, veh/h	791			866	545			
Approach Delay, s/veh	145.0			46.2	111.6			
Approach LOS	F			D	F			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		45.5	22.5	62.0				84.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		41.0	18.0	57.5				80.0
Max Q Clear Time (g_c+I1), s		43.0	18.4	59.5				16.5
Green Ext Time (p_c), s		0.0	0.0	0.0				2.8
Intersection Summary								
HCM 2010 Ctrl Delay			97.9					
HCM 2010 LOS			F					
Notes								

HCM 2010 Signalized Intersection Summary
 23: Inter-Garrison Road & Abrams Drive

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶↷	↑	↑	↶↷	↶↷	↶↷		
Traffic Volume (veh/h)	630	760	420	30	20	420		
Future Volume (veh/h)	630	760	420	30	20	420		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1759	1759	1881	1881	1881	1881		
Adj Flow Rate, veh/h	663	800	442	27	21	247		
Adj No. of Lanes	2	1	1	1	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	8	8	1	1	1	1		
Cap, veh/h	794	1068	524	446	656	302		
Arrive On Green	0.24	0.61	0.28	0.28	0.19	0.19		
Sat Flow, veh/h	3250	1759	1881	1599	3476	1599		
Grp Volume(v), veh/h	663	800	442	27	21	247		
Grp Sat Flow(s),veh/h/ln	1625	1759	1881	1599	1738	1599		
Q Serve(g_s), s	8.1	13.6	9.2	0.5	0.2	6.2		
Cycle Q Clear(g_c), s	8.1	13.6	9.2	0.5	0.2	6.2		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	794	1068	524	446	656	302		
V/C Ratio(X)	0.84	0.75	0.84	0.06	0.03	0.82		
Avail Cap(c_a), veh/h	2148	2727	1514	1287	2255	1037		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	14.9	5.9	14.1	11.0	13.8	16.2		
Incr Delay (d2), s/veh	0.9	0.4	1.4	0.0	0.0	2.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.7	6.6	5.0	0.2	0.1	5.3		
LnGrp Delay(d),s/veh	15.8	6.3	15.6	11.0	13.8	18.3		
LnGrp LOS	B	A	B	B	B	B		
Approach Vol, veh/h		1463	469		268			
Approach Delay, s/veh		10.6	15.3		18.0			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.3		11.4	13.7	16.6		
Change Period (Y+Rc), s		5.0		3.5	3.5	5.0		
Max Green Setting (Gmax), s		64.5		27.0	27.5	33.5		
Max Q Clear Time (g_c+I1), s		15.6		8.2	10.1	11.2		
Green Ext Time (p_c), s		0.8		0.1	0.1	0.4		
Intersection Summary								
HCM 2010 Ctrl Delay			12.5					
HCM 2010 LOS			B					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cuml w/ Proj, PM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗			↕			↖ ↗	↖ ↗
Traffic Volume (veh/h)	1260	500	10	10	360	100	10	10	10	120	10	540
Future Volume (veh/h)	1260	500	10	10	360	100	10	10	10	120	10	540
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	1340	532	11	11	383	106	11	11	8	128	11	353
Adj No. of Lanes	2	2	0	1	1	0	0	1	0	0	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	1023	2154	45	19	452	125	18	18	13	287	25	743
Arrive On Green	0.30	0.61	0.61	0.01	0.32	0.32	0.03	0.03	0.03	0.18	0.18	0.18
Sat Flow, veh/h	3442	3546	73	1774	1405	389	654	654	476	1624	140	1568
Grp Volume(v), veh/h	1340	265	278	11	0	489	30	0	0	139	0	353
Grp Sat Flow(s),veh/h/ln	1721	1770	1850	1774	0	1794	1783	0	0	1763	0	1568
Q Serve(g_s), s	30.0	7.0	7.0	0.6	0.0	25.6	1.7	0.0	0.0	7.1	0.0	15.4
Cycle Q Clear(g_c), s	30.0	7.0	7.0	0.6	0.0	25.6	1.7	0.0	0.0	7.1	0.0	15.4
Prop In Lane	1.00		0.04	1.00		0.22	0.37		0.27	0.92		1.00
Lane Grp Cap(c), veh/h	1023	1075	1124	19	0	577	50	0	0	311	0	743
V/C Ratio(X)	1.31	0.25	0.25	0.59	0.00	0.85	0.60	0.00	0.00	0.45	0.00	0.48
Avail Cap(c_a), veh/h	1023	1075	1124	528	0	1067	530	0	0	524	0	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.4	9.1	9.1	49.7	0.0	31.9	48.5	0.0	0.0	37.1	0.0	18.0
Incr Delay (d2), s/veh	146.3	0.2	0.2	10.5	0.0	5.5	4.1	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	35.0	3.4	3.6	0.4	0.0	13.5	0.9	0.0	0.0	3.5	0.0	6.7
LnGrp Delay(d),s/veh	181.7	9.3	9.3	60.2	0.0	37.4	52.6	0.0	0.0	37.5	0.0	18.2
LnGrp LOS	F	A	A	E		D	D			D		B
Approach Vol, veh/h		1883			500			30			492	
Approach Delay, s/veh		132.0			37.9			52.6			23.7	
Approach LOS		F			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	66.3		22.8	33.8	37.4		6.8				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1), s	12.6	9.0		17.4	32.0	27.6		3.7				
Green Ext Time (p_c), s	0.0	5.1		0.4	0.0	4.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				96.6								
HCM 2010 LOS				F								
Notes												

