APPENDIX J

TRAFFIC IMPACT ANALYSIS

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TRAFFIC IMPACT ANALYSIS

IPT ENTERPRISE BUSINESS CENTER LLC PROJECT

LAKE FOREST, CALIFORNIA

This Traffic Impact Analysis has been prepared under the supervision of
Ambarish Mukherjee, P.E.

May 2025

TRAFFIC IMPACT ANALYSIS

IPT ENTERPRISE BUSINESS CENTER LLC PROJECT

LAKE FOREST, CALIFORNIA

Submitted to:

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Project No. CLF2101.04A

May 2025

EXECUTIVE SUMMARY

LSA has prepared this Traffic Impact Analysis (TIA) to identify potential level of service (LOS) impacts and California Environmental Quality Act (CEQA) transportation impacts (e.g., vehicle miles traveled [VMT]) resulting from the development of the proposed IPT Enterprise Business Center LLC Project (proposed project) at 26200 Enterprise Way (project site) in Lake Forest, California. LSA has prepared this analysis with the objectives and methodologies set forth in the City of Lake Forest's (City) *Transportation Analysis Guidelines* (TA Guidelines) (July 21, 2020), the 2021 Congestion Management Program (CMP) for Orange County, and applicable provisions of CEQA.

The proposed project is located at 26200 Enterprise Way in Lake Forest, California. The proposed project would demolish an existing 144,906-square-foot (sf), two-story office/industrial building and construct a 35-foot (ft) tall, 165,803-sf industrial building, including approximately 10,000 sf of office use, up to 65,000 sf of manufacturing use, and the remainder to be utilized for warehouse use. The existing building is currently vacant. A maximum of 23 usable dock high doors, a gated truck loading area, and up to 262 parking spaces for passenger vehicles would be provided for the proposed project.

The proposed project would include the following off-site improvements at five study area intersections within the City, as project design features, to enhance public safety and address concerns related to large truck turning movements. The off-site improvements would be constructed by the project applicant prior to occupancy of the proposed industrial building:

- **Bake Parkway/Commercentre Drive**. Modifications would be made to the traffic signal to accommodate protected eastbound and westbound left-turn phasing (from split phasing). Lane geometrics would be modified for the westbound approach to accommodate dual left-turn lanes and a shared through/right-turn lane. Additionally, modifications would be made to the traffic signal equipment.

- **Dimension Drive/Bake Parkway**. Modifications would be made to the median to accommodate a 430-foot westbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

- **Dimension Drive/Commercentre Drive – Enterprise Way**. Modifications would be made to the traffic signal to accommodate protected eastbound and westbound left-turn phasing (from permissive phasing). The curb radius of the southeast corner at this intersection would be modified to accommodate wheelbase-67 (WB-67) truck turns (northbound right turn). Additionally, modifications would be made to the traffic signal equipment.

- **Lake Forest Drive/Dimension Drive**. Modifications would be made to accommodate a 250-foot northbound left-turn lane and a 205-foot eastbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

- **Lake Forest Drive/Rancho Parkway**. Modifications would be made to accommodate a new 225-foot northbound right-turn lane, a 470-foot northbound left-turn lane, and a 440-foot

southbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

Access to the project site is provided via two existing full-access driveways on Enterprise Way for WB-67 trucks and passenger cars. A third driveway (shared right-in/right-out [RIRO] driveway on Bake Parkway with the adjacent property) also provides access for passenger cars. However, this driveway requires passenger cars to traverse an existing parking lot for the adjacent property, which is not an ideal or convenient route to the project site. Therefore, for the purpose of this TIA, the RIRO driveway on Bake Parkway was not considered. The proposed project is anticipated to be completed by 2027.

This study analyzes the a.m. (7:00–9:00 a.m.) and p.m. peak-hour (4:00–6:00 p.m.) LOS for the study area intersections during a typical weekday. Project impacts were determined based on the analysis of the following scenarios, consistent with the City's requirements:

1. Existing (2024) Conditions
2. Existing (2024) with Project Conditions
3. Opening Year (2027) with Cumulative Projects without Project Conditions
4. Opening Year (2027) with Cumulative Projects with Project Conditions

Based on the results of this TIA and the City's performance criteria, the proposed project (including proposed off-site improvements at five study area intersections), would not significantly affect the study area intersections in either the Existing or Opening Year (cumulative) horizon.

LSA evaluated truck turning templates for the inbound and outbound turning movements at the study area intersections. As a result of the WB-67 truck turn templates, the inbound and outbound turning movements at the study area intersections are considered feasible, except for the northbound right-turn (inbound) movement at Dimension Drive/Commercentre Drive – Enterprise Way. However, the proposed project would include a curb radius modification at the southeast corner of Dimension Drive/Commercentre Drive – Enterprise Way to accommodate WB-67 truck turns (northbound right turn). Therefore, with implementation of this improvement, all inbound and outbound truck turning movements at the study area intersections are considered feasible.

In compliance with the 2022 California Green Building Standards Code (January 1, 2023), the project would provide 31 bicycle racks in total. The proposed project would maintain the existing walkways/sidewalks in the vicinity of the project site.

The proposed project is a non-residential office/employment project. Based on the latest City's TA Guidelines, the project VMT rate exceeds the City's VMT threshold (Target VMT Rate) by 20 percent based on the Lake Forest VMT Look-Up Table and by 7.5 percent based on the latest version of the Orange County Transportation Analysis Model (OCTAM version 5.1). With implementation of VMT reduction/Transportation Demand Management (TDM) measures (addition of bike lanes) that would promote alternative transportation with the intent of reducing VMT, the project's VMT impact could be reduced but not to below a level of significance. According to the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (October 2024) (CAPCOA

Handbook), the addition of bike lanes (T-20 Expand Bikeway Network) can provide a maximum VMT reduction of 0.5 percent. Assuming this TDM measure could achieve the maximum 0.5 percent VMT reduction, the reduction achieved would not reduce the project's VMT impact to below the City's VMT threshold. Therefore, even with implementation of the TDM measure (addition of bike lanes), the project's VMT impact would be significant and unavoidable.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAD	Computer-Aided Design
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CEQA	California Environmental Quality Act
City	City of Lake Forest
CMP	Congestion Management Program
CTR	Commute Trip Reduction
ft	foot/feet
HBW	Home-Based Work
HCM 7	California Department of Transportation's *Highway Capacity Manual*, 7th Edition
ICU	intersection capacity utilization
ITE	Institute of Transportation Engineers
LFTAM	Lake Forest Transportation Analysis Model
LOS	level(s) of service
mph	miles per hour
NOP	Notice of Preparation
OCTA	Orange County Transportation Authority
OCTAM	Orange County Transportation Analysis Model
PCEs	passenger car equivalents
project	IPT Enterprise Business Center LLC Project
RIRO	right-in/right-out
SB	Senate Bill
sf	square foot/feet
TA Guidelines	Transportation Analysis Guidelines
TAZ	Traffic Analysis Zone
TDM	Transportation Demand Management
TIA	Traffic Impact Analysis
TRB	Transportation Research Board
TWLTL	two-way left-turn lane

v/c	volume-to-capacity
VMT	vehicle miles traveled
WB-67	wheelbase 67

INTRODUCTION

The purpose of this Traffic Impact Analysis (TIA) is to identify the potential level of service (LOS) impacts and California Environmental Quality Act (CEQA) transportation impacts (vehicle miles traveled [VMT]) associated with the development of the proposed IPT Enterprise Business Center LLC Project (proposed project) at 26200 Enterprise Way (project site) in Lake Forest, California. Figure 1 shows the location of the project site and the study area intersections.

LSA prepared the TIA based on the City of Lake Forest's (City) *Transportation Analysis Guidelines* (TA Guidelines) (July 21, 2020).

PROJECT DESCRIPTION

The proposed project is located at 26200 Enterprise Way in Lake Forest, California. The proposed project would demolish an existing 144,906-square-foot (sf), two-story office/industrial building and construct a 35-foot (ft) tall, 165,803-sf industrial building, including approximately 10,000 sf of office use, up to 65,000 sf of manufacturing use, and the remainder to be utilized for warehouse use. The existing building is currently vacant. A maximum of 23 usable dock high doors, a gated truck loading area, and up to 262 parking spaces for passenger vehicles would be provided for the proposed project.

The proposed project would include the following off-site improvements at five study area intersections within the City, as project design features, to enhance public safety and address concerns related to large truck turning movements. The off-site improvements would be constructed by the project applicant prior to occupancy of the proposed industrial building. Refer to Appendix A for exhibits showing the proposed off-site intersection improvements.

- **Bake Parkway/Commercentre Drive**. Modifications would be made to the traffic signal to accommodate protected eastbound and westbound left-turn phasing (from split phasing). Lane geometrics would be modified for the westbound approach to accommodate dual left-turn lanes and a shared through/right-turn lane. Additionally, modifications would be made to the traffic signal equipment.

- **Dimension Drive/Bake Parkway**. Modifications would be made to the median to accommodate a 430-foot westbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

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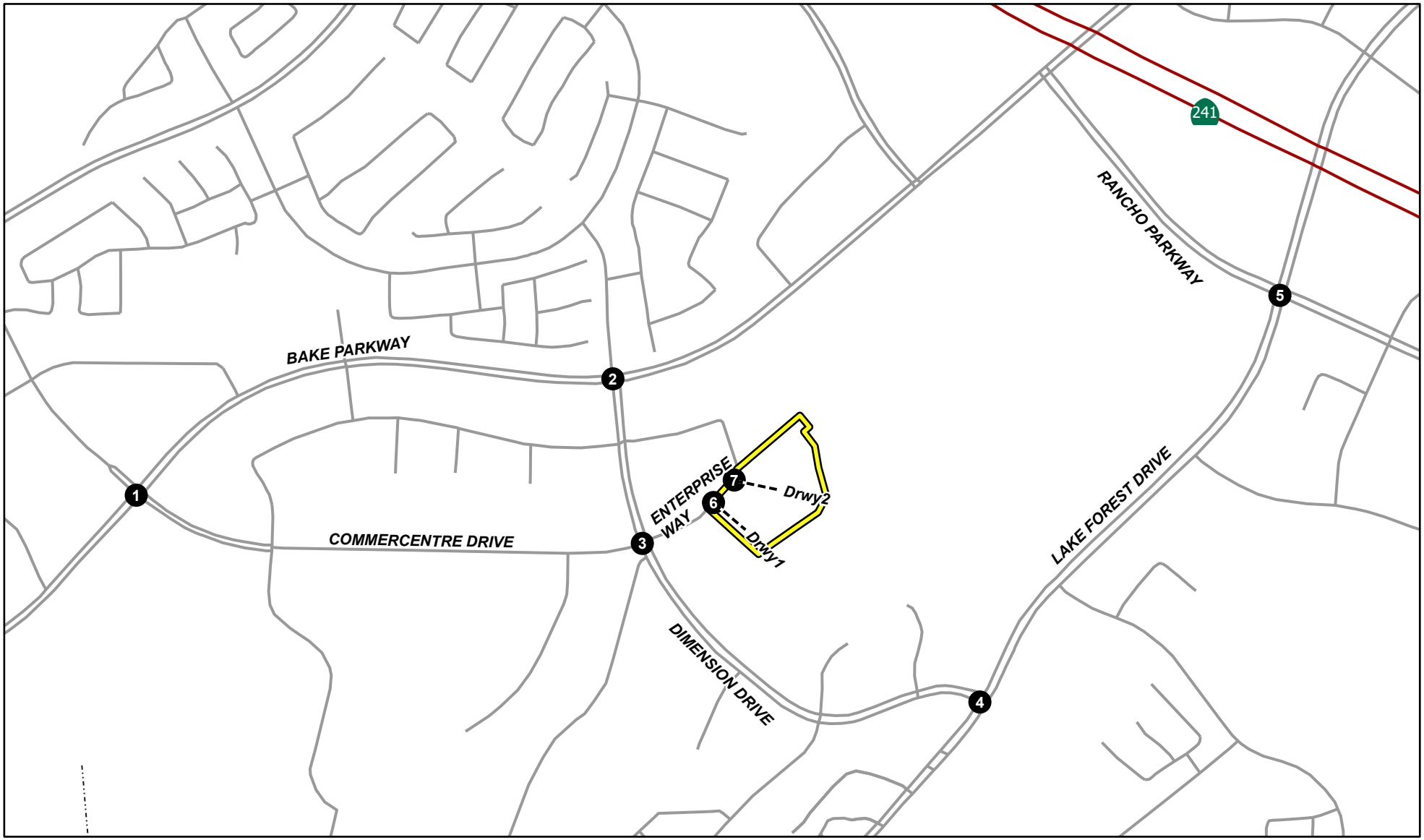

LSA

Project Site

Study Intersections - determined by the City of Lake Forest

Project Driveway

FIGURE 1

N

0 470 940

FEET

SOURCE: TIGER Road Map (2021)

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis

Project Location and Study Area Intersections

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- **Lake Forest Drive/Dimension Drive**. Modifications would be made to accommodate a 250-foot northbound left-turn lane and a 205-foot eastbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

- **Lake Forest Drive/Rancho Parkway**. Modifications would be made to accommodate a new 225-foot northbound right-turn lane, a 470-foot northbound left-turn lane, and a 440-foot southbound left-turn lane. Additionally, modifications would be made to the traffic signal equipment.

Access to the project site is provided via two existing full-access driveways on Enterprise Way for WB-67 trucks and passenger cars. A third driveway (shared right-in/right-out [RIRO] driveway on Bake Parkway to the adjacent property) also provides access for passenger cars. However, this driveway requires passenger cars to traverse an existing parking lot, which is not an ideal or convenient route to the project site. Therefore, for the purpose of this TIA, the RIRO driveway on Bake Parkway was not considered.

Figure 2 shows the site plan for the proposed project. The proposed project is anticipated to be completed by 2027.

ANALYSIS SCENARIOS

The TIA analyzes the a.m. (7:00–9:00 a.m.) and p.m. (4:00–6:00 p.m.) peak-hour LOS and queuing for the study area intersections during a typical weekday and this study examines the following four scenarios:

1. Existing (2024) Conditions
2. Existing (2024) with Project Conditions
3. Opening Year (2027) with Cumulative Projects without Project Conditions
4. Opening Year (2027) with Cumulative Projects with Project Conditions

STUDY AREA INTERSECTIONS

The study area includes the following intersections, as shown in Figure 1:

1. Bake Parkway/Commercentre Drive
2. Dimension Drive/Bake Parkway
3. Dimension Drive/Commercentre Drive – Enterprise Way
4. Lake Forest Drive/Dimension Drive
5. Lake Forest Drive/Rancho Parkway
6. Enterprise Way/Project Driveway 1
7. Enterprise Way/Project Driveway 2

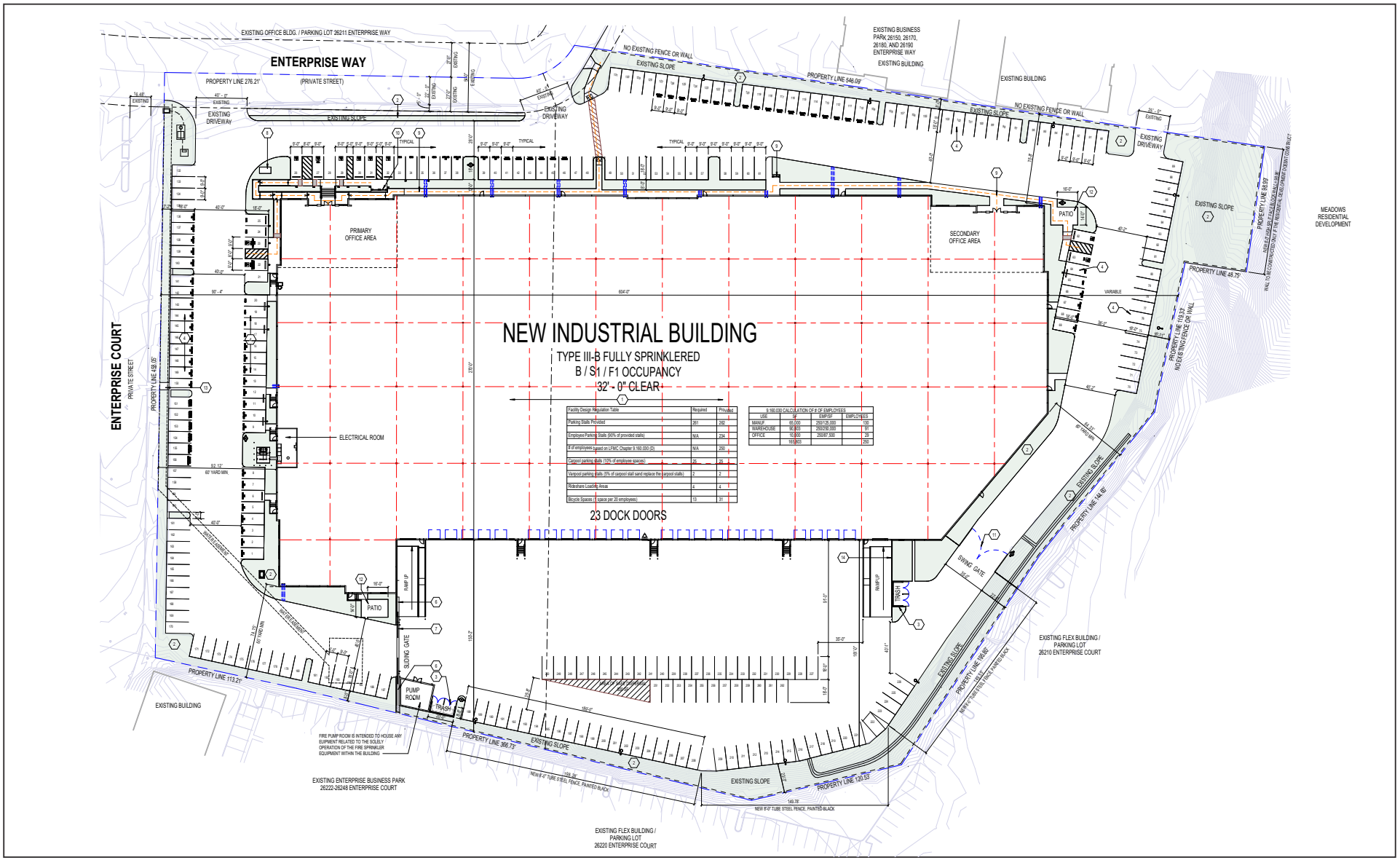

FIGURE 2

0 90 180

FEET

SOURCE: RGA Architects

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IPT Enterprise Business Center LLC Project

Site Plan

ANALYSIS METHODOLOGY

This TIA is consistent with the objectives and methodologies set forth in the City's TA Guidelines, the 2021 Congestion Management Program (CMP) for Orange County, and applicable provisions of CEQA. The project study area, methodology, and cumulative projects were determined through coordination with the City, prior to the preparation of this TIA.

INTERSECTION LEVEL OF SERVICE

LSA used the intersection capacity utilization (ICU) methodology to determine the LOS for the signalized study area intersections, consistent with the City's requirements. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. Per the City's TA guidelines, the ICU calculations assume a per-lane capacity of 1,700 vehicles per hour with a clearance interval of 0.05. A clearance interval is the period of time during which vehicles are allowed to exit an intersection before a conflicting movement is released. The relationship of ICU to LOS is demonstrated in the following table.

Level of Service	ICU
A	0.00–0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	>1.00

Source: Transportation Analysis Guidelines (City of Lake Forest 2020b).
ICU = intersection capacity utilization

In addition to the ICU methodology of calculating intersection LOS, an operational analysis was also prepared based on the *Highway Capacity Manual* (HCM 7th Edition) (Transportation Research Board [TRB] 2022) methodology to determine the LOS at both signalized and unsignalized intersections within the study area. The HCM 7th Edition intersection methodology presents LOS in terms of total intersection delay (in seconds per vehicle) and approach delay of the major and minor streets (in seconds per vehicle). The resulting delay is expressed in terms of LOS, similar to the ICU methodology. The relationship of delay to LOS is demonstrated in the following table.

Level of Service	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Highway Capacity Manual* (Transportation Research Board [TRB] 2022).

THRESHOLDS OF SIGNIFICANCE

The City has identified LOS D as the threshold for acceptable intersection operations. The following criteria shall be used to determine if a project would be responsible for LOS deficiencies and whether feasible roadway improvements should be identified to improve performance.

- If, under without project conditions, an intersection operates at LOS D or better and the addition of project trips results in unacceptable LOS (LOS E or F); or

- If, under without project conditions, an intersection operates at LOS E or F and the impact of the development is greater than 0.01 in ICU.

EXISTING (2024) CONDITIONS

EXISTING CIRCULATION SYSTEM

Key roadways in the vicinity of the proposed project are as follows:

Bake Parkway is classified as a Primary Arterial in the City of Lake Forest General Plan 2040 Mobility Element. It is a four-lane, divided roadway north of the project site. In the project vicinity, the posted speed is 55 miles per hour (mph). Bike lanes (Class II) and sidewalks are provided on both sides of the street, and on-street parking is prohibited on both sides of this roadway.

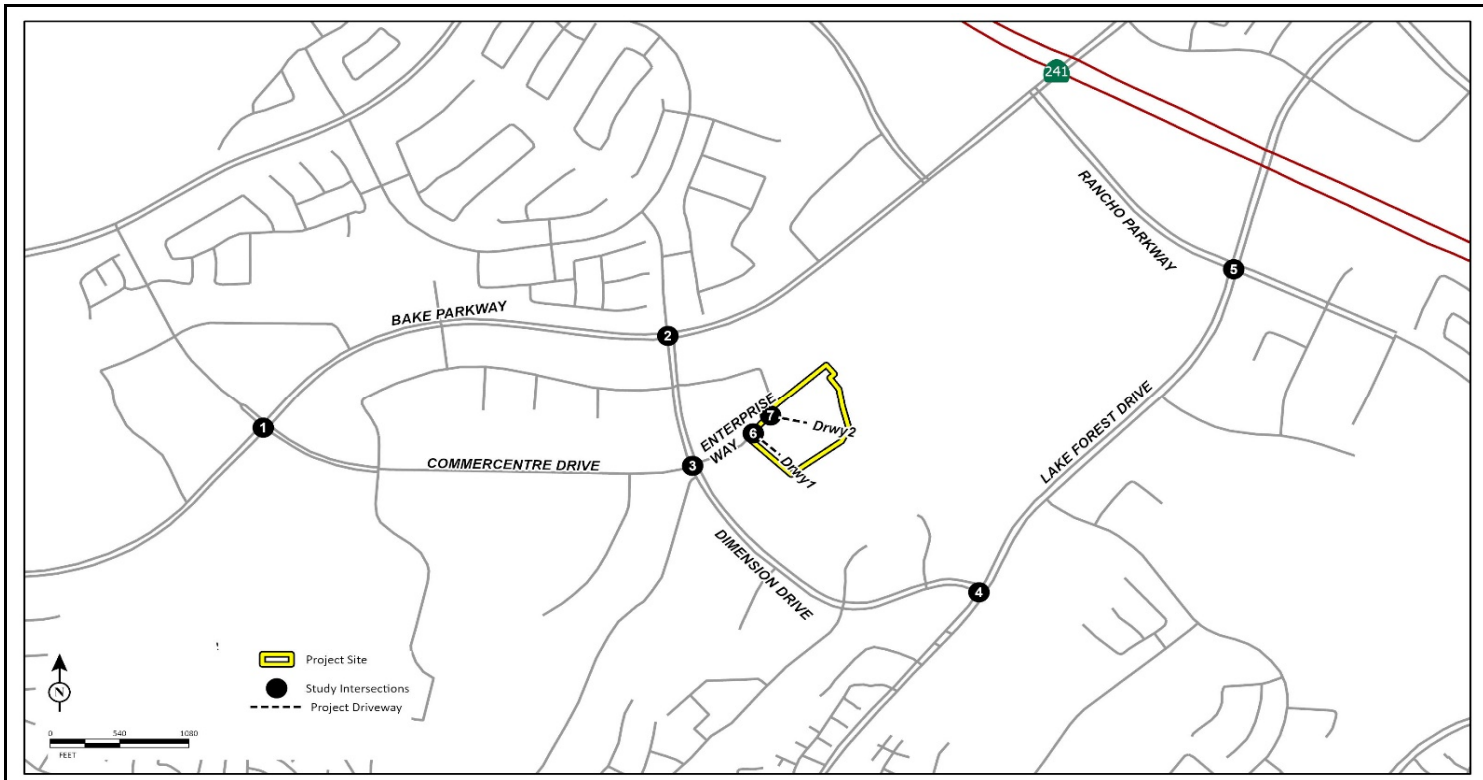
Commercentre Drive – Enterprise Way is a roadway west of the project site. Commercentre Drive from Alton Parkway to Dimension Drive is classified as a Secondary Arterial in the City of Lake Forest General Plan 2040 Mobility Element, and it is a four-lane, undivided facility with a centered two-way left-turn lane (TWLTL). In the project vicinity, the posted speed is 45 mph. Sidewalks are provided on both sides of the street, and on-street parking is prohibited on both sides of this roadway. Enterprise Way is a two-lane local private roadway with a posted speed of 25 mph. A sidewalk is provided on one side of the street, and on-street parking is permitted in select locations of this roadway. Project access is provided via two full-access driveways on Enterprise Way.

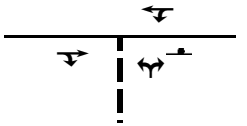
Dimension Drive is a four-lane, divided local roadway west of the project site. In the project vicinity, the posted speed is 45 mph. Sidewalks are provided on both sides of the street, and on-street parking is permitted in select locations of this roadway, expect for recreational vehicles.

Lake Forest Drive is classified as a Primary Arterial in the City of Lake Forest General Plan 2040 Mobility Element. It is a four-lane, divided roadway south and east of the project site. In the project vicinity, the posted speed is 50 mph. Bike lanes (Class II) and sidewalks are provided on both sides of the street, and on-street parking is prohibited on both sides of this roadway.

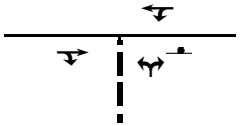
Rancho Parkway is classified as a Primary Arterial in the City of Lake Forest General Plan 2040 Mobility Element. It is a four-lane, divided roadway north of the project site. In the project vicinity, the posted speed is 45 mph. Bike lanes (Class II) and sidewalks are provided on both sides of the street, and on-street parking is prohibited on both sides of this roadway.