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↔↔	↕↔		↔↔↔	↕↔		↗	↕↕	↗
Traffic Volume (veh/h)	50	280	690	40	250	50	670	70	20	60	100	40
Future Volume (veh/h)	50	280	690	40	250	50	670	70	20	60	100	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	52	292	0	42	1000	50	698	73	20	62	104	42
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.25	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	173	634	539	144	1100	55	909	628	166	100	356	238
Arrive On Green	0.05	0.34	0.00	0.04	0.33	0.33	0.18	0.22	0.22	0.06	0.10	0.10
Sat Flow, veh/h	3442	1863	1583	3312	3301	165	5052	2797	738	1774	3539	1574
Grp Volume(v), veh/h	52	292	0	42	516	534	698	46	47	62	104	42
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1763	1684	1787	1749	1774	1770	1574
Q Serve(g_s), s	0.8	6.6	0.0	0.7	15.5	15.5	7.0	1.1	1.2	1.8	1.5	1.2
Cycle Q Clear(g_c), s	0.8	6.6	0.0	0.7	15.5	15.5	7.0	1.1	1.2	1.8	1.5	1.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	173	634	539	144	567	587	909	401	392	100	356	238
V/C Ratio(X)	0.30	0.46	0.00	0.29	0.91	0.91	0.77	0.11	0.12	0.62	0.29	0.18
Avail Cap(c_a), veh/h	321	634	539	309	572	592	1028	737	721	228	1196	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	13.8	0.0	24.8	17.1	17.1	20.9	16.5	16.6	24.7	22.3	19.8
Incr Delay (d2), s/veh	1.0	0.5	0.0	1.1	18.5	18.0	3.2	0.1	0.1	6.2	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.4	0.0	0.3	10.1	10.4	3.5	0.5	0.6	1.1	0.7	0.6
LnGrp Delay(d),s/veh	25.5	14.4	0.0	25.9	35.6	35.1	24.1	16.7	16.7	30.9	22.8	20.2
LnGrp LOS	C	B		C	D	D	C	B	B	C	C	C
Approach Vol, veh/h		344			1092			791			208	
Approach Delay, s/veh		16.0			35.0			23.2			24.7	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.1	9.9	7.2	22.4	7.5	16.5	6.8	22.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.1	18.1	5.0	18.0	6.9	22.1	5.0	18.0				
Max Q Clear Time (g_c+1/3), s	3.5	3.5	2.8	17.5	3.8	3.2	2.7	8.6				
Green Ext Time (p_c), s	0.6	0.5	0.0	0.3	0.0	0.4	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	290	50	380	60	340	460	400	350	50
Future Volume (veh/h)	20	20	30	290	50	380	60	340	460	400	350	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	326	56	0	67	382	0	449	393	0
Adj No. of Lanes	1	2	0	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	187	267	36	463	404	181	112	553	248	407	1138	509
Arrive On Green	0.11	0.09	0.09	0.13	0.11	0.00	0.06	0.15	0.00	0.23	0.32	0.00
Sat Flow, veh/h	1723	3049	407	3442	3539	1583	1792	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	22	12	13	326	56	0	67	382	0	449	393	0
Grp Sat Flow(s),veh/h/ln	1723	1719	1736	1721	1770	1583	1792	1787	1599	1774	1770	1583
Q Serve(g_s), s	0.5	0.3	0.3	4.1	0.7	0.0	1.7	4.6	0.0	10.5	3.9	0.0
Cycle Q Clear(g_c), s	0.5	0.3	0.3	4.1	0.7	0.0	1.7	4.6	0.0	10.5	3.9	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	151	152	463	404	181	112	553	248	407	1138	509
V/C Ratio(X)	0.12	0.08	0.08	0.70	0.14	0.00	0.60	0.69	0.00	1.10	0.35	0.00
Avail Cap(c_a), veh/h	772	1146	1157	1542	2359	1055	411	1992	891	407	1972	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.4	19.2	19.2	18.9	18.2	0.0	20.9	18.3	0.0	17.6	11.8	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.7	0.1	0.0	1.9	0.6	0.0	75.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.2	2.0	0.3	0.0	0.9	2.3	0.0	13.5	1.9	0.0
LnGrp Delay(d),s/veh	18.5	19.3	19.3	19.7	18.3	0.0	22.8	18.9	0.0	93.1	11.9	0.0
LnGrp LOS	B	B	B	B	B		C	B		F	B	
Approach Vol, veh/h		47			382			449			842	
Approach Delay, s/veh		18.9			19.5			19.5			55.2	
Approach LOS		B			B			B			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	19.2	9.5	9.7	15.0	11.6	10.7	8.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	25.5	20.5	30.5	10.5	25.5	20.5	30.5				
Max Q Clear Time (g_c+1), s	13.5	5.9	2.5	2.7	12.5	6.6	6.1	2.3				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.1	0.0	0.5	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				36.9								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 47: General Jim Moore Boulevard & Coe Avenue

Cuml w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗					↖	↑↑			↑↑	↗
Traffic Volume (veh/h)	60	0	100	0	0	0	150	980	0	0	440	50
Future Volume (veh/h)	60	0	100	0	0	0	150	980	0	0	440	50
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1900				1881	1881	0	0	1863	1863
Adj Flow Rate, veh/h	67	0	0				169	1101	0	0	494	-6
Adj No. of Lanes	1	1	0				1	2	0	0	2	1
Peak Hour Factor	0.89	0.89	0.89				0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	2	1				1	1	0	0	2	2
Cap, veh/h	144	151	0				250	1975	0	0	812	363
Arrive On Green	0.08	0.00	0.00				0.14	0.55	0.00	0.00	0.23	0.00
Sat Flow, veh/h	1792	1881	0				1792	3668	0	0	3632	1583
Grp Volume(v), veh/h	67	0	0				169	1101	0	0	494	-6
Grp Sat Flow(s),veh/h/ln	1792	1881	0				1792	1787	0	0	1770	1583
Q Serve(g_s), s	0.9	0.0	0.0				2.2	4.9	0.0	0.0	3.1	0.0
Cycle Q Clear(g_c), s	0.9	0.0	0.0				2.2	4.9	0.0	0.0	3.1	0.0
Prop In Lane	1.00		0.00				1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	144	151	0				250	1975	0	0	812	363
V/C Ratio(X)	0.47	0.00	0.00				0.68	0.56	0.00	0.00	0.61	-0.02
Avail Cap(c_a), veh/h	3070	3223	0				402	6416	0	0	4909	2196
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	10.8	0.0	0.0				10.0	3.5	0.0	0.0	8.5	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.0				1.2	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0				1.2	2.3	0.0	0.0	1.5	0.0
LnGrp Delay(d),s/veh	11.6	0.0	0.0				11.2	3.6	0.0	0.0	8.7	0.0
LnGrp LOS	B						B	A			A	
Approach Vol, veh/h		67						1270			488	
Approach Delay, s/veh		11.6						4.6			8.8	
Approach LOS		B						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	7.9	10.1				18.0		6.5				
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5				
Max Green Setting (Gmax), s	5	34.0				44.0		42.0				
Max Q Clear Time (g_c+1), s	1	5.1				6.9		2.9				
Green Ext Time (p_c), s	0.0	0.6				1.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			6.0									
HCM 2010 LOS			A									