The existing geometrics and traffic control devices at the study area intersections are shown on Figure 3. As described above under the Project Description section, the proposed project would implement off-site improvements (including traffic signal and lane geometric revisions) at five study area intersections prior to occupancy of the proposed industrial building. For the purpose of this TIA, the off-site improvements at these five study area intersections have been incorporated in the LOS and queuing analysis in the “with Project” conditions.

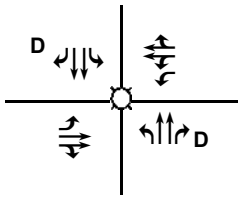




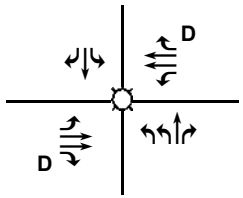
6 Driveway 1/Commercentre Dr-Enterprise Way



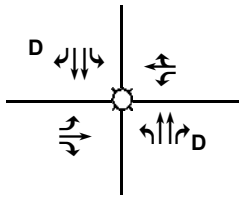
7 Driveway 2/Commercentre Dr-Enterprise Way



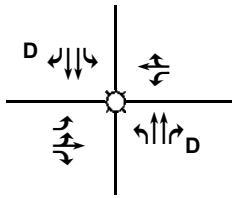
1 Bake Pkwy/Commercentre Dr



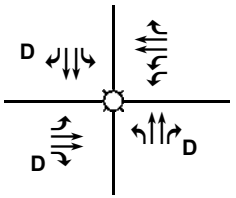
2 Dimension Dr/Bake Pkwy



3 Dimension Dr/Commercentre Dr-Enterprise Way



4 Lake Forest Dr/Dimension Dr



5 Lake Forest Dr/Rancho Pkwy

FIGURE 3

LSA

Legend

Signal — D De-Facto Right Turn

Stop Sign — Project Driveway

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis

Project Study Intersection Geometrics and Traffic Control

EXISTING TRANSIT SYSTEM

The study area is currently served by the Orange County Transportation Authority (OCTA) via Route 480, which runs along Dimension Drive and Commercentre Drive near the project site, and Route 177, which runs along Lake Forest Drive. Route 480 provides transportation to and from the Irvine Metrolink Station and Lake Forest via Alton Parkway/Bake Parkway/Lake Forest Drive. Transit facilities are accessible to and from the project site via sidewalks along Enterprise Way. This is an important feature, as OCTA stops are provided at the northwest and southwest corners of the intersection of Dimension Drive/Commercentre Drive – Enterprise Way (Route 480) approximately 800 ft away from the project driveways. Route 177 is a community route and provides transportation to and from Foothill Ranch to Laguna Hills via Lake Forest Drive/Muirlands Boulevard/Los Alisos Boulevard. Route 177 has bus stops at the southwest and northeast corners of the intersection of Lake Forest Drive/Dimension Drive approximately 2,200 ft away from the project driveways. The OCTA system map is provided in Appendix B.

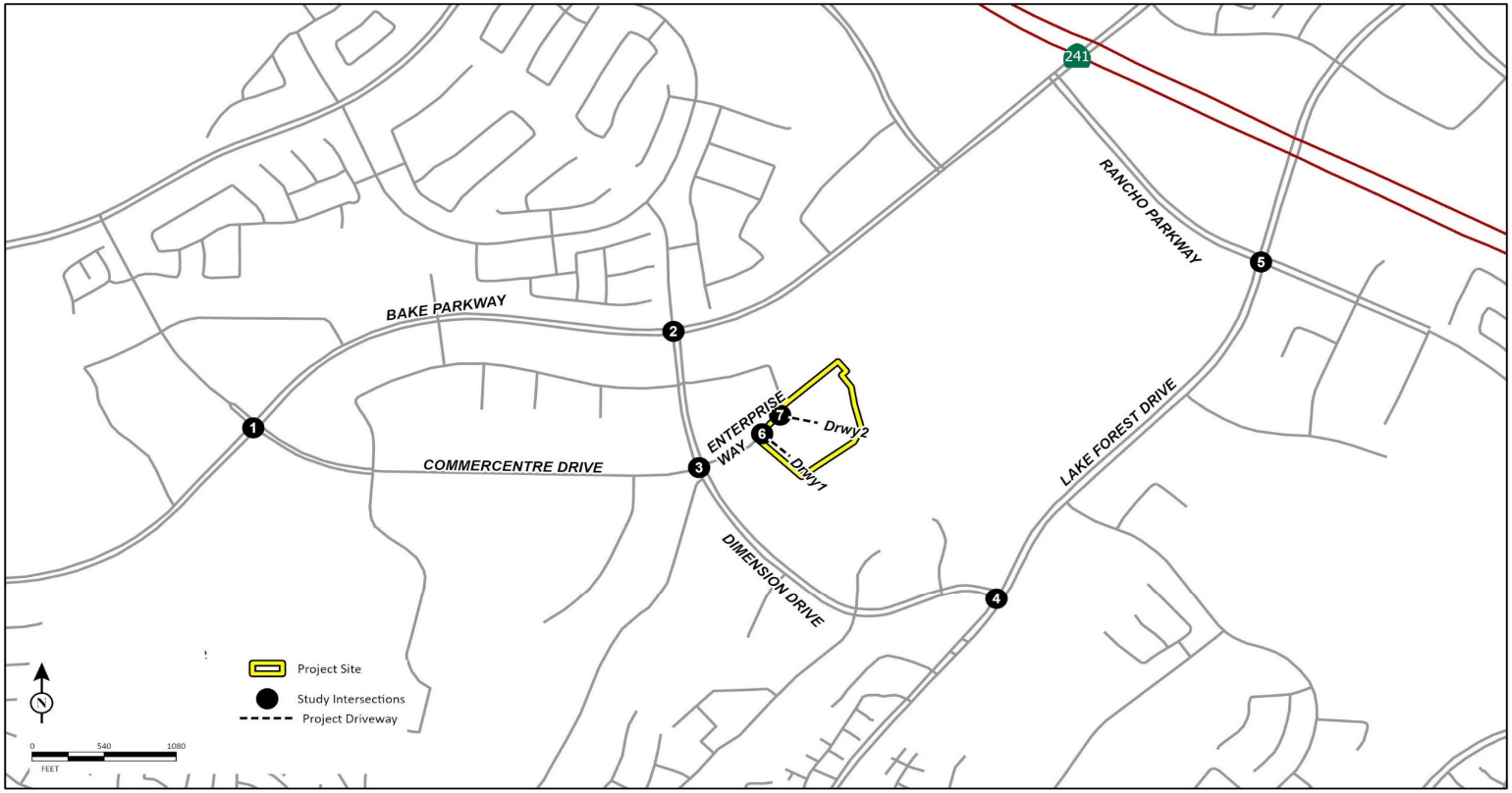
EXISTING BICYCLE AND PEDESTRIAN SYSTEM

On-street (Class II) bicycle lanes are provided along Bake Parkway, Lake Forest Drive, and Rancho Parkway. In compliance with the 2022 California Green Building Standards Code (January 1, 2023), the proposed project would provide 31 bicycle racks. Exterior bicycle racks would be provided along the northwest corner of the building and directly west of the parking stalls along the northern perimeter of the building. Additional indoor bicycle storage/racks would be provided on the west side of the first floor of the building.

Sidewalks currently exist in the project vicinity on both sides of Bake Parkway, Commercentre Drive – Enterprise Way, Dimension Drive, Lake Forest Drive, and Rancho Parkway. The proposed project would maintain the existing walkways/sidewalks in the vicinity of the project site. In addition, an accessible on-site pedestrian path is proposed through the parking lot to a paved walkway along the north side of the building that leads to the primary office area in the northwest corner of the building and the secondary office area in the northeast corner of the building.

EXISTING (2024) TRAFFIC COUNTS

Counts Unlimited collected weekday peak-hour intersection turn volumes for the signalized study area intersections in February 2024. Appendix C provides the existing count data. Figure 4 presents the Existing (2024) a.m. and p.m. peak-hour volumes for the study area intersections. It should be noted that the existing building on the project site is currently vacant, and no traffic is generated at the project driveways on Enterprise Way. The eastbound/westbound through traffic volumes at the two project driveways on Enterprise Way are the same as the approach/departure volumes of the north leg at Dimension Drive/Commercentre Drive – Enterprise Way. Therefore, the traffic volumes for the unsignalized intersections at two project driveways on Enterprise Way were developed based on the traffic volumes at the signalized study area intersection of Dimension Drive/Commercentre Drive – Enterprise Way.



142 / 138	732 / 687	15 / 9
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101 / 146 ↳	134 / 121 →	75 / 64 ↴
68 / 82 ↰	701 / 1060 ↑	276 / 159 ↱
↰	↑	↱
↱ 5 / 9		
← 107 / 178		
↰ 148 / 265		

1 Bake Pkwy/Commercentre Dr

58 / 33	123 / 85	84 / 72
↵	↓	↳
28 / 83 ↳	739 / 1081 →	58 / 39 ↴
58 / 88 ↰	80 / 119 ↑	104 / 147 ↱
↰	↑	↱
↱ 111 / 83		
← 743 / 661		
↰ 115 / 160		

2 Dimension Dr/Bake Pkwy

33 / 35	191 / 277	20 / 26
↵	↓	↳
18 / 52 ↳	21 / 10 →	211 / 305 ↴
222 / 171 ↰	180 / 222 ↑	45 / 5 ↱
↰	↑	↱
↱ 5 / 15		
← 6 / 31		
↰ 11 / 45		

3 Dimension Dr/Commercentre Dr-Enterprise Way

267 / 188	482 / 644	13 / 31
↵	↓	↳
180 / 338 ↳	5 / 10 →	76 / 101 ↴
154 / 117 ↰	629 / 756 ↑	12 / 16 ↱
↰	↑	↱
↱ 3 / 7		
← 0 / 4		
↰ 4 / 28		

4 Lake Forest Dr/Dimension Dr

59 / 49	459 / 493	119 / 173
↵	↓	↳
25 / 39 ↳	292 / 590 →	68 / 111 ↴
114 / 148 ↰	435 / 575 ↑	133 / 272 ↱
↰	↑	↱
↱ 50 / 96		
← 421 / 360		
↰ 200 / 147		

5 Lake Forest Dr/Rancho Pkwy

	← 22 / 91	
86 / 41 →		

6 Driveway 1/Commercentre Dr-Enterprise Way

	← 22 / 91	
86 / 41 →		

7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 4

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Existing (2024) Peak-Hour Traffic Volumes

EXISTING (2024) INTERSECTION LEVEL OF SERVICE ANALYSIS

Table A summarizes the results of the Existing (2024) a.m. and p.m. peak-hour LOS analysis for the study area intersections. The LOS analysis is based on both ICU and HCM methodology, and Appendix D provides the Existing (2024) LOS calculation worksheets. As this table indicates, the study area intersections operate at an acceptable LOS (D or better) during the a.m. and p.m. peak hours.

Table A: Existing (2024) Intersection Level of Service Summary

Intersection	Control	Existing (2024)							
		AM Peak Hour				PM Peak Hour			
		ICU	LOS	HCM Delay (sec)	LOS	ICU	LOS	HCM Delay (sec)	LOS
1. Bake Parkway/Commercentre Drive	Signal	0.42	A	27.2	C	0.52	A	30.9	C
2. Dimension Drive/Bake Parkway	Signal	0.44	A	27.7	C	0.57	A	32.5	C
3. Dimension Drive/Commercentre Drive – Enterprise Way	Signal	0.27	A	15.1	B	0.36	A	15.7	B
4. Lake Forest Drive/Dimension Drive	Signal	0.35	A	20.0	C	0.41	A	23.7	C
5. Lake Forest Drive/Rancho Parkway	Signal	0.41	A	33.2	C	0.53	A	37.3	D
6. Enterprise Way/Project Driveway 1	OWSC	--	--	0.0	A	--	--	0.0	A
7. Enterprise Way/Project Driveway 2	OWSC	--	--	0.0	A	--	--	0.0	A

Source: Compiled by LSA (2024).
HCM = Highway Capacity Manual
ICU = intersection capacity utilization
LOS = level of service
OWSC = one-way stop control
sec = seconds

OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITHOUT PROJECT CONDITIONS

OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITHOUT PROJECT TRAFFIC VOLUMES

According to the project applicant, the proposed project is anticipated to be built and occupied by 2027. As confirmed with the City Traffic staff in June 2024, a growth rate of 1 percent per year was used for the purpose of the future year traffic analysis. To develop Opening Year (2027) with Cumulative Projects without Project conditions, an ambient growth factor of 3 percent (1 percent per year, compounded over 3 years from 2024 to 2027) was applied to the Existing (2024) traffic volumes. In addition, traffic volumes from other approved and pending (cumulative) developments within this time frame were added to develop the Opening Year base condition.