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cuml w/ Eastside Pkwy w/ Proj, AM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↑↑↑	↗↗	↖↖↖	↑↑↑	↗↗	↖↖↖	↑	↗↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	180	1050	910	460	860	120	420	90	200	50	100	210
Future Volume (veh/h)	180	1050	910	460	860	120	420	90	200	50	100	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1810	1810	1810	1900	1900	1900
Adj Flow Rate, veh/h	184	1071	710	469	878	122	429	92	82	51	102	209
Adj No. of Lanes	2	3	2	3	3	1	3	1	2	2	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	5	5	5	0	0	0
Cap, veh/h	295	1538	843	629	1742	622	585	398	594	177	542	380
Arrive On Green	0.09	0.30	0.30	0.13	0.34	0.34	0.12	0.22	0.22	0.05	0.15	0.15
Sat Flow, veh/h	3442	5085	2787	5003	5085	1583	4860	1810	2701	3510	3610	1612
Grp Volume(v), veh/h	184	1071	710	469	878	122	429	92	82	51	102	209
Grp Sat Flow(s),veh/h/ln	1721	1695	1393	1668	1695	1583	1620	1810	1350	1755	1805	1612
Q Serve(g_s), s	3.1	11.1	14.2	5.4	8.2	3.0	5.1	2.5	1.5	0.8	1.5	6.8
Cycle Q Clear(g_c), s	3.1	11.1	14.2	5.4	8.2	3.0	5.1	2.5	1.5	0.8	1.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1538	843	629	1742	622	585	398	594	177	542	380
V/C Ratio(X)	0.62	0.70	0.84	0.75	0.50	0.20	0.73	0.23	0.14	0.29	0.19	0.55
Avail Cap(c_a), veh/h	869	2568	1407	1263	2568	879	1636	640	955	591	1276	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	18.3	19.4	25.1	15.5	11.9	25.2	19.0	18.6	27.2	22.1	19.9
Incr Delay (d2), s/veh	0.8	0.2	1.0	0.7	0.1	0.1	0.7	0.1	0.0	0.3	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	5.2	5.5	2.5	3.8	1.3	2.3	1.2	0.5	0.4	0.7	3.0
LnGrp Delay(d),s/veh	27.0	18.5	20.4	25.7	15.6	11.9	25.9	19.1	18.7	27.5	22.1	20.4
LnGrp LOS	C	B	C	C	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1965			1469			603			362	
Approach Delay, s/veh		20.0			18.5			23.9			21.9	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	23.3	10.7	13.5	9.6	25.6	6.5	17.7				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+1), s	15.0	16.2	7.1	8.8	5.1	10.2	2.8	4.5				
Green Ext Time (p_c), s	0.1	1.8	0.1	0.1	0.0	1.4	0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↔↔	↔	↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	190	50	670	10	20	30	950	880	20	60	590	90
Future Volume (veh/h)	190	50	670	10	20	30	950	880	20	60	590	90
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1638	1638	1638	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	204	54	306	11	22	19	1022	946	16	65	634	34
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	3	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	16	16	16	2	2	2	2	2	2
Cap, veh/h	388	210	1217	60	63	53	1116	1952	872	131	1350	414
Arrive On Green	0.11	0.11	0.11	0.04	0.04	0.04	0.32	0.55	0.55	0.04	0.27	0.27
Sat Flow, veh/h	3442	1863	2774	1560	1638	1384	3442	3539	1581	3442	5085	1558
Grp Volume(v), veh/h	204	54	306	11	22	19	1022	946	16	65	634	34
Grp Sat Flow(s),veh/h/ln	1721	1863	1387	1560	1638	1384	1721	1770	1581	1721	1695	1558
Q Serve(g_s), s	4.5	2.1	5.6	0.5	1.1	1.1	22.9	13.1	0.4	1.5	8.4	1.3
Cycle Q Clear(g_c), s	4.5	2.1	5.6	0.5	1.1	1.1	22.9	13.1	0.4	1.5	8.4	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	388	210	1217	60	63	53	1116	1952	872	131	1350	414
V/C Ratio(X)	0.53	0.26	0.25	0.18	0.35	0.36	0.92	0.48	0.02	0.50	0.47	0.08
Avail Cap(c_a), veh/h	1501	812	2114	603	633	535	1501	2205	985	858	3802	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	32.5	14.3	37.4	37.6	37.6	26.1	11.0	8.1	37.8	24.7	22.1
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.5	1.2	1.5	6.2	0.5	0.0	1.1	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	1.1	2.1	0.2	0.5	0.4	11.7	6.4	0.2	0.7	4.0	0.6
LnGrp Delay(d),s/veh	34.0	32.8	14.3	37.9	38.9	39.2	32.3	11.5	8.2	38.9	25.4	22.4
LnGrp LOS	C	C	B	D	D	D	C	B	A	D	C	C
Approach Vol, veh/h		564			52			1984			733	
Approach Delay, s/veh		23.2			38.8			22.2			26.5	
Approach LOS		C			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	30.1	27.5		8.1	7.2	50.5		14.6				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+2), s	24.9	10.4		3.1	3.5	15.1		7.6				
Green Ext Time (p_c), s	1.1	10.7		0.1	0.0	15.6		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	110	610	900	460	260	160		
Future Volume (veh/h)	110	610	900	460	260	160		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1845	1845	1863	1863	1845	1900		
Adj Flow Rate, veh/h	117	381	957	489	277	154		
Adj No. of Lanes	1	2	2	2	2	0		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	3	3	2	2	3	3		
Cap, veh/h	274	1307	1092	2271	522	282		
Arrive On Green	0.16	0.16	0.32	0.64	0.24	0.24		
Sat Flow, veh/h	1757	2760	3442	3632	2291	1188		
Grp Volume(v), veh/h	117	381	957	489	219	212		
Grp Sat Flow(s),veh/h/ln	1757	1380	1721	1770	1752	1635		
Q Serve(g_s), s	3.2	4.5	14.2	3.1	5.9	6.1		
Cycle Q Clear(g_c), s	3.2	4.5	14.2	3.1	5.9	6.1		
Prop In Lane	1.00	1.00	1.00			0.73		
Lane Grp Cap(c), veh/h	274	1307	1092	2271	416	388		
V/C Ratio(X)	0.43	0.29	0.88	0.22	0.53	0.55		
Avail Cap(c_a), veh/h	880	2257	1277	3938	1950	1819		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	20.6	8.7	17.4	4.0	17.9	18.0		
Incr Delay (d2), s/veh	1.0	0.1	5.7	0.1	1.9	2.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.7	7.5	1.5	3.0	3.0		
LnGrp Delay(d),s/veh	21.6	8.8	23.1	4.1	19.9	20.3		
LnGrp LOS	C	A	C	A	B	C		
Approach Vol, veh/h	498			1446	431			
Approach Delay, s/veh	11.8			16.7	20.1			
Approach LOS	B			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.8	19.2				41.0		12.9
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	60.0	60.0				60.0		27.0
Max Q Clear Time (g_c+M), s	8.1	8.1				5.1		6.5
Green Ext Time (p_c), s	0.9	4.7				5.8		1.9
Intersection Summary								
HCM 2010 Ctrl Delay			16.3					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

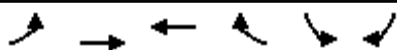
Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↩		↩↩	↑	↩↩			
Traffic Volume (veh/h)	220	120	520	530	50	290		
Future Volume (veh/h)	220	120	520	530	50	290		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1520	1900	1881	1881	1845	1900		
Adj Flow Rate, veh/h	253	46	598	609	57	149		
Adj No. of Lanes	1	0	2	1	0	0		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87		
Percent Heavy Veh, %	25	25	1	1	0	0		
Cap, veh/h	335	61	865	1171	74	192		
Arrive On Green	0.27	0.27	0.25	0.62	0.17	0.17		
Sat Flow, veh/h	1252	228	3476	1881	445	1164		
Grp Volume(v), veh/h	0	299	598	609	207	0		
Grp Sat Flow(s),veh/h/ln	0	1480	1738	1881	1617	0		
Q Serve(g_s), s	0.0	7.9	6.6	7.7	5.2	0.0		
Cycle Q Clear(g_c), s	0.0	7.9	6.6	7.7	5.2	0.0		
Prop In Lane		0.15	1.00		0.28	0.72		
Lane Grp Cap(c), veh/h	0	396	865	1171	267	0		
V/C Ratio(X)	0.00	0.76	0.69	0.52	0.77	0.00		
Avail Cap(c_a), veh/h	0	855	1861	2294	736	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	14.3	14.4	4.5	16.9	0.0		
Incr Delay (d2), s/veh	0.0	3.0	1.0	0.4	4.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	3.5	3.3	4.0	2.7	0.0		
LnGrp Delay(d),s/veh	0.0	17.2	15.5	4.8	21.7	0.0		
LnGrp LOS		B	B	A	C			
Approach Vol, veh/h	299			1207	207			
Approach Delay, s/veh	17.2			10.1	21.7			
Approach LOS	B			B	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		11.5	15.0	15.8				30.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		19.3	22.7	24.5				51.7
Max Q Clear Time (g_c+I1), s		7.2	8.6	9.9				9.7
Green Ext Time (p_c), s		0.5	1.9	1.5				4.5
Intersection Summary								
HCM 2010 Ctrl Delay			12.7					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 25: Inter-Garrison Road & Sherman Boulevard

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	600	130	310	130	90	820		
Future Volume (veh/h)	600	130	310	130	90	820		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1810	1810	1881	1900	1900	1900		
Adj Flow Rate, veh/h	732	159	378	146	110	921		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	5	5	1	1	0	0		
Cap, veh/h	729	1341	359	139	321	969		
Arrive On Green	0.42	0.74	0.28	0.28	0.18	0.18		
Sat Flow, veh/h	1723	1810	1293	500	1810	1615		
Grp Volume(v), veh/h	732	159	0	524	110	921		
Grp Sat Flow(s),veh/h/ln	1723	1810	0	1793	1810	1615		
Q Serve(g_s), s	46.5	2.7	0.0	30.5	5.9	19.5		
Cycle Q Clear(g_c), s	46.5	2.7	0.0	30.5	5.9	19.5		
Prop In Lane	1.00			0.28	1.00	1.00		
Lane Grp Cap(c), veh/h	729	1341	0	497	321	969		
V/C Ratio(X)	1.00	0.12	0.00	1.05	0.34	0.95		
Avail Cap(c_a), veh/h	729	1341	0	497	321	969		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	31.7	4.0	0.0	39.8	39.6	20.5		
Incr Delay (d2), s/veh	34.5	0.0	0.0	55.3	0.6	18.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	19.0	1.4	0.0	22.7	3.0	44.0		
LnGrp Delay(d),s/veh	66.3	4.1	0.0	95.1	40.3	38.6		
LnGrp LOS	F	A		F	D	D		
Approach Vol, veh/h		891	524		1031			
Approach Delay, s/veh		55.2	95.1		38.8			
Approach LOS		E	F		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				86.0		24.0	51.0	35.0
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				81.5		19.5	46.5	30.5
Max Q Clear Time (g_c+I1), s				4.7		21.5	48.5	32.5
Green Ext Time (p_c), s				1.1		0.0	0.0	0.0
Intersection Summary								
HCM 2010 Ctrl Delay			56.8					
HCM 2010 LOS			E					

HCM 2010 Signalized Intersection Summary
28: Davis Road & Reservation Road

Cuml w/ Eastside Pkwy w/ Proj, AM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↔		↔	↔			↔			↔	↔↔
Traffic Volume (veh/h)	750	320	10	10	570	90	10	10	10	150	10	850
Future Volume (veh/h)	750	320	10	10	570	90	10	10	10	150	10	850
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1900	1900	1900	1845	1845
Adj Flow Rate, veh/h	872	372	12	12	663	105	12	12	9	174	12	746
Adj No. of Lanes	2	2	0	1	1	0	0	1	0	0	1	2
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	0	0	0	3	3	3
Cap, veh/h	730	2187	70	19	666	105	17	17	12	350	24	1171
Arrive On Green	0.21	0.63	0.63	0.01	0.42	0.42	0.03	0.03	0.03	0.21	0.21	0.21
Sat Flow, veh/h	3442	3500	113	1774	1570	249	648	648	486	1649	114	2760
Grp Volume(v), veh/h	872	188	196	12	0	768	33	0	0	186	0	746
Grp Sat Flow(s),veh/h/ln	1721	1770	1843	1774	0	1819	1782	0	0	1762	0	1380
Q Serve(g_s), s	30.0	6.3	6.3	1.0	0.0	59.5	2.6	0.0	0.0	13.1	0.0	30.0
Cycle Q Clear(g_c), s	30.0	6.3	6.3	1.0	0.0	59.5	2.6	0.0	0.0	13.1	0.0	30.0
Prop In Lane	1.00		0.06	1.00		0.14	0.36		0.27	0.94		1.00
Lane Grp Cap(c), veh/h	730	1106	1152	19	0	772	46	0	0	374	0	1171
V/C Ratio(X)	1.19	0.17	0.17	0.64	0.00	1.00	0.72	0.00	0.00	0.50	0.00	0.64
Avail Cap(c_a), veh/h	730	1106	1152	376	0	772	378	0	0	374	0	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	11.1	11.1	69.7	0.0	40.6	68.4	0.0	0.0	49.1	0.0	32.1
Incr Delay (d2), s/veh	100.7	0.1	0.1	12.4	0.0	31.2	7.7	0.0	0.0	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	3.1	3.3	0.5	0.0	36.6	1.4	0.0	0.0	6.4	0.0	11.6
LnGrp Delay(d),s/veh	156.4	11.2	11.2	82.1	0.0	71.8	76.1	0.0	0.0	49.5	0.0	33.0
LnGrp LOS	F	B	B	F		E	E			D		C
Approach Vol, veh/h		1256			780			33			932	
Approach Delay, s/veh		112.0			71.9			76.1			36.3	
Approach LOS		F			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.4	93.4		35.0	33.8	65.0		7.6				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1), s	13	8.3		32.0	32.0	61.5		4.6				
Green Ext Time (p_c), s	0.0	3.4		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				77.7								
HCM 2010 LOS				E								
Notes												