LSA contacted the City to identify cumulative projects in the project vicinity. The cumulative project list for this TIA includes all proposed, recently approved, under construction, and reasonably foreseeable projects as of the date of the Notice of Preparation (NOP) (March 2024) that could produce a related or cumulative impact on the local environment when considered in conjunction with the proposed project. Thirteen (13) cumulative projects were identified based on coordination with the City Community Development Department. Appendix E provides the cumulative project list and the trip generation for the cumulative projects. It should be noted that the first project on the cumulative list is the proposed project. In addition, cumulative projects numbers 2 and 12 are not expected to generate new trips and trips generated by cumulative projects numbers 3 and 6 are not expected to approach/depart the study intersections. Therefore, no project generation was prepared for cumulative projects numbers 1, 2, 3, 6, and 12 in Appendix E.

Figure 5 shows the locations of the cumulative projects. Figure 6 illustrates the cumulative project trip assignment. Figure 7 shows the Opening Year (2027) with Cumulative Projects without Project a.m. and p.m. peak-hour traffic volumes.

OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Table B summarizes the results of the Opening Year (2027) with Cumulative Projects without Project a.m. and p.m. peak-hour LOS analysis for the study area intersections. The LOS analysis is based on both ICU and HCM methodology, and Appendix D provides the Opening Year (2027) with Cumulative Projects without Project LOS calculation worksheets. As this table indicates, the study area intersections are forecast to operate at an acceptable LOS (D or better) during the a.m. and p.m. peak hours.

LSA

Project Site

Cumulative Projects

Note: Cumulative project #1 is the proposed project.

0 1000 2000
FEET

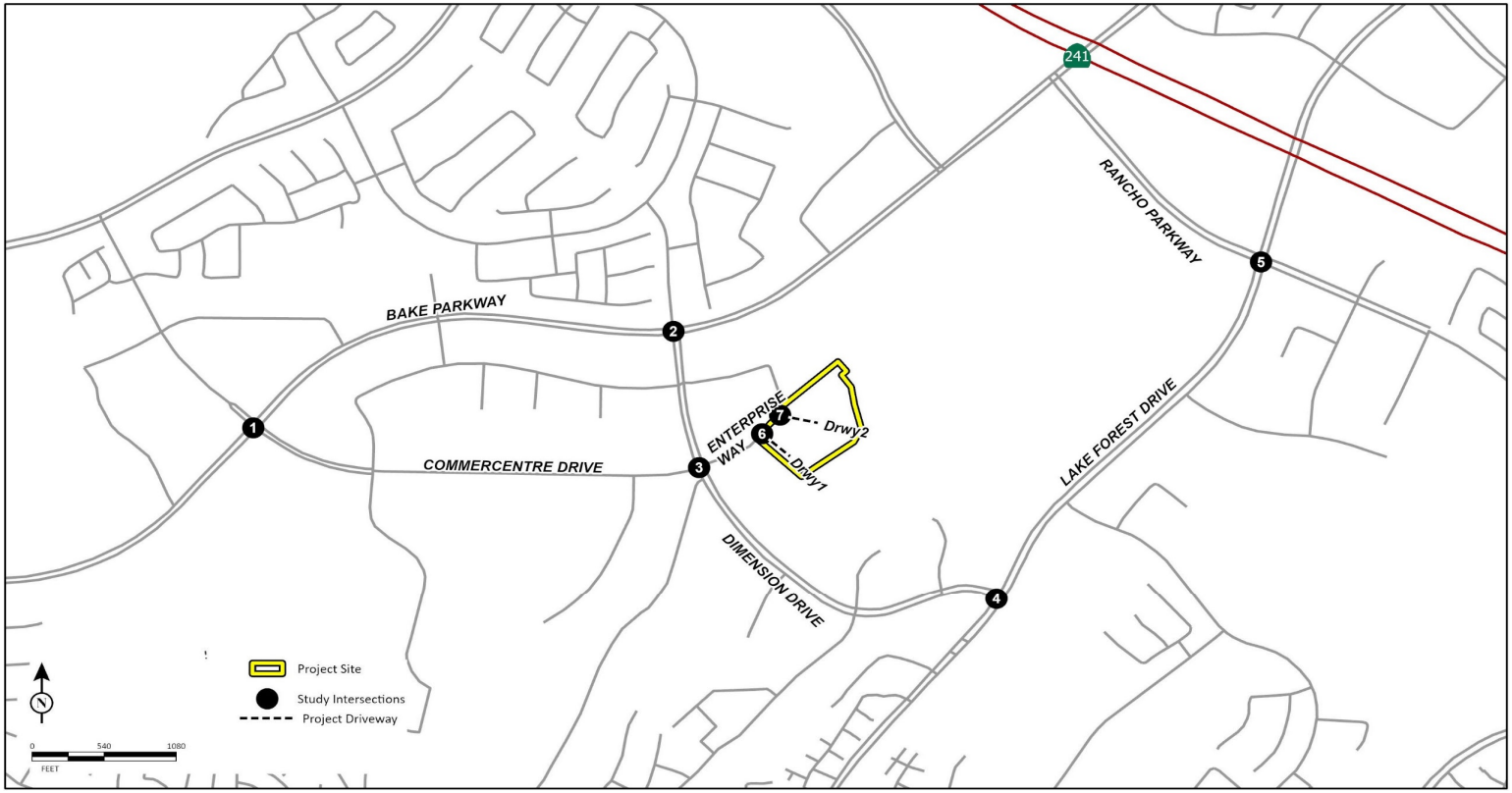
SOURCE: Google Maps

FIGURE 5

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis

Cumulative Project Locations

P:\CLF2101.04A - IPT Enterprise Industrial\Technical Studies\Traffic\GIS\IPT Enterprise Business Center LLC Project\IPT Enterprise Business Center LLC Project.aprx (8/19/2024)



1 Bake Pkwy/Commercentre Dr

1 / 4 ↲	38 / 33 ↓	← 1 / 8
		↰ 13 / 31
4 / 1 →		→ ↱
8 / 2 ↳		21 / 44 → 31 / 15 ↱

2 Dimension Dr/Bake Pkwy

1 / 0 ↓	0 / 1 ↳	↱ 1 / 1
		← 38 / 28
19 / 45 →		↰ 14 / 6
4 / 1 ↲		2 / 8 ↰ → ↱ 0 / 1 3 / 10

3 Dimension Dr/Commercentre Dr-Enterprise Way

2 / 2 ↲	2 / 1 ↓	4 / 1 ↳ ↱ 1 / 4
		← 14 / 39
0 / 2 ↳		↰ 18 / 49
39 / 17 →		→ ↱ 1 / 2 50 / 22

4 Lake Forest Dr/Dimension Dr

32 / 14 ↲	11 / 9 ←	
10 / 31 ↳		↰ →
8 / 19 ↲		19 / 9 7 / 13

5 Lake Forest Dr/Rancho Pkwy

3 / 8 ↲	18 / 12 ↓	← 6 / 17
		↰ 20 / 7
7 / 5 ↳		↰ → ↱
15 / 10 →		3 / 8 10 / 20 5 / 18
7 / 5 ↲		

6 Driveway 1/Commercentre Dr-Enterprise Way

← 26 / 70
69 / 31 →

7 Driveway 2/Commercentre Dr-Enterprise Way

← 26 / 70
69 / 31 →

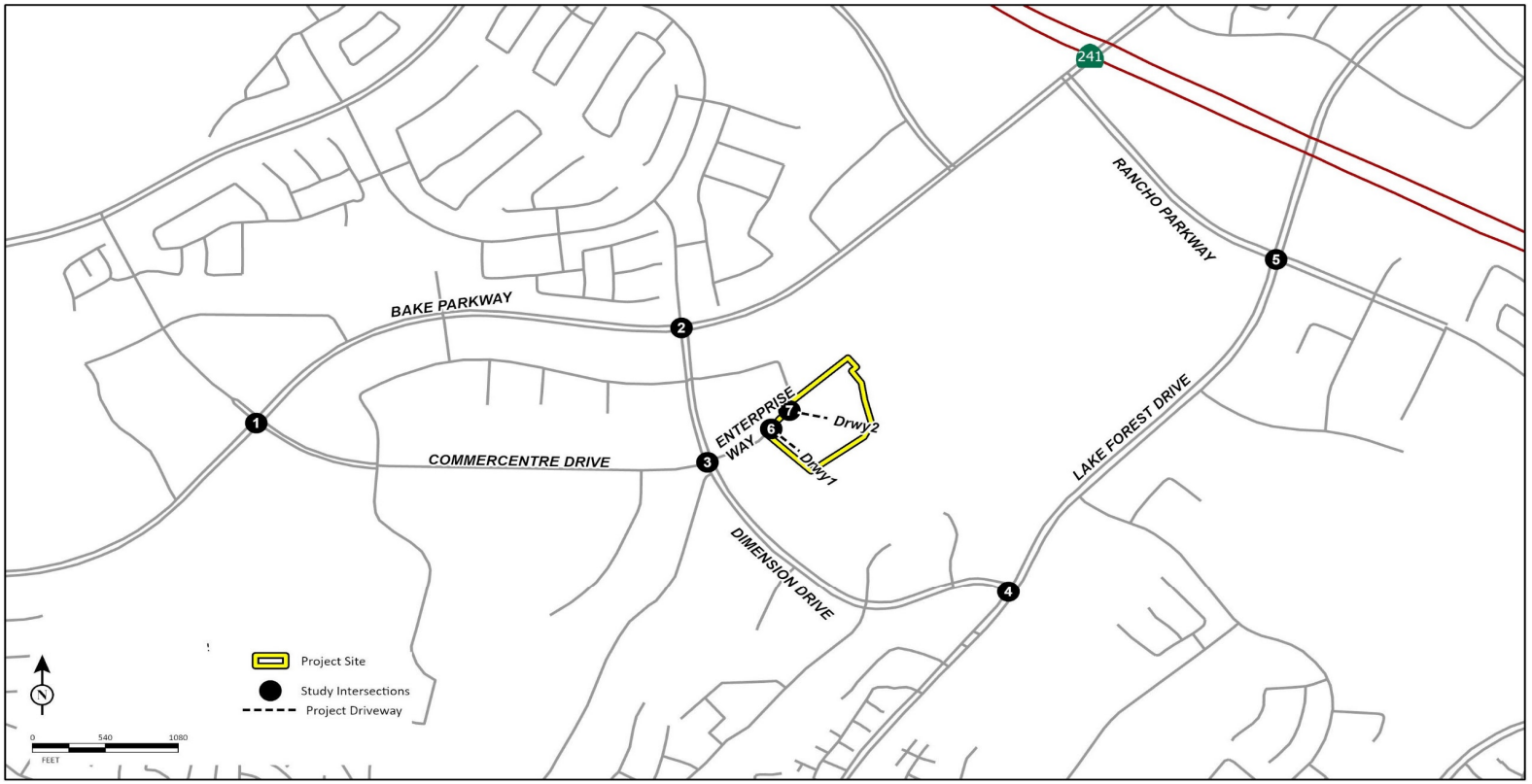
LSA

FIGURE 6

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Cumulative Projects Peak-Hour Traffic Volumes



1 Bake Pkwy/Commercentre Dr				2 Dimension Dr/Bake Pkwy				3 Dimension Dr/Commercentre Dr-Enterprise Way				4 Lake Forest Dr/Dimension Dr				5 Lake Forest Dr/Rancho Pkwy			
147 / 146	792 / 741	15 / 9	5 / 9	60 / 34	128 / 88	87 / 75	115 / 87	36 / 38	199 / 286	25 / 28	6 / 19	307 / 208	508 / 673	13 / 32	3 / 7	64 / 58	491 / 520	123 / 178	52 / 99
↵	↓	↳	↱	↵	↓	↳	↱	↵	↓	↳	↱	↵	↓	↳	↱	↵	↓	↳	↱
			← 111 / 191				← 804 / 709				← 20 / 71				← 0 / 4				← 440 / 388
108 / 151	↳	↰	↰ 165 / 304	29 / 86	↳	↰	↰ 132 / 171	19 / 56	↳	↰	↰ 29 / 95	195 / 379	↳	↰	↰ 4 / 29	33 / 45	↳	↰	↰ 226 / 158
146 / 127	→	↑	↑	780 / 1159	→	↑	↑	61 / 27	→	↑	↑	5 / 10	→	↑	↑	316 / 618	→	↑	↑
77 / 66	↴	↱	↱	64 / 41	↴	↱	↱	217 / 314	↴	↱	↱	86 / 123	↴	↱	↱	77 / 119	↴	↱	↱
70 / 84	743 / 1136	315 / 179		62 / 99	82 / 124	110 / 161		229 / 176	186 / 231	96 / 27		178 / 130	655 / 792	12 / 16		120 / 160	458 / 612	142 / 298	

6 Driveway 1/Commercentre Dr-Enterprise Way	7 Driveway 2/Commercentre Dr-Enterprise Way
← 49 / 164	← 49 / 164
158 / 73 →	158 / 73 →

LSA

FIGURE 7

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Opening Year (2027) with Cumulative Projects without Project Peak-Hour Traffic Volumes

Table B: Opening Year (2027) with Cumulative Projects without Project Intersection Level of Service Summary

Intersection	Control	Opening Year (2027) with Cumulative Projects without Project							
		AM Peak Hour				PM Peak Hour			
		ICU	LOS	HCM Delay (sec)	LOS	ICU	LOS	HCM Delay (sec)	LOS
1. Bake Parkway/Commercentre Drive	Signal	0.44	A	26.7	C	0.56	A	31.2	C
2. Dimension Drive/Bake Parkway	Signal	0.46	A	28.2	C	0.60	A	34.1	C
3. Dimension Drive/Commercentre Drive – Enterprise Way	Signal	0.30	A	15.0	B	0.38	A	15.6	B
4. Lake Forest Drive/Dimension Drive	Signal	0.39	A	21.3	C	0.44	A	25.1	C
5. Lake Forest Drive/Rancho Parkway	Signal	0.42	A	35.2	C	0.56	A	39.0	D
6. Enterprise Way/Project Driveway 1	OWSC	--	--	0.0	A	--	--	0.0	A
7. Enterprise Way/Project Driveway 2	OWSC	--	--	0.0	A	--	--	0.0	A

Source: Compiled by LSA (2024).
HCM = Highway Capacity Manual
ICU = intersection capacity utilization
LOS = level of service
OWSC = one-way stop control
sec = seconds
Notes: Opening Year (2027) with Cumulative Projects conditions includes all cumulative (proposed, recently approved, under construction, and reasonably foreseeable) projects as of the date of the Notice of Preparation (NOP) (March 2024). The cumulative projects included in this analysis were obtained from the City of Lake Forest (City) at the time of the NOP.