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↔↔	↕↔		↔↔↔	↕↔		↗	↕↕	↗
Traffic Volume (veh/h)	50	280	830	20	170	70	960	60	10	40	50	20
Future Volume (veh/h)	50	280	830	20	170	70	960	60	10	40	50	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1792	1792	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	56	315	0	22	191	77	1079	67	10	45	56	22
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	2	2	2
Cap, veh/h	148	404	343	70	466	181	1415	1159	169	66	450	201
Arrive On Green	0.04	0.22	0.00	0.02	0.19	0.19	0.28	0.37	0.37	0.04	0.13	0.13
Sat Flow, veh/h	3442	1863	1583	3312	2394	931	5052	3129	457	1774	3539	1576
Grp Volume(v), veh/h	56	315	0	22	134	134	1079	38	39	45	56	22
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1656	1703	1622	1684	1787	1800	1774	1770	1576
Q Serve(g_s), s	0.8	8.1	0.0	0.3	3.5	3.7	9.9	0.7	0.7	1.3	0.7	0.6
Cycle Q Clear(g_c), s	0.8	8.1	0.0	0.3	3.5	3.7	9.9	0.7	0.7	1.3	0.7	0.6
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	148	404	343	70	331	316	1415	662	667	66	450	201
V/C Ratio(X)	0.38	0.78	0.00	0.32	0.40	0.42	0.76	0.06	0.06	0.68	0.12	0.11
Avail Cap(c_a), veh/h	271	569	484	261	520	496	1943	1276	1285	220	1605	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	18.7	0.0	24.5	17.9	17.9	16.7	10.3	10.3	24.1	19.6	19.6
Incr Delay (d2), s/veh	1.6	5.1	0.0	1.0	1.0	1.1	1.0	0.1	0.1	4.6	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.7	0.0	0.2	1.7	1.7	4.7	0.3	0.4	0.7	0.4	0.3
LnGrp Delay(d),s/veh	25.2	23.9	0.0	25.4	18.8	19.0	17.7	10.3	10.4	28.7	19.8	19.9
LnGrp LOS	C	C		C	B	B	B	B	B	C	B	B
Approach Vol, veh/h		371			290			1156			123	
Approach Delay, s/veh		24.1			19.4			17.2			23.1	
Approach LOS		C			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	11.0	6.7	14.4	6.4	23.3	5.6	15.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	23.0	4.0	15.5	6.3	36.2	4.0	15.5				
Max Q Clear Time (g_c+M), s	9.5	2.7	2.8	5.7	3.3	2.7	2.3	10.1				
Green Ext Time (p_c), s	2.3	0.3	0.0	1.3	0.0	0.7	0.0	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	100	80	460	40	630	50	340	300	430	470	50
Future Volume (veh/h)	30	100	80	460	40	630	50	340	300	430	470	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1810	1863	1863	1863	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	34	115	60	529	46	0	57	391	0	494	540	0
Adj No. of Lanes	1	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	5	5	5	2	2	2	1	1	1	2	2	2
Cap, veh/h	66	196	253	660	927	415	195	651	203	625	1282	399
Arrive On Green	0.04	0.11	0.11	0.19	0.26	0.00	0.06	0.13	0.00	0.18	0.25	0.00
Sat Flow, veh/h	1723	1810	1534	3442	3539	1583	3476	5136	1599	3442	5085	1583
Grp Volume(v), veh/h	34	115	60	529	46	0	57	391	0	494	540	0
Grp Sat Flow(s),veh/h/ln	1723	1810	1534	1721	1770	1583	1738	1712	1599	1721	1695	1583
Q Serve(g_s), s	0.9	2.8	1.6	6.8	0.4	0.0	0.7	3.3	0.0	6.3	4.1	0.0
Cycle Q Clear(g_c), s	0.9	2.8	1.6	6.8	0.4	0.0	0.7	3.3	0.0	6.3	4.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	196	253	660	927	415	195	651	203	625	1282	399
V/C Ratio(X)	0.52	0.59	0.24	0.80	0.05	0.00	0.29	0.60	0.00	0.79	0.42	0.00
Avail Cap(c_a), veh/h	229	747	720	1115	2139	957	385	2691	838	1048	3648	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.7	19.5	16.7	17.8	12.7	0.0	20.8	19.0	0.0	18.0	14.4	0.0
Incr Delay (d2), s/veh	2.3	1.0	0.2	0.9	0.0	0.0	0.3	0.3	0.0	0.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.4	0.7	3.2	0.2	0.0	0.4	1.6	0.0	3.0	1.9	0.0
LnGrp Delay(d),s/veh	24.0	20.5	16.9	18.6	12.7	0.0	21.1	19.3	0.0	18.8	14.5	0.0
LnGrp LOS	C	C	B	B	B		C	B		B	B	
Approach Vol, veh/h		209			575			448			1034	
Approach Delay, s/veh		20.1			18.2			19.5			16.6	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	16.1	6.3	16.5	12.9	10.3	13.3	9.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	33.0	33.0	6.1	27.8	14.0	24.1	14.9	19.0				
Max Q Clear Time (g_c+1), s	6.1	6.1	2.9	2.4	8.3	5.3	8.8	4.8				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.1	0.5	0.1	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cuml w/ Eastside Pkwy w/ Proj, AM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕ ↑↑↑			↕ ↑↑↑		↕
Traffic Volume (veh/h)	90	110	150	380	80	40	200	420	310	80	760	250
Future Volume (veh/h)	90	110	150	380	80	40	200	420	310	80	760	250
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1900	1900	1863	1900	1881	1881	1900	1863	1863	1863
Adj Flow Rate, veh/h	115	141	163	487	103	47	256	538	370	103	974	252
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	283	347	374	513	96	44	205	859	396	128	1060	325
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.11	0.25	0.25	0.07	0.21	0.21
Sat Flow, veh/h	434	626	675	821	174	79	1792	3424	1577	1774	5085	1557
Grp Volume(v), veh/h	419	0	0	637	0	0	256	538	370	103	974	252
Grp Sat Flow(s),veh/h/ln	1736	0	0	1074	0	0	1792	1712	1577	1774	1695	1557
Q Serve(g_s), s	0.0	0.0	0.0	45.0	0.0	0.0	12.5	15.3	25.1	6.3	20.5	16.7
Cycle Q Clear(g_c), s	15.5	0.0	0.0	60.5	0.0	0.0	12.5	15.3	25.1	6.3	20.5	16.7
Prop In Lane	0.27		0.39	0.76		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1003	0	0	653	0	0	205	859	396	128	1060	325
V/C Ratio(X)	0.42	0.00	0.00	0.98	0.00	0.00	1.25	0.63	0.94	0.81	0.92	0.78
Avail Cap(c_a), veh/h	1003	0	0	653	0	0	205	893	411	128	1093	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	0.0	28.3	0.0	0.0	48.4	36.4	40.1	50.0	42.3	40.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	29.0	0.0	0.0	146.0	0.9	27.6	28.5	11.6	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	0.0	24.4	0.0	0.0	14.5	7.3	13.9	4.1	10.7	8.1
LnGrp Delay(d),s/veh	14.4	0.0	0.0	57.3	0.0	0.0	194.4	37.3	67.6	78.4	54.0	50.4
LnGrp LOS	B			E			F	D	E	E	D	D
Approach Vol, veh/h		419			637			1164			1329	
Approach Delay, s/veh		14.4			57.3			81.5			55.2	
Approach LOS		B			E			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	27.3		65.0	12.4	31.9		65.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	23.5		60.5	7.5	28.5		60.5				
Max Q Clear Time (g_c+M), s	14.5	22.5		62.5	8.3	27.1		17.5				
Green Ext Time (p_c), s	0.0	0.3		0.0	0.0	0.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				59.4								
HCM 2010 LOS				E								

HCM 2010 Signalized Intersection Summary
5: 2nd Avenue & Imjin Parkway

Cuml w/ Eastside Pkwy w/ Proj, PM
09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑	↖↗	↖↗↖	↑↑↑	↖↗	↖↗↖	↑	↖↗	↖↗	↑↑	↖↗
Traffic Volume (veh/h)	140	1010	760	330	1060	140	900	110	500	90	100	150
Future Volume (veh/h)	140	1010	760	330	1060	140	900	110	500	90	100	150
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	146	1052	592	344	1104	146	938	115	287	94	104	125
Adj No. of Lanes	2	3	2	3	3	1	3	1	2	2	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	0	0	0
Cap, veh/h	259	1356	736	507	1489	555	1091	525	775	209	440	193
Arrive On Green	0.07	0.26	0.26	0.10	0.29	0.29	0.21	0.28	0.28	0.06	0.12	0.12
Sat Flow, veh/h	3476	5136	2788	5052	5136	1585	5103	1900	2806	3510	3610	1587
Grp Volume(v), veh/h	146	1052	592	344	1104	146	938	115	287	94	104	125
Grp Sat Flow(s),veh/h/ln	1738	1712	1394	1684	1712	1585	1701	1900	1403	1755	1805	1587
Q Serve(g_s), s	2.4	11.3	11.8	3.9	11.6	3.9	10.6	2.8	4.9	1.5	1.6	4.5
Cycle Q Clear(g_c), s	2.4	11.3	11.8	3.9	11.6	3.9	10.6	2.8	4.9	1.5	1.6	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1356	736	507	1489	555	1091	525	775	209	440	193
V/C Ratio(X)	0.56	0.78	0.80	0.68	0.74	0.26	0.86	0.22	0.37	0.45	0.24	0.65
Avail Cap(c_a), veh/h	874	2581	1401	1270	2581	892	1710	669	987	588	1270	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	20.3	20.5	25.9	19.2	13.9	22.6	16.6	17.4	27.1	23.7	25.0
Incr Delay (d2), s/veh	0.7	0.4	0.8	0.6	0.3	0.1	1.7	0.1	0.1	0.6	0.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.4	4.6	1.8	5.5	1.7	5.1	1.5	1.9	0.8	0.8	2.0
LnGrp Delay(d),s/veh	27.4	20.7	21.3	26.5	19.4	14.0	24.3	16.7	17.5	27.7	23.8	26.3
LnGrp LOS	C	C	C	C	B	B	C	B	B	C	C	C
Approach Vol, veh/h		1790			1594			1340			323	
Approach Delay, s/veh		21.5			20.5			22.2			25.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	21.1	16.3	11.9	8.9	22.6	7.1	21.1				
Change Period (Y+Rc), s	4.5	5.3	3.5	4.6	4.5	5.3	3.5	4.6				
Max Green Setting (Gmax), s	15.0	30.0	20.0	21.0	15.0	30.0	10.0	21.0				
Max Q Clear Time (g_c+1), s	11.9	13.8	12.6	6.5	4.4	13.6	3.5	6.9				
Green Ext Time (p_c), s	0.1	1.8	0.2	0.1	0.0	1.7	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
 12: Reservation Road & Imjin Parkway