PROJECT CONDITIONS

PROJECT TRIP GENERATION

LSA examined the trip generation of the proposed project by applying the trip generation rates for Land Use Code 140 (Manufacturing), Land Use Code 150 (Warehousing), and Land Use Code 710 (General Office Building) from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021). Table C summarizes the project trip generation using the ITE trip rates.

The future tenant is unknown. However, using the applicant-provided potential breakdown of uses within the proposed building (office, manufacturing, and warehousing), LSA developed trip generation estimates. The specific uses and square footages assumed for the proposed project were agreed upon by the City prior to preparation of the TIA.

As Table C indicates, the proposed project is estimated to generate 727 daily trips, including 94 trips (70 inbound and 24 outbound) in the a.m. peak hour and 99 trips (31 inbound and 68 outbound) in the p.m. peak hour in passenger car equivalents (PCEs). As mentioned before, the existing office building on site is currently vacant. Therefore, no trip reductions for the previous uses on site have been applied.

PROJECT TRIP DISTRIBUTION

Generalized trip distribution patterns were developed based on the expected travel patterns and minimum time paths, as well as the location of the proposed project in relation to surrounding land uses and the regional roadway network.

The anticipated trip distribution for project trips (passenger cars) is as follows:

- 30 percent of project trips to/from south on Bake Parkway
- 15 percent of project trips to/from west on Commercentre Drive
- 9 percent of project trips to/from east on Bake Parkway
- 1 percent of project trips to/from north on Dimension Drive
- 15 percent of project trips to/from south on Lake Forest Drive
- 10 percent of project trips to/from north on Lake Forest Drive
- 20 percent of project trips to/from east on Rancho Parkway

The anticipated trip distribution for project trips (trucks) is as follows:

- 45 percent of project trips to/from south on Bake Parkway
- 30 percent of project trips to/from south on Lake Forest Drive
- 15 percent of project trips to/from north on Lake Forest Drive
- 10 percent of project trips to/from east on Rancho Parkway

LSA

Table C: Project Trip Generation Summary (26200 Enterprise Way)

Land Use	Size	Unit	PCE[4]	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Rates[1]										
Warehousing (cars)		*tsf*		1.180	0.102	0.015	0.117	0.021	0.103	0.124
Warehousing (2-axle trucks)		*tsf*		0.116	0.006	0.006	0.012	0.006	0.006	0.012
Warehousing (3-axle trucks)		*tsf*		0.094	0.005	0.004	0.009	0.005	0.005	0.010
Warehousing (4-axle trucks)		*tsf*		0.320	0.017	0.015	0.032	0.018	0.016	0.034
Warehousing (total)[2]		tsf		1.710	0.130	0.040	0.170	0.050	0.130	0.180
Manufacturing (cars)		*tsf*		3.734	0.438	0.096	0.534	0.166	0.416	0.582
Manufacturing (2-axle trucks)		*tsf*		0.380	0.027	0.021	0.048	0.021	0.031	0.052
Manufacturing (3-axle trucks)		*tsf*		0.185	0.015	0.011	0.026	0.011	0.017	0.028
Manufacturing (4-axle trucks)		*tsf*		0.451	0.040	0.032	0.072	0.032	0.046	0.078
Manufacturing (total)[3]		tsf		4.750	0.520	0.160	0.680	0.230	0.510	0.740
Office (<300 tsf)		tsf		10.840	1.340	0.180	1.520	0.240	1.200	1.440
Office (>=300 tsf)		tsf		Regression Equations						
Proposed Project Trip Generation (Non-PCEs)										
Warehousing (cars)		*tsf*	*1.0*	*107*	*9*	*1*	*10*	*2*	*9*	*11*
Warehousing (2-axle trucks)		*tsf*	*1.0*	*11*	*1*	*1*	*2*	*1*	*1*	*2*
Warehousing (3-axle trucks)		*tsf*	*1.0*	*9*	*0*	*0*	*0*	*0*	*0*	*0*
Warehousing (4-axle trucks)		*tsf*	*1.0*	*29*	*2*	*1*	*3*	*2*	*1*	*3*
Warehousing (total)	90.803	tsf	-	156	12	3	15	5	11	16
Manufacturing (cars)		*tsf*	*1.0*	*243*	*28*	*6*	*34*	*11*	*27*	*38*
Manufacturing (2-axle trucks)		*tsf*	*1.0*	*25*	*2*	*1*	*3*	*1*	*2*	*3*
Manufacturing (3-axle trucks)		*tsf*	*1.0*	*12*	*1*	*1*	*2*	*1*	*1*	*2*
Manufacturing (4-axle trucks)		*tsf*	*1.0*	*29*	*3*	*2*	*5*	*2*	*3*	*5*
Manufacturing (total)	65.000	tsf	-	309	34	10	44	15	33	48
Office	10.000	tsf	1.0	108	13	2	15	2	12	14
Total Project Trip Generation (Non-PCEs)	**165.803**	**tsf**	**-**	**573**	**59**	**15**	**74**	**22**	**56**	**78**
Proposed Project Trip Generation (in PCEs)										
Warehousing (cars)		*tsf*	*1.0*	107	*9*	*1*	*10*	*2*	*9*	*11*
Warehousing (2-axle trucks)		*tsf*	*1.5*	16	*1*	*1*	*2*	*1*	*1*	*2*
Warehousing (3-axle trucks)		*tsf*	*2.0*	17	*1*	*1*	*2*	*1*	*1*	*2*
Warehousing (4-axle trucks)		*tsf*	*3.0*	87	*5*	*4*	*9*	*5*	*4*	*9*
Warehousing (total in PCEs)	90.803	tsf	-	227	16	7	23	9	15	24
Manufacturing (cars)		*tsf*	*1.0*	243	*28*	*6*	*34*	*11*	*27*	*38*
Manufacturing (2-axle trucks)		*tsf*	*1.5*	37	*3*	*2*	*5*	*2*	*3*	*5*
Manufacturing (3-axle trucks)		*tsf*	*2.0*	24	*2*	*1*	*3*	*1*	*2*	*3*
Manufacturing (4-axle trucks)		*tsf*	*3.0*	88	*8*	*6*	*14*	*6*	*9*	*15*
Manufacturing (total)	65.000	tsf	-	392	41	15	56	20	41	61
Office	10.000	tsf	1.0	108	13	2	15	2	12	14
Total Project Trip Generation (in PCEs)	**165.803**	**tsf**	**-**	**727**	**70**	**24**	**94**	**31**	**68**	**99**

*****For Informational Purposes Only*****

Approved Trip Generation (in PCEs)										
Office	144.906	tsf	1.0	1,571	194	26	220	35	174	209
Total Approved Trip Generation (in PCEs)	**144.906**	**tsf**	**-**	**1,571**	**194**	**26**	**220**	**35**	**174**	**209**
Trip Generation Comparison in PCEs (Project - Approved)[5]				**(844)**	**(124)**	**(2)**	**(126)**	**(4)**	**(106)**	**(110)**

[1] Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021).
Land Use Code 140 - Manufacturing
Land Use Code 150 - Warehousing
Land Use Code 710 - General Office Building

[2] Trips were converted to passenger vehicles and trucks based on the South Coast Air Quality Management District (SCAQMD) requirements for warehouse projects. Based on the *Warehouse Truck Trip Study Data Results and Usage* (SCAQMD, July 2014), 31% of the trips are trucks (6.8% 2-axle trucks, 5.5% 3-axle trucks, and 18.7% 4 or more axle trucks).

[3] The resulting trips were converted to passenger vehicles and trucks based on the City of Fontana Truck Trip Generation Study, dated August 2003. As such, 21.4 percent of the traffic will be trucks.

[4] Trips were converted to PCEs using the following factors: 1.0 for cars, 1.5 PCE factor for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4 or more axle trucks.

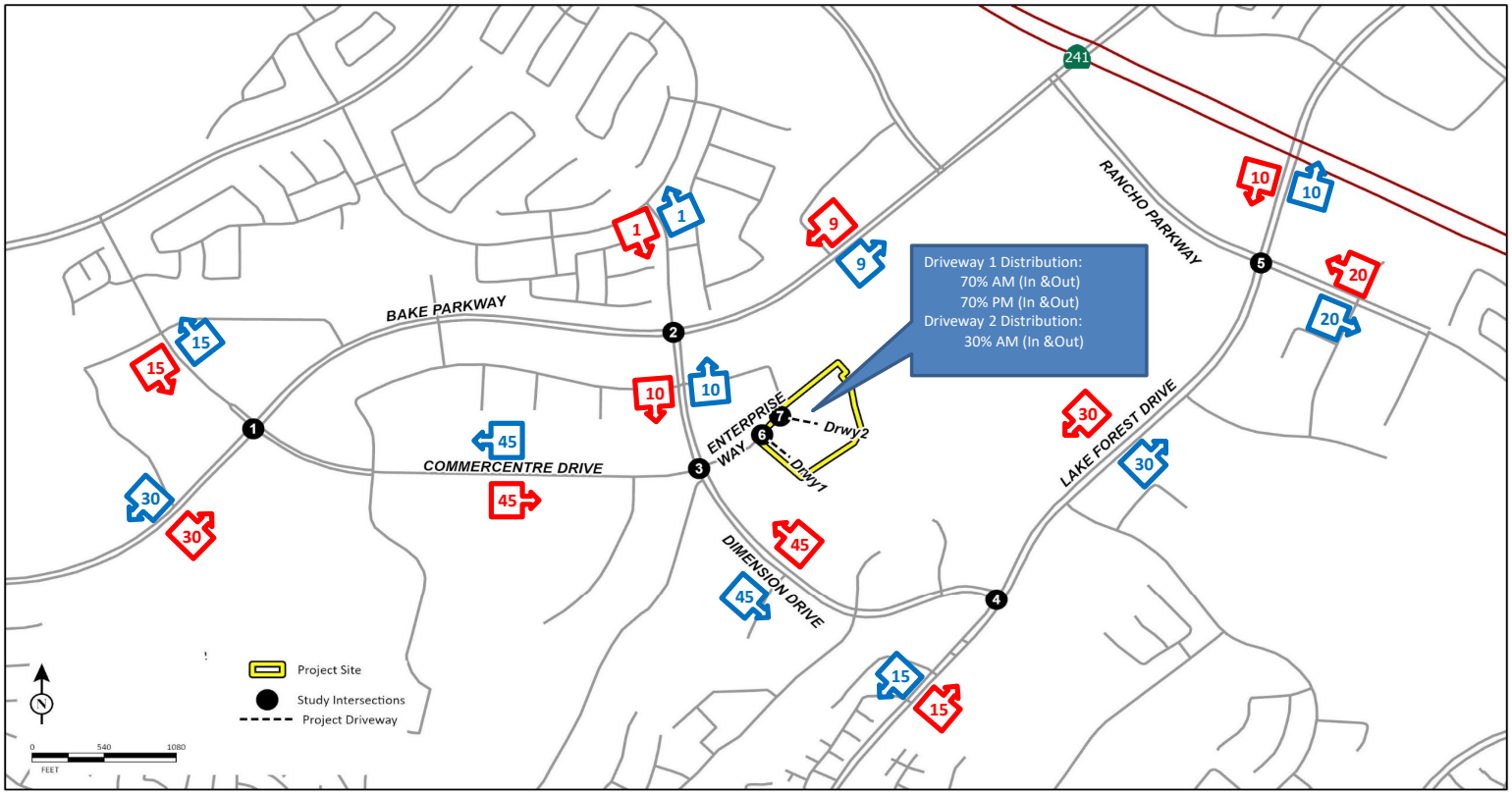
[5] Trip generation comparison is for information purposes only. The approved land use is currently vacant; therefore, no trip credits were taken from the approved use on site and the full project trips were analyzed.