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↔↔	↔	↑	↔	↔↔	↑↑	↔	↔↔	↑↑↑	↔
Traffic Volume (veh/h)	110	20	1280	10	40	30	820	630	10	20	940	190
Future Volume (veh/h)	110	20	1280	10	40	30	820	630	10	20	940	190
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1827	1827	1827	1881	1881	1881	1881	1881	1881
Adj Flow Rate, veh/h	124	22	1037	11	45	12	921	708	10	22	1056	79
Adj No. of Lanes	2	1	2	1	1	1	2	2	1	2	3	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	4	4	4	1	1	1	1	1	1
Cap, veh/h	860	465	1390	76	80	67	860	1949	872	57	1614	503
Arrive On Green	0.25	0.25	0.25	0.04	0.04	0.04	0.25	0.55	0.55	0.02	0.31	0.31
Sat Flow, veh/h	3476	1881	2803	1740	1827	1532	3476	3574	1599	3476	5136	1599
Grp Volume(v), veh/h	124	22	1037	11	45	12	921	708	10	22	1056	79
Grp Sat Flow(s),veh/h/ln	1738	1881	1401	1740	1827	1532	1738	1787	1599	1738	1712	1599
Q Serve(g_s), s	3.9	1.3	35.0	0.9	3.4	1.1	35.0	15.9	0.4	0.9	25.1	5.0
Cycle Q Clear(g_c), s	3.9	1.3	35.0	0.9	3.4	1.1	35.0	15.9	0.4	0.9	25.1	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	860	465	1390	76	80	67	860	1949	872	57	1614	503
V/C Ratio(X)	0.14	0.05	0.75	0.14	0.56	0.18	1.07	0.36	0.01	0.39	0.65	0.16
Avail Cap(c_a), veh/h	860	465	1390	381	400	336	860	1949	872	491	2178	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	40.5	28.6	65.1	66.3	65.2	53.2	18.2	14.7	68.9	41.9	35.0
Incr Delay (d2), s/veh	0.0	0.0	2.0	0.3	2.3	0.5	51.5	0.3	0.0	1.6	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	16.6	0.4	1.8	0.5	22.9	8.0	0.2	0.4	12.0	2.3
LnGrp Delay(d),s/veh	41.6	40.5	30.6	65.4	68.6	65.6	104.7	18.5	14.7	70.5	43.1	35.4
LnGrp LOS	D	D	C	E	E	E	F	B	B	E	D	D
Approach Vol, veh/h		1183			68			1639			1157	
Approach Delay, s/veh		32.0			67.5			67.0			43.1	
Approach LOS		C			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.1	50.7		11.2	6.4	83.3		40.5				
Change Period (Y+Rc), s	4.1	* 6.2		5.0	4.1	* 6.2		5.5				
Max Green Setting (Gmax), s	35.0	* 60		31.0	20.0	* 50		35.0				
Max Q Clear Time (g_c+R), s	37.0	27.1		5.4	2.9	17.9		37.0				
Green Ext Time (p_c), s	0.0	17.3		0.2	0.0	10.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			49.9									
HCM 2010 LOS			D									
Notes												

HCM 2010 Signalized Intersection Summary
 14: Reservation Road & Inter-Garrison Road

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	80	960	620	380	940	210		
Future Volume (veh/h)	80	960	620	380	940	210		
Number	3	18	1	6	2	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1845	1845	1881	1900		
Adj Flow Rate, veh/h	98	1016	756	463	1146	247		
Adj No. of Lanes	1	2	2	2	2	0		
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82		
Percent Heavy Veh, %	1	1	3	3	1	1		
Cap, veh/h	412	1126	580	2374	1368	293		
Arrive On Green	0.23	0.23	0.17	0.68	0.47	0.47		
Sat Flow, veh/h	1792	2814	3408	3597	3024	627		
Grp Volume(v), veh/h	98	1016	756	463	696	697		
Grp Sat Flow(s),veh/h/ln	1792	1407	1704	1752	1787	1770		
Q Serve(g_s), s	5.2	27.0	20.0	5.8	39.9	40.7		
Cycle Q Clear(g_c), s	5.2	27.0	20.0	5.8	39.9	40.7		
Prop In Lane	1.00	1.00	1.00			0.35		
Lane Grp Cap(c), veh/h	412	1126	580	2374	835	827		
V/C Ratio(X)	0.24	0.90	1.30	0.20	0.83	0.84		
Avail Cap(c_a), veh/h	412	1126	580	2374	913	904		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	36.8	33.1	48.7	7.0	27.3	27.5		
Incr Delay (d2), s/veh	0.3	10.1	148.4	0.1	7.1	7.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.6	17.0	21.3	2.8	21.2	21.5		
LnGrp Delay(d),s/veh	37.1	43.2	197.1	7.1	34.4	35.2		
LnGrp LOS	D	D	F	A	C	D		
Approach Vol, veh/h	1114			1219	1393			
Approach Delay, s/veh	42.7			125.0	34.8			
Approach LOS	D			F	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	34.7	61.2				85.9		31.5
Change Period (Y+Rc), s	4.7	6.4				6.4		4.5
Max Green Setting (Gmax), s	26	60.0				60.0		27.0
Max Q Clear Time (g_c+Rc), s	42.7					7.8		29.0
Green Ext Time (p_c), s	0.0	12.2				5.4		0.0
Intersection Summary								
HCM 2010 Ctrl Delay			66.6					
HCM 2010 LOS			E					
Notes								