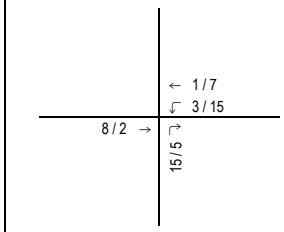
PCE = passenger car equivalent

tsf = thousand square feet (or thousand-square-foot)

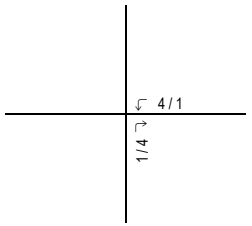
PROJECT TRIP ASSIGNMENT

Project traffic volumes for vehicles both entering and exiting the project site were distributed and assigned to the adjacent street system accordingly. The project trip assignment is the product of the project trip generation and the trip distribution percentages. Figures 8 and 9 show the project trip distribution and assignment for passenger cars and trucks (in PCEs), respectively. Figure 10 shows the total project trip distribution and assignment for the proposed project.

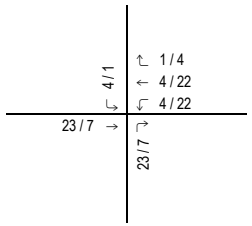




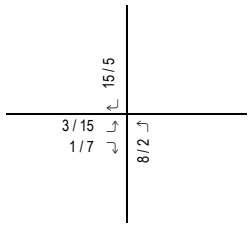
1 Bake Pkwy/Commercentre Dr



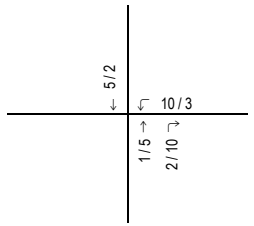
2 Dimension Dr/Bake Pkwy



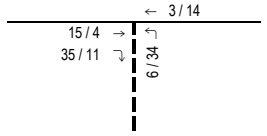
3 Dimension Dr/Commercentre Dr-Enterprise Way



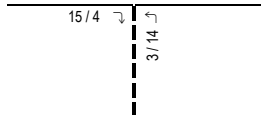
4 Lake Forest Dr/Dimension Dr



5 Lake Forest Dr/Rancho Pkwy



6 Driveway 1/Commercentre Dr-Enterprise Way



7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 8

LEGEND

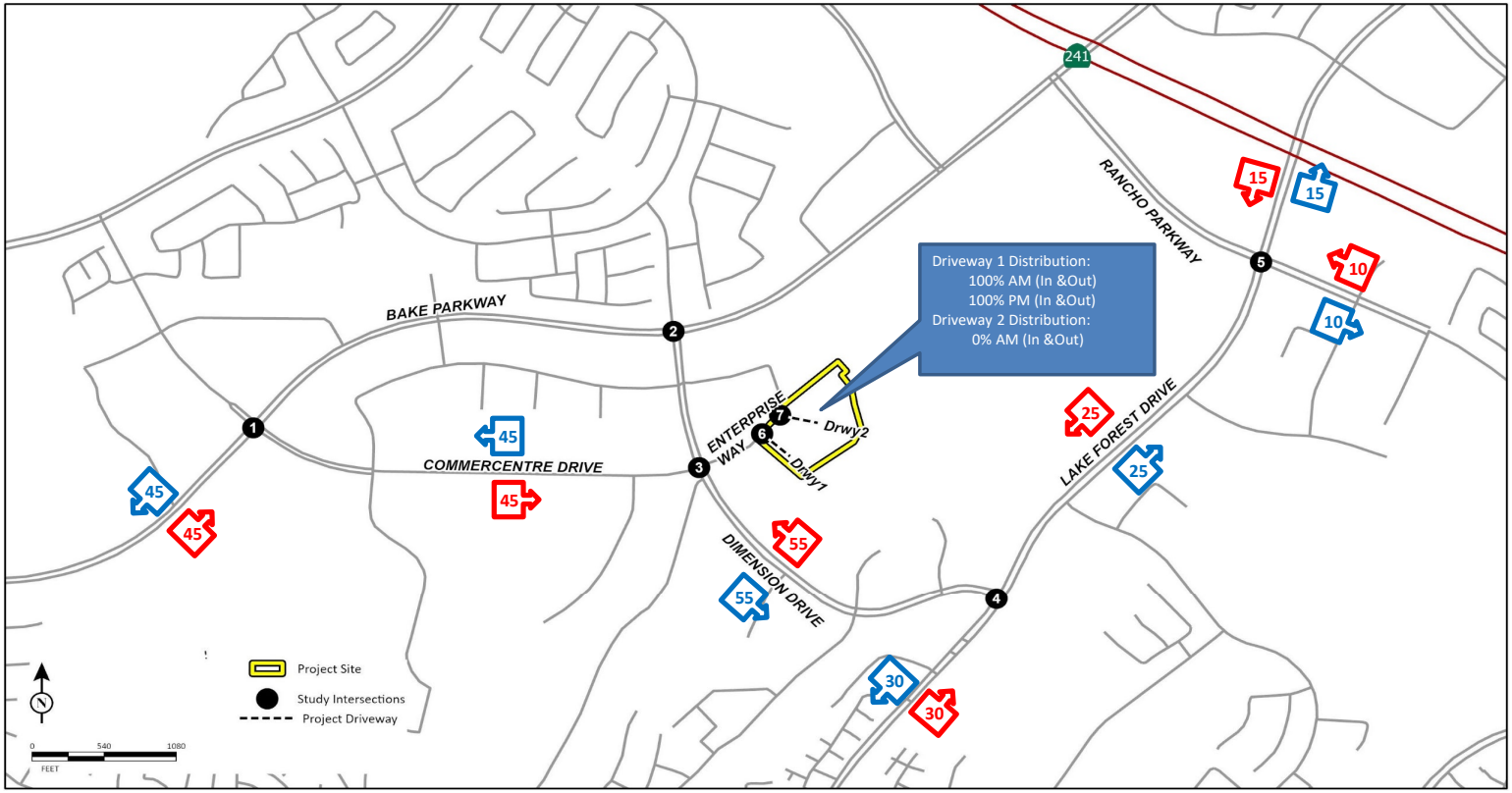
XXX / YYY AM / PM Volume

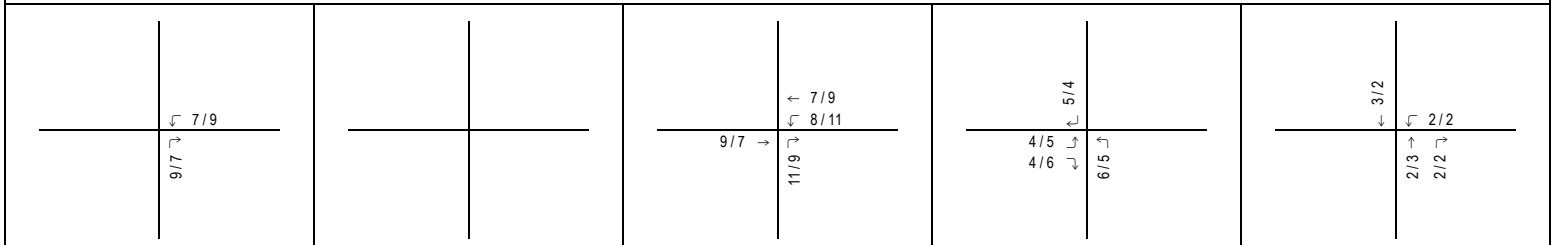
Inbound/Outbound Trip Distribution %

IPT Enterprise Business Center LLC Project

Traffic Impact Analysis

Project (Passenger Car) Trip Distribution and Assignment





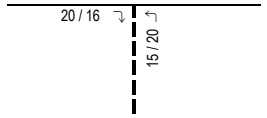
1 Bake Pkwy/Commercentre Dr

2 Dimension Dr/Bake Pkwy

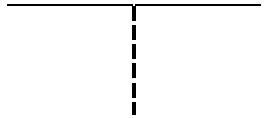
3 Dimension Dr/Commercentre Dr-Enterprise Way

4 Lake Forest Dr/Dimension Dr

5 Lake Forest Dr/Rancho Pkwy



6 Driveway 1/Commercentre Dr-Enterprise Way



7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 9

LEGEND

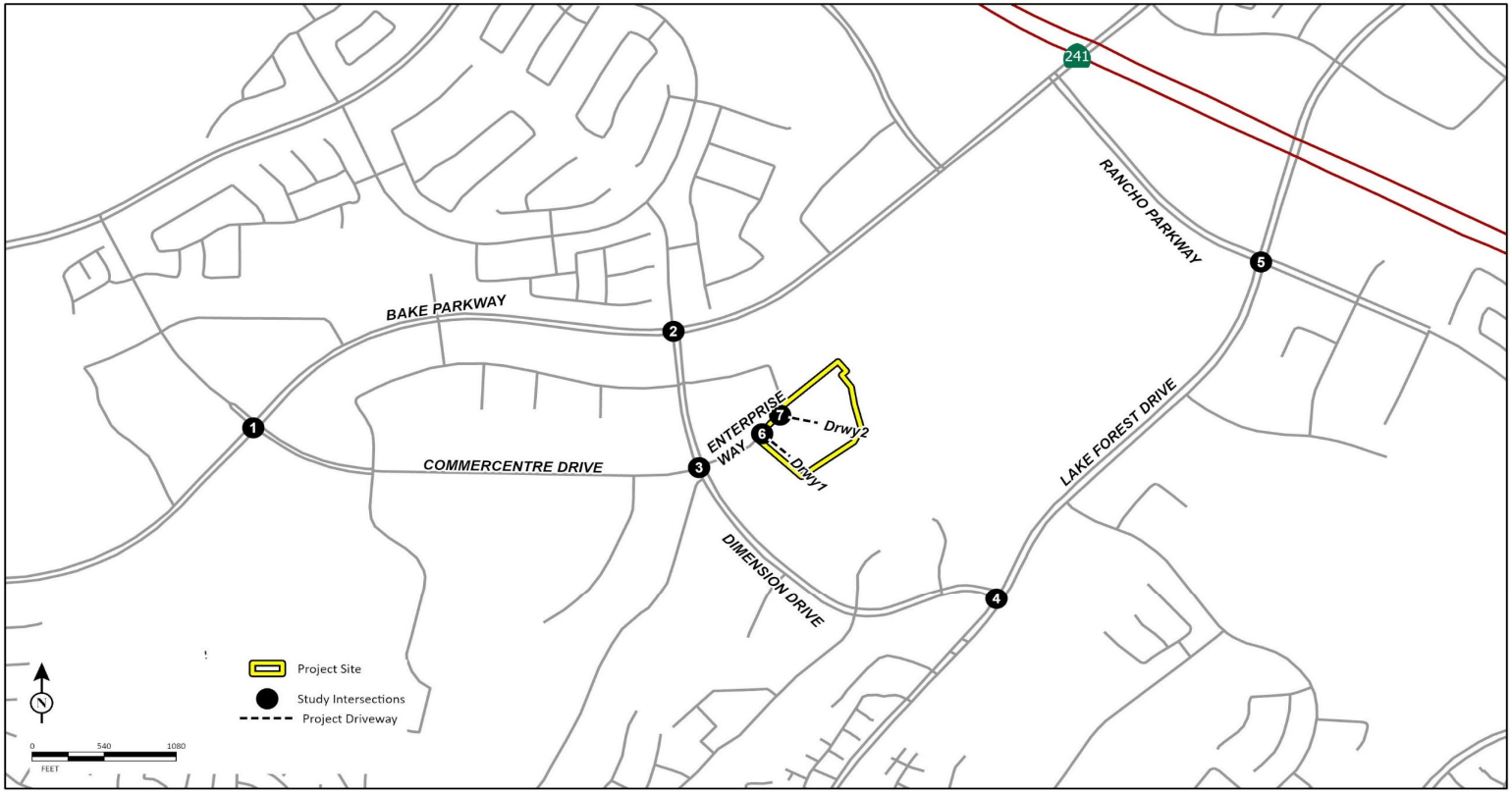
XXX / YYY AM / PM Volume

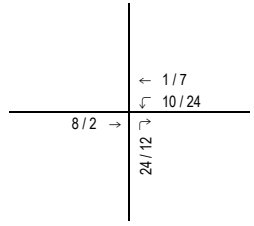
Inbound/Outbound Trip Distribution %

IPT Enterprise Business Center LLC Project

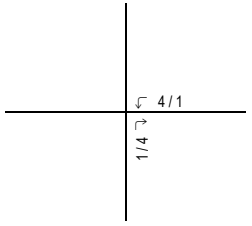
Traffic Impact Analysis

Project (Truck in PCEs) Trip Distribution and Assignment

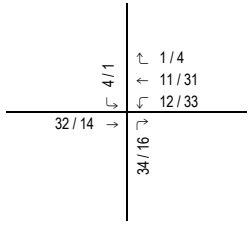




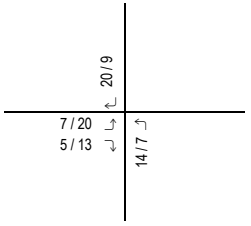
1 Bake Pkwy/Commercentre Dr



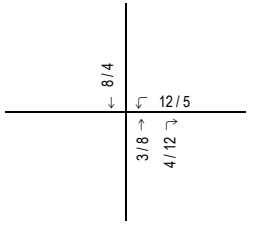
2 Dimension Dr/Bake Pkwy



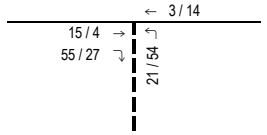
3 Dimension Dr/Commercentre Dr-Enterprise Way



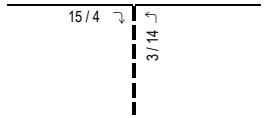
4 Lake Forest Dr/Dimension Dr



5 Lake Forest Dr/Rancho Pkwy



6 Driveway 1/Commercentre Dr-Enterprise Way



7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 10

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Total Project (in PCEs) Trip Distribution and Assignment

EXISTING (2024) WITH PROJECT CONDITIONS

EXISTING (2024) WITH PROJECT TRAFFIC VOLUMES

To determine Existing with Project conditions, traffic generated by the proposed project was added to existing traffic volumes at the study area intersections. Figure 11 shows the resulting Existing (2024) with Project a.m. and p.m. peak-hour traffic volumes at the study area intersections.