HCM 2010 Signalized Intersection Summary
 22: 8th Avenue & Inter-Garrison Road

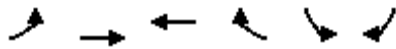
Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	580	80	280	380	60	420		
Future Volume (veh/h)	580	80	280	380	60	420		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1900	1900		
Adj Flow Rate, veh/h	598	62	289	392	62	37		
Adj No. of Lanes	1	0	2	1	0	0		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	756	78	478	1308	88	53		
Arrive On Green	0.46	0.46	0.14	0.70	0.08	0.08		
Sat Flow, veh/h	1660	172	3442	1863	1075	641		
Grp Volume(v), veh/h	0	660	289	392	100	0		
Grp Sat Flow(s),veh/h/ln	0	1832	1721	1863	1733	0		
Q Serve(g_s), s	0.0	12.8	3.3	3.3	2.3	0.0		
Cycle Q Clear(g_c), s	0.0	12.8	3.3	3.3	2.3	0.0		
Prop In Lane		0.09	1.00		0.62	0.37		
Lane Grp Cap(c), veh/h	0	834	478	1308	143	0		
V/C Ratio(X)	0.00	0.79	0.61	0.30	0.70	0.00		
Avail Cap(c_a), veh/h	0	1428	1279	2345	1184	0		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	9.7	16.9	2.3	18.6	0.0		
Incr Delay (d2), s/veh	0.0	1.7	1.2	0.1	6.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	6.8	1.6	1.7	1.4	0.0		
LnGrp Delay(d),s/veh	0.0	11.4	18.1	2.5	24.8	0.0		
LnGrp LOS		B	B	A	C			
Approach Vol, veh/h	660			681	100			
Approach Delay, s/veh	11.4			9.1	24.8			
Approach LOS	B			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.9	10.3	23.5				33.8
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		28.5	15.5	32.5				52.5
Max Q Clear Time (g_c+I1), s		4.3	5.3	14.8				5.3
Green Ext Time (p_c), s		0.2	0.7	4.2				2.6
Intersection Summary								
HCM 2010 Ctrl Delay			11.3					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 25: Inter-Garrison Road & Sherman Boulevard

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	990	270	160	100	120	520		
Future Volume (veh/h)	990	270	160	100	120	520		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1792	1900	1845	1845		
Adj Flow Rate, veh/h	1138	310	184	100	138	534		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87		
Percent Heavy Veh, %	1	1	6	6	3	3		
Cap, veh/h	1106	1525	179	97	227	1171		
Arrive On Green	0.62	0.81	0.16	0.16	0.13	0.13		
Sat Flow, veh/h	1792	1881	1093	594	1757	1568		
Grp Volume(v), veh/h	1138	310	0	284	138	534		
Grp Sat Flow(s),veh/h/ln	1792	1881	0	1688	1757	1568		
Q Serve(g_s), s	92.6	5.6	0.0	24.5	11.1	19.4		
Cycle Q Clear(g_c), s	92.6	5.6	0.0	24.5	11.1	19.4		
Prop In Lane	1.00			0.35	1.00	1.00		
Lane Grp Cap(c), veh/h	1106	1525	0	276	227	1171		
V/C Ratio(X)	1.03	0.20	0.00	1.03	0.61	0.46		
Avail Cap(c_a), veh/h	1106	1525	0	276	227	1171		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	28.7	3.2	0.0	62.8	61.7	7.3		
Incr Delay (d2), s/veh	34.7	0.1	0.0	62.3	11.5	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	16.1	2.9	0.0	16.2	6.1	28.2		
LnGrp Delay(d),s/veh	63.4	3.3	0.0	125.0	73.2	8.6		
LnGrp LOS	F	A		F	E	A		
Approach Vol, veh/h		1448	284		672			
Approach Delay, s/veh		50.5	125.0		21.9			
Approach LOS		D	F		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				126.1		23.9	97.1	29.0
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				121.6		19.4	92.6	24.5
Max Q Clear Time (g_c+I1), s				7.6		21.4	94.6	26.5
Green Ext Time (p_c), s				2.2		0.0	0.0	0.0
Intersection Summary								
HCM 2010 Ctrl Delay			51.3					
HCM 2010 LOS			D					

HCM 2010 Signalized Intersection Summary
 28: Davis Road & Reservation Road

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TT	TT		T	T			TT			T	TT
Traffic Volume (veh/h)	1410	520	10	10	370	100	10	10	10	120	10	830
Future Volume (veh/h)	1410	520	10	10	370	100	10	10	10	120	10	830
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1834	1900	1900	1900	1900	1900	1881	1881
Adj Flow Rate, veh/h	1500	553	11	11	394	106	11	11	9	128	11	748
Adj No. of Lanes	2	2	0	1	1	0	0	1	0	0	1	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	4	4	4	0	0	0	1	1	1
Cap, veh/h	936	2086	41	18	456	123	18	18	14	351	30	1362
Arrive On Green	0.27	0.59	0.59	0.01	0.33	0.33	0.03	0.03	0.03	0.21	0.21	0.21
Sat Flow, veh/h	3442	3549	71	1740	1393	375	631	631	516	1656	142	2814
Grp Volume(v), veh/h	1500	276	288	11	0	500	31	0	0	139	0	748
Grp Sat Flow(s),veh/h/ln	1721	1770	1850	1740	0	1768	1777	0	0	1798	0	1407
Q Serve(g_s), s	30.0	8.4	8.4	0.7	0.0	29.3	1.9	0.0	0.0	7.3	0.0	20.6
Cycle Q Clear(g_c), s	30.0	8.4	8.4	0.7	0.0	29.3	1.9	0.0	0.0	7.3	0.0	20.6
Prop In Lane	1.00		0.04	1.00		0.21	0.35		0.29	0.92		1.00
Lane Grp Cap(c), veh/h	936	1040	1087	18	0	578	49	0	0	381	0	1362
V/C Ratio(X)	1.60	0.26	0.27	0.61	0.00	0.86	0.63	0.00	0.00	0.36	0.00	0.55
Avail Cap(c_a), veh/h	936	1040	1087	473	0	962	483	0	0	489	0	1531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	11.1	11.1	54.4	0.0	34.8	53.1	0.0	0.0	37.1	0.0	20.0
Incr Delay (d2), s/veh	276.2	0.2	0.2	11.7	0.0	6.6	4.8	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	50.1	4.1	4.3	0.4	0.0	15.4	1.0	0.0	0.0	3.7	0.0	8.0
LnGrp Delay(d),s/veh	316.4	11.3	11.3	66.0	0.0	41.5	57.8	0.0	0.0	37.3	0.0	20.1
LnGrp LOS	F	B	B	E		D	E			D		C
Approach Vol, veh/h		2064			511			31			887	
Approach Delay, s/veh		233.0			42.0			57.8			22.8	
Approach LOS		F			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	69.8		28.4	33.8	41.1		7.1				
Change Period (Y+Rc), s	3.9	5.0		5.0	* 3.8	5.0		4.0				
Max Green Setting (Gmax), s	30	60.0		30.0	* 30	60.0		30.0				
Max Q Clear Time (g_c+1), s	10.4	10.4		22.6	32.0	31.3		3.9				
Green Ext Time (p_c), s	0.0	5.3		0.8	0.0	4.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				150.2								
HCM 2010 LOS				F								
Notes												

HCM 2010 Signalized Intersection Summary
 33: General Jim Moore Boulevard & Lightfighter Drive

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑	↗	↔↔	↕↔		↔↔↔	↕↔		↗	↕↕	↗
Traffic Volume (veh/h)	50	230	940	40	240	50	750	60	20	60	100	40
Future Volume (veh/h)	50	230	940	40	240	50	750	60	20	60	100	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1900	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	52	240	0	42	250	51	781	62	19	62	104	-70
Adj No. of Lanes	2	1	1	2	2	0	3	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	0	0	0
Cap, veh/h	150	327	278	129	503	101	1173	880	258	88	503	225
Arrive On Green	0.04	0.17	0.00	0.04	0.17	0.17	0.23	0.32	0.32	0.05	0.14	0.00
Sat Flow, veh/h	3476	1881	1599	3510	2997	602	5052	2726	801	1810	3610	1615
Grp Volume(v), veh/h	52	240	0	42	149	152	781	40	41	62	104	-70
Grp Sat Flow(s),veh/h/ln	1738	1881	1599	1755	1805	1794	1684	1787	1740	1810	1805	1615
Q Serve(g_s), s	0.6	5.2	0.0	0.5	3.2	3.3	6.0	0.7	0.7	1.5	1.1	0.0
Cycle Q Clear(g_c), s	0.6	5.2	0.0	0.5	3.2	3.3	6.0	0.7	0.7	1.5	1.1	0.0
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	150	327	278	129	303	301	1173	577	562	88	503	225
V/C Ratio(X)	0.35	0.73	0.00	0.33	0.49	0.51	0.67	0.07	0.07	0.70	0.21	-0.31
Avail Cap(c_a), veh/h	323	415	353	326	398	396	1302	1120	1090	273	1877	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.0	16.8	0.0	20.2	16.3	16.3	15.0	10.1	10.1	20.2	16.4	0.0
Incr Delay (d2), s/veh	1.4	5.4	0.0	0.5	1.5	1.6	1.0	0.1	0.1	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.2	0.0	0.2	1.7	1.8	2.9	0.3	0.4	0.8	0.6	0.0
LnGrp Delay(d),s/veh	21.4	22.3	0.0	20.8	17.8	17.9	16.0	10.2	10.2	24.0	16.7	0.0
LnGrp LOS	C	C		C	B	B	B	B	B	C	B	
Approach Vol, veh/h		292			343			862			96	
Approach Delay, s/veh		22.1			18.2			15.5			33.5	
Approach LOS		C			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	10.5	6.4	11.7	6.6	18.4	6.1	12.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	22.4	4.0	9.5	6.5	27.0	4.0	9.5				
Max Q Clear Time (g_c+1/3), s	10.5	3.1	2.6	5.3	3.5	2.7	2.5	7.2				
Green Ext Time (p_c), s	0.9	0.6	0.0	0.7	0.0	0.7	0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.4									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 39: General Jim Moore Boulevard & Gigling Road

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	270	50	530	60	260	430	750	250	50
Future Volume (veh/h)	20	20	30	270	50	530	60	260	430	750	250	50
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1881	1881	1881	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	22	3	303	56	0	67	292	0	843	281	0
Adj No. of Lanes	1	1	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	7	7	1	1	1	2	2	2	2	2	2
Cap, veh/h	45	161	230	433	674	302	214	599	186	962	1704	530
Arrive On Green	0.03	0.09	0.09	0.12	0.19	0.00	0.06	0.12	0.00	0.28	0.33	0.00
Sat Flow, veh/h	1691	1776	1501	3476	3574	1599	3442	5085	1583	3442	5085	1583
Grp Volume(v), veh/h	22	22	3	303	56	0	67	292	0	843	281	0
Grp Sat Flow(s),veh/h/ln	1691	1776	1501	1738	1787	1599	1721	1695	1583	1721	1695	1583
Q Serve(g_s), s	0.6	0.5	0.1	3.9	0.6	0.0	0.9	2.5	0.0	10.9	1.8	0.0
Cycle Q Clear(g_c), s	0.6	0.5	0.1	3.9	0.6	0.0	0.9	2.5	0.0	10.9	1.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	45	161	230	433	674	302	214	599	186	962	1704	530
V/C Ratio(X)	0.49	0.14	0.01	0.70	0.08	0.00	0.31	0.49	0.00	0.88	0.16	0.00
Avail Cap(c_a), veh/h	208	917	870	711	2139	957	393	2627	818	1815	4729	1472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.3	19.5	16.7	19.5	15.5	0.0	20.8	19.2	0.0	16.0	10.9	0.0
Incr Delay (d2), s/veh	3.0	0.1	0.0	0.8	0.0	0.0	0.3	0.2	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	1.9	0.3	0.0	0.4	1.2	0.0	5.3	0.8	0.0
LnGrp Delay(d),s/veh	25.3	19.6	16.7	20.3	15.6	0.0	21.1	19.4	0.0	17.0	10.9	0.0
LnGrp LOS	C	B	B	C	B		C	B		B	B	
Approach Vol, veh/h		47			359			359			1124	
Approach Delay, s/veh		22.1			19.5			19.7			15.5	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	20.1	5.7	13.3	17.5	10.0	10.3	8.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	43.2	43.2	5.7	27.8	24.5	24.0	9.5	24.0				
Max Q Clear Time (g_c+1), s	3.8	3.8	2.6	2.6	12.9	4.5	5.9	2.5				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.1	0.1	0.4	0.0	0.0				

Intersection Summary												
HCM 2010 Ctrl Delay											17.2	
HCM 2010 LOS											B	

Notes

HCM 2010 Signalized Intersection Summary
 46: General Jim Moore Boulevard & Normandy Road

Cuml w/ Eastside Pkwy w/ Proj, PM
 09/06/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕ ↑↑↑			↕ ↑↑↑		↕
Traffic Volume (veh/h)	140	40	100	290	50	10	90	790	320	30	480	80
Future Volume (veh/h)	140	40	100	290	50	10	90	790	320	30	480	80
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1900	1881	1881	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	43	84	315	54	8	98	859	325	33	522	28
Adj No. of Lanes	0	1	0	0	1	0	1	3	0	1	3	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	0	0	0
Cap, veh/h	386	121	159	546	65	10	319	1117	421	69	851	264
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.18	0.30	0.30	0.04	0.16	0.16
Sat Flow, veh/h	773	379	497	1190	204	30	1792	3674	1384	1810	5187	1610
Grp Volume(v), veh/h	279	0	0	377	0	0	98	800	384	33	522	28
Grp Sat Flow(s),veh/h/ln	1649	0	0	1424	0	0	1792	1712	1634	1810	1729	1610
Q Serve(g_s), s	0.0	0.0	0.0	4.3	0.0	0.0	1.9	8.5	8.5	0.7	3.7	0.6
Cycle Q Clear(g_c), s	5.3	0.0	0.0	9.5	0.0	0.0	1.9	8.5	8.5	0.7	3.7	0.6
Prop In Lane	0.54		0.30	0.84		0.02	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	666	0	0	621	0	0	319	1041	497	69	851	264
V/C Ratio(X)	0.42	0.00	0.00	0.61	0.00	0.00	0.31	0.77	0.77	0.48	0.61	0.11
Avail Cap(c_a), veh/h	1409	0	0	1298	0	0	319	2007	958	231	2806	871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	0.0	0.0	12.3	0.0	0.0	14.3	12.6	12.6	18.8	15.5	14.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.2	0.5	1.0	1.9	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	0.0	3.8	0.0	0.0	0.9	4.0	4.0	0.4	1.8	0.3
LnGrp Delay(d),s/veh	11.2	0.0	0.0	12.7	0.0	0.0	14.5	13.1	13.6	20.7	15.8	14.3
LnGrp LOS	B			B			B	B	B	C	B	B
Approach Vol, veh/h		279			377			1282			583	
Approach Delay, s/veh		11.2			12.7			13.3			16.0	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.6	11.0		17.3	6.0	16.6		17.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.6	21.6		33.0	5.1	23.4		33.0				
Max Q Clear Time (g_c+1), s	5.7	5.7		11.5	2.7	10.5		7.3				
Green Ext Time (p_c), s	0.0	0.7		0.6	0.0	1.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				13.6								
HCM 2010 LOS				B								