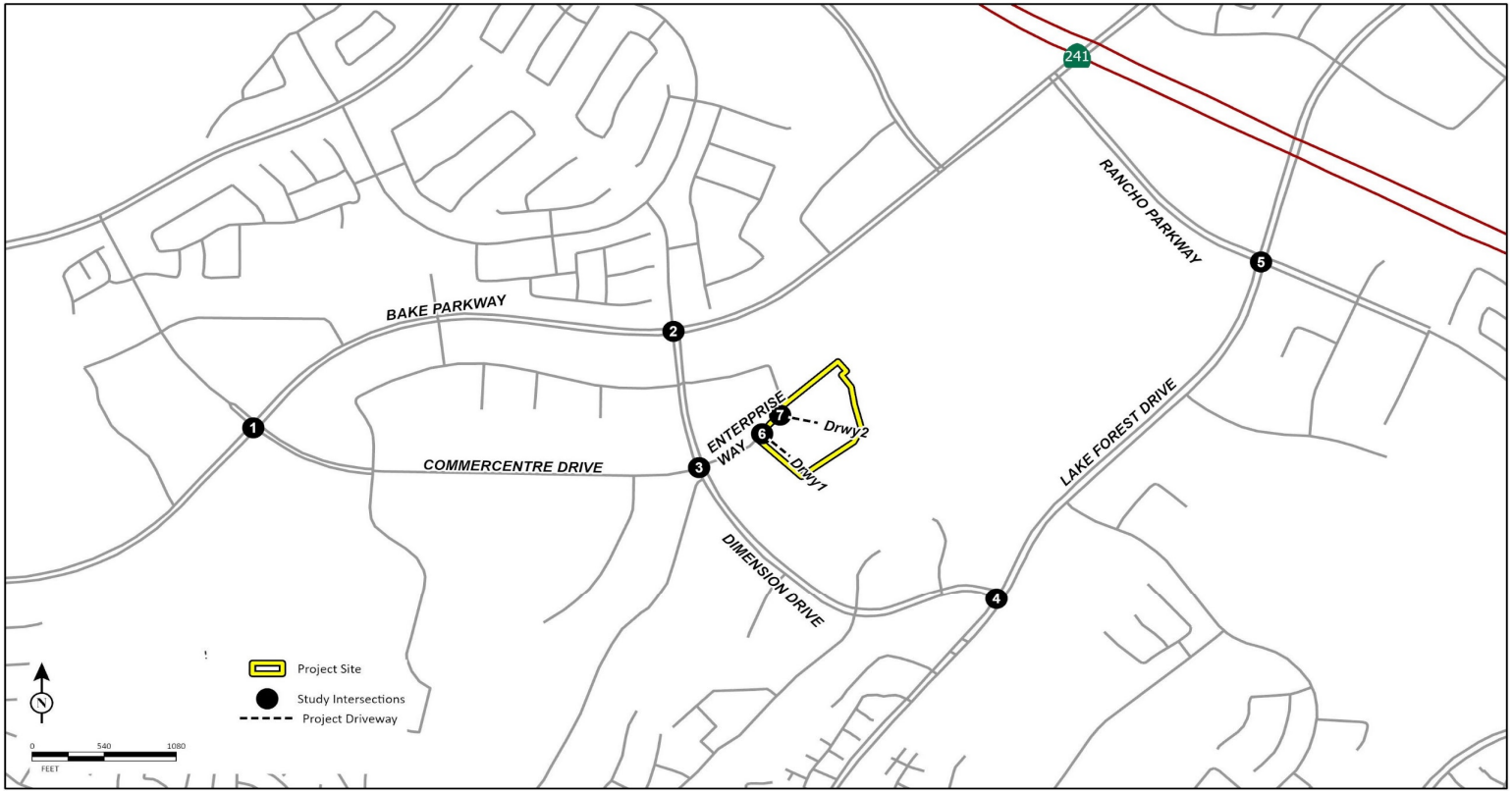
EXISTING (2024) WITH PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

The proposed off-site improvements at five study area intersections, as described above under the Project Description section, have been incorporated in the LOS analysis for this scenario. Table D summarizes the results of the Existing (2024) with Project a.m. and p.m. peak-hour LOS analysis for the study area intersections. The LOS analysis is based on both ICU and HCM methodology and Appendix D provides the Existing (2024) with Project LOS calculation worksheets. As this table indicates, the study area intersections are forecast to operate at an acceptable LOS (D or better) during the a.m. and p.m. peak hours.

Table D: Existing (2024) with Project Intersection Level of Service Summary

Intersection	Control	Existing (2024) with Project							
		AM Peak Hour				PM Peak Hour			
		ICU	LOS	HCM Delay (sec)	LOS	ICU	LOS	HCM Delay (sec)	LOS
1. Bake Parkway/Commercentre Drive	Signal	0.44	A	26.6	C	0.57	A	32.7	C
2. Dimension Drive/Bake Parkway	Signal	0.44	A	27.9	C	0.57	A	32.7	C
3. Dimension Drive/Commercentre Drive – Enterprise Way	Signal	0.28	A	16.6	B	0.38	A	26.8	C
4. Lake Forest Drive/Dimension Drive	Signal	0.37	A	21.0	C	0.41	A	24.5	C
5. Lake Forest Drive/Rancho Parkway	Signal	0.41	A	33.8	C	0.53	A	37.3	D
6. Enterprise Way/Project Driveway 1	OWSC	--	--	9.5	A	--	--	9.7	A
7. Enterprise Way/Project Driveway 2	OWSC	--	--	9.1	A	--	--	9.3	A

Source: Compiled by LSA (2024).
ICU = intersection capacity utilization
LOS = level of service
HCM = Highway Capacity Manual
OWSC = one-way stop control
sec = seconds



142 / 138 ↲	732 / 687 ↓	15 / 9 ↳
101 / 146 ↲		
142 / 123 →		
75 / 64 ↲		

↱ 5 / 9
← 108 / 185
↰ 158 / 289

68 / 82 ↰ ↑ ↱
701 / 1060
300 / 171

1 Bake Pkwy/Commercentre Dr

58 / 33 ↲	123 / 85 ↓	84 / 72 ↳
28 / 83 ↲		
739 / 1081 →		
58 / 39 ↲		

↱ 111 / 83
← 743 / 661
↰ 119 / 161

58 / 88 ↰ ↑ ↱
80 / 119
105 / 151

2 Dimension Dr/Bake Pkwy

33 / 35 ↲	191 / 277 ↓	24 / 27 ↳
18 / 52 ↲		
53 / 24 →		
211 / 305 ↲		

↱ 6 / 19
← 17 / 62
↰ 23 / 78

222 / 171 ↰ ↑ ↱
180 / 222
79 / 21

3 Dimension Dr/Commercentre Dr-Enterprise Way

287 / 197 ↲	482 / 644 ↓	13 / 31 ↳
187 / 358 ↲		
5 / 10 →		
81 / 114 ↲		

↱ 3 / 7
← 0 / 4
↰ 4 / 28

168 / 124 ↰ ↑ ↱
629 / 756
12 / 16

4 Lake Forest Dr/Dimension Dr

59 / 49 ↲	467 / 497 ↓	119 / 173 ↳
25 / 39 ↲		
292 / 590 →		
68 / 111 ↲		

↱ 50 / 96
← 421 / 360
↰ 212 / 152

114 / 148 ↰ ↑ ↱
438 / 583
137 / 284

5 Lake Forest Dr/Rancho Pkwy

← 25 / 105
101 / 45 →
55 / 27 ↲
21 / 54 ↰

6 Driveway 1/Commercentre Dr-Enterprise Way

← 22 / 91
86 / 41 →
15 / 4 ↲
3 / 14 ↰

7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 11

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Existing (2024) with Project Peak-Hour Traffic Volumes

OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITH PROJECT CONDITIONS

OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITH PROJECT TRAFFIC VOLUMES

As confirmed with the City Traffic staff in June 2024, a growth rate of 1 percent per year was used for the purpose of the future year traffic analysis. To determine Opening Year (2027) with Cumulative Projects with Project conditions, an ambient growth factor of 3 percent (1 percent per year, compounded over 3 years from 2024 to 2027) was applied to the existing traffic volumes. In addition, traffic generated by 13 cumulative projects and the proposed project were added to the study area intersections. Figure 12 shows the Opening Year (2027) with Cumulative Projects with Project a.m. and p.m. peak-hour traffic volumes at the study area intersections.

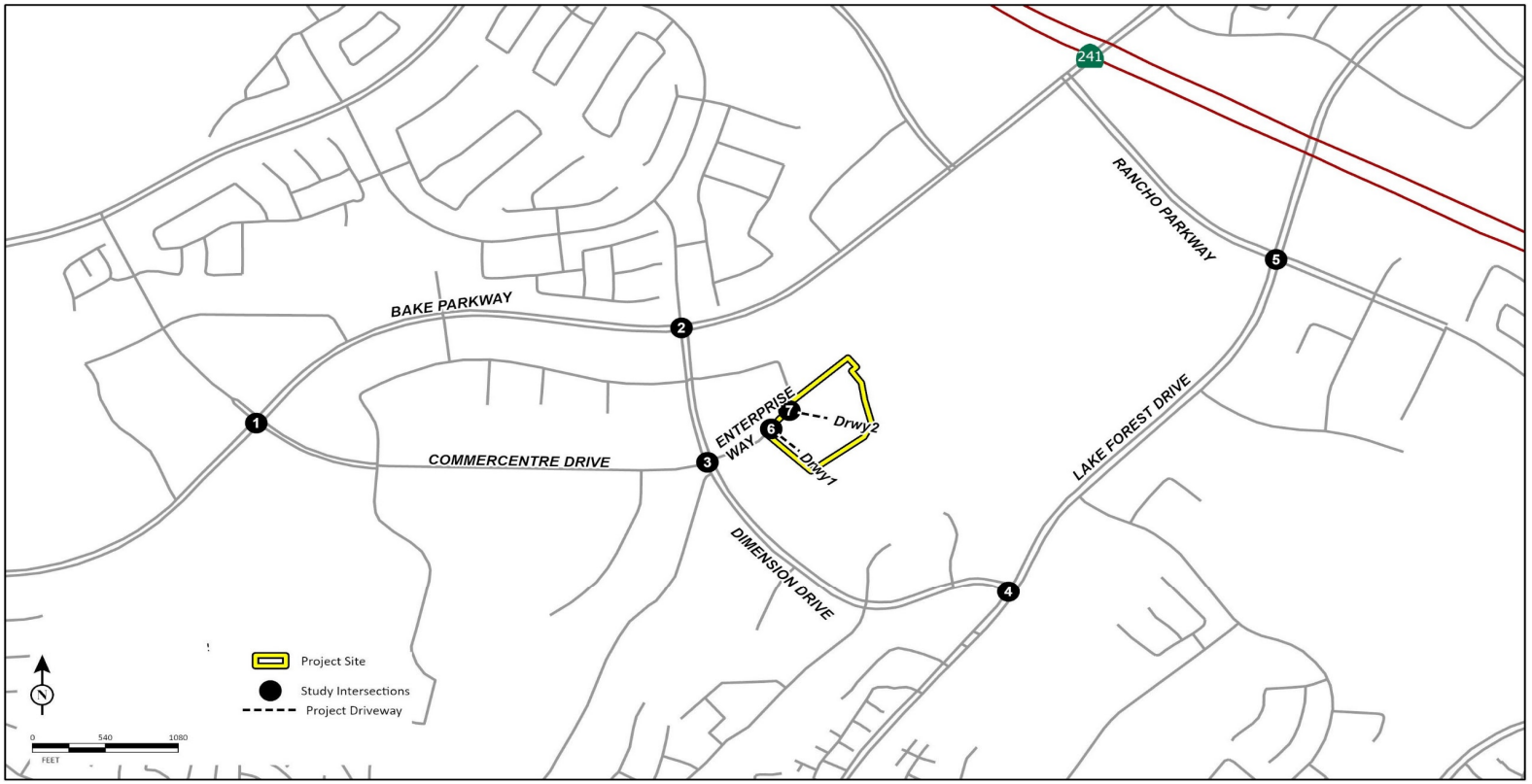
OPENING YEAR (2027) WITH CUMULATIVE PROJECTS WITH PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

The proposed off-site improvements at five study area intersections, as described under the Project Description section, have been incorporated in the LOS analysis for this scenario. Table E summarizes the results of the Opening Year (2027) with Cumulative Projects with Project a.m. and p.m. peak-hour LOS analysis for the study area intersections. The LOS analysis is based on both ICU and HCM methodology and Appendix D provides the Opening Year (2027) with Cumulative Projects with Project LOS calculation worksheets. As this table indicates, the study area intersections are forecast to operate at an acceptable LOS (D or better) during the a.m. and p.m. peak hours.

Table E: Opening Year (2027) with Cumulative Projects with Project Intersection Level of Service Summary

Intersection	Control	Opening Year (2027) with Cumulative Projects with Project							
		AM Peak Hour				PM Peak Hour			
		ICU	LOS	HCM Delay (sec)	LOS	ICU	LOS	HCM Delay (sec)	LOS
1. Bake Parkway/Commercentre Drive	Signal	0.45	A	27.1	C	0.60	A	32.9	C
2. Dimension Drive/Bake Parkway	Signal	0.46	A	28.5	C	0.60	A	34.3	C
3. Dimension Drive/Commercentre Drive – Enterprise Way	Signal	0.31	A	17.4	B	0.40	A	34.0	C
4. Lake Forest Drive/Dimension Drive	Signal	0.41	A	22.7	C	0.45	A	25.8	C
5. Lake Forest Drive/Rancho Parkway	Signal	0.43	A	36.2	D	0.56	A	39.0	D
6. Enterprise Way/Project Driveway 1	OWSC	--	--	10.2	B	--	--	10.6	B
7. Enterprise Way/Project Driveway 2	OWSC	--	--	9.8	A	--	--	10.0	B

Source: Compiled by LSA (2024).
HCM = Highway Capacity Manual
ICU = intersection capacity utilization
LOS = level of service
OWSC = one-way stop control
sec = seconds
Notes: Opening Year (2027) with Cumulative Projects conditions includes all cumulative (proposed, recently approved, under construction, and reasonably foreseeable) projects as of the date of the Notice of Preparation (NOP) (March 2024). The cumulative projects included in this analysis were obtained from the City of Lake Forest (City) at the time of the NOP.



147 / 146 ↲	792 / 741 ↓	15 / 9 ↳
108 / 151 ↰	154 / 129 →	77 / 66 ↴
5 / 9 ↱	112 / 198 ↑	175 / 328 ↱
70 / 84 ↰	743 / 1136 ↑	339 / 191 ↱

1 Bake Pkwy/Commercentre Dr

60 / 34 ↲	128 / 88 ↓	87 / 75 ↳
29 / 86 ↰	780 / 1159 →	64 / 41 ↴
115 / 87 ↱	804 / 709 ↑	136 / 172 ↱
62 / 99 ↰	82 / 124 ↑	111 / 165 ↱

2 Dimension Dr/Bake Pkwy

36 / 38 ↲	199 / 286 ↓	29 / 29 ↳
19 / 56 ↰	93 / 41 →	217 / 314 ↴
7 / 23 ↱	31 / 102 ↑	41 / 128 ↱
229 / 176 ↰	186 / 231 ↑	130 / 43 ↱

3 Dimension Dr/Commercentre Dr-Enterprise Way

327 / 217 ↲	508 / 673 ↓	13 / 32 ↳
202 / 399 ↰	5 / 10 →	91 / 136 ↴
3 / 7 ↱	0 / 4 ↑	4 / 29 ↱
192 / 137 ↰	655 / 792 ↑	12 / 16 ↱

4 Lake Forest Dr/Dimension Dr

64 / 58 ↲	499 / 524 ↓	123 / 178 ↳
33 / 45 ↰	316 / 618 →	77 / 119 ↴
52 / 99 ↱	440 / 388 ↑	238 / 163 ↱
120 / 160 ↰	461 / 620 ↑	146 / 310 ↱

5 Lake Forest Dr/Rancho Pkwy

← 52 / 178		
173 / 77 →		21 / 54 ↱
55 / 27 ↴		

6 Driveway 1/Commercentre Dr-Enterprise Way

← 49 / 164		
158 / 73 →		3 / 14 ↱
15 / 4 ↴		

7 Driveway 2/Commercentre Dr-Enterprise Way

LSA

FIGURE 12

LEGEND

XXX / YYY AM / PM Volume

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Opening Year (2027) with Cumulative Projects with Project Peak-Hour Traffic Volumes

P:\A-E\CLF2101.04A - IPT Enterprise Industrial\Technical Studies\Traffic\xls\Fig 12 - Opening Year with Cumulative WP.xlsx (2/4/2025)

ACCESS AND ON-SITE CIRCULATION ANALYSIS

INTERSECTION QUEUING ANALYSIS

Based on the HCM methodology, a 95th percentile queuing analysis was conducted in Synchro (version 12) for the study area intersections in Existing (2024) without and with Project and Opening Year (2027) with Cumulative Projects without and with Project traffic conditions to determine whether the existing turn pocket storage lengths could accommodate the peak-hour queues.

As described above under the Project Description section, the proposed project would implement off-site improvements (including traffic signal and lane geometric revisions) at five study area intersections, as project design features, prior to occupancy of the proposed industrial building. Therefore, the off-site improvements at these study area intersections have been incorporated in this queuing analysis in the "with Project" conditions.

Existing (2024) without and with Project Intersection Queuing Analysis

Table F summarizes the results of the Existing (2024) without and with Project a.m. and p.m. peak-hour queuing analysis for the study area intersections. Appendix D provides the Existing (2024) without and with Project HCM queuing worksheets. As this table indicates, the vehicle queues of the following turning movements exceed the storage lengths, but no operational improvements are required or recommended as justified below.

- **Bake Parkway/Commercentre Drive Eastbound Left-turn**. The 196 ft vehicle queue exceeds the 155 ft storage length of the eastbound left-turn lane by 41 ft (approximately equivalent to two cars) at this location during the p.m. peak hour in the Existing (2024) condition. The 199 ft vehicle queue exceeds the 155 ft storage length of the eastbound left-turn lane by 44 ft (approximately equivalent to two cars) at this location during the p.m. peak hour in the Existing (2024) with Project condition.

  Although the striped Bake Parkway/Commercentre Drive eastbound left-turn lane is approximately 155 ft, an opening that becomes a continuous TWLT median provides an additional 250 ft of storage. The 250 ft additional storage space is sufficient to accommodate the Existing without and with Project vehicle queues. It should be noted that the shortage of 41 ft is an existing condition. The proposed project is not expected to add any vehicles to this movement. Therefore, the proposed project is not anticipated to impact the operation of this intersection, and it is recommended that the eastbound left-turn lane remain in its current configuration.

- **Lake Forest Drive/Dimension Drive Northbound Left-turn**. The 164 ft vehicle queue exceeds the 140 ft storage length of the northbound left-turn lane by 24 ft (approximately equivalent to one car) at this location during the a.m. peak hour in the Existing (2024) condition. The striped Lake Forest Drive/Dimension Drive northbound left-turn lane is approximately 140 ft with an 85 ft transition. The 85 ft transition provides the additional storage space to accommodate the Existing without Project vehicle queue.

LSA

Table F: Existing (2024) without and with Project Intersection Queuing Analysis

Intersection		Turn Lane	Storage Length (feet per Lane)	Existing (2024) without Project				Existing (2024) with Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Volume	Queue[1]	Volume	Queue[1]	Volume	Queue[1]	Volume	Queue[1]
1	Bake Parkway/Commercentre Drive	NBL	285	68	115	82	127	68	115	82	144
		NBR[2]	200	276	68	159	87	300	47	171	70
		SBL	285	15	41	9	26	15	42	9	26
		SBR[2]	175	142	20	138	39	142	7	138	12
		EBL[3]	155	101	154	146	196	101	154	146	199
		WBL	345	148	150	265	217	--	--	--	--
		Dual WBL[4]		--	--	--	--	158	113	289	177
2	Dimension Drive/Bake Parkway	Dual NBL	165	58	54	88	71	58	54	88	71
		NBR	165	104	9	147	40	105	10	151	44
		SBL	165	84	134	72	111	84	134	72	111
		SBR	165	58	0	33	0	58	0	33	0
		EBL	285	28	60	83	120	28	63	83	130
		EBR[2]	225	58	0	39	0	58	0	39	0
		WBL[5]	290	115	171	160	204	--	--	--	--
			430	--	--	--	--	119	176	161	205
		WBR[2]	200	111	25	83	5	111	25	83	5
3	Dimension Drive/Commercentre Drive – Enterprise Way	NBL	195	222	106	171	97	222	142	171	140
		NBR[2]	125	45	5	5	0	79	5	21	0
		SBL	190	20	20	26	27	24	30	27	39
		SBR[2]	125	33	0	35	0	33	0	35	0
		EBL	195	18	17	52	37	18	23	52	54
		EBR	195	211	42	305	50	211	53	305	68
		WBL	140	11	12	45	32	23	29	78	75
4	Lake Forest Drive/Dimension Drive	NBL[6]	140	154	164	117	131	--	--	--	--
			250	--	--	--	--	168	176	124	139
		NBR[2]	190	12	0	16	0	12	0	16	0
		SBL	105	13	25	31	43	13	25	31	44
		SBR[2]	200	267	110	188	116	287	112	197	120
		EBL[7]	155	180	116	338	176	--	--	--	--
			205	--	--	--	--	187	118	358	185
		EBR	150	76	0	101	4	81	0	114	13
		WBL[8]	30	4	13	28	46	4	13	28	46
5	Lake Forest Drive/Rancho Parkway	NBL[9]	330	114	114	148	189	--	--	--	--
			470	--	--	--	--	114	114	148	188
		NBR[10]	200	133	100	272	191	--	--	--	--
			225	--	--	--	--	137	100	284	199
		SBL[11]	330	119	127	173	235	--	--	--	--
			440	--	--	--	--	119	127	173	235
		SBR[2]	195	59	0	49	0	59	0	49	0
		EBL	250	25	43	39	59	25	43	39	59
		EBR[2]	195	68	3	111	30	68	3	111	30
		Dual WBL	250	200	126	147	81	212	137	152	83
		WBR	100	50	0	96	19	50	0	96	19

Source: Compiled by LSA (2024).

= exceeds the storage length

[1] Queue is reported in feet. One vehicle is approximately 25 feet.
The queue length is reported for the lane with the highest queue in the lane group.

[2] Defacto right-turn lane

[3] Although the striped Bake Parkway/Commercentre Drive EBL lane is approximately 155 feet, an opening that becomes a continuous two-way left-turn lane (TWLTL) median provides an additional 250 feet of storage.

[4] The WBL configuration has one dedicated left-turn lane plus one shared-lane for through and left-turn volumes. The proposed project would improve this WBL to dual left-turn lanes.

[5] The proposed project would extend this WBL lane from 290 feet to 430 feet.

[6] The proposed project would extend this NBL lane from 140 feet to 250 feet.

[7] The existing EBL has one dedicated left-turn lane plus one shared-lane for through and left-turn volumes. The proposed project would extend the dedicated EBL lane from 155 feet to 205 feet.

[8] The striped Lake Forest Drive/Dimension Drive WBL lane is approximately 30 feet and has additional 25 feet of storage space.

[9] The proposed project would extend this NBL lane from 330 feet to 470 feet.

[10] The proposed project would improve this NBR lane from a defacto right-turn lane to a 225-foot dedicated right-turn lane.

[11] The proposed project would extend this SBL lane from 330 feet to 440 feet.

NBR = northbound right, NBL = northboud left, SBR = southbound right, SBL = southbound left
EBR = eastbound right, EBL = eastbound left, WBR = westbound right, WBL = westbound left

In the Existing (2024) with Project condition, the proposed project would extend the northbound left-turn lane from 140 ft to 250 ft at this location, as a project design feature. With implementation of this improvement, the vehicle queues (176 ft in the a.m. and 139 ft in the p.m. peak hour, respectively) of this turning movement would not exceed the extended turn lane (250 ft) and therefore, no operational impact is anticipated at this location.

- **Lake Forest Drive/Dimension Drive Eastbound Left-turn**. The eastbound approach at this intersection provides one dedicated left-turn lane and one shared lane for through and left-turn traffic. The 176 ft vehicle queue exceeds the 155 ft storage length of the eastbound left-turn lane by 21 ft (approximately equivalent to one car) at this location during the p.m. peak hour in the Existing (2024) condition. The striped Lake Forest Drive/Dimension Drive eastbound left-turn lane is approximately 155 ft with a 70 ft transition. The 70 ft transition provides the additional storage space to accommodate the Existing without Project vehicle queue.

  In the Existing (2024) with Project condition, the proposed project would extend the eastbound left-turn lane from 155 ft to 205 ft at this location, as a project design feature. With implementation of this improvement, the vehicle queues (118 ft in the a.m. and 185 ft in the p.m. peak hour, respectively) of this turning movement would not exceed the extended turn lane (205 ft) and therefore, no operational impact is anticipated at this location.

- **Lake Forest Drive/Dimension Drive Westbound Left-turn**. The 46 ft vehicle queue exceeds the 30 ft storage length of the westbound left-turn lane by 16 ft (less than one vehicle length) at this location during the p.m. peak hour in the Existing (2024) condition. The 46 ft vehicle queue exceeds the 30 ft storage length of the westbound left-turn lane by 16 ft (less than one vehicle length) at this location during the p.m. peak hour in the Existing (2024) with Project condition.

  The striped Lake Forest Drive/Dimension Drive westbound left-turn lane is approximately 30 ft and has additional 25 ft of storage space. The additional 25 ft storage space can accommodate the Existing without and with Project vehicle queues. It should be noted that the shortage of 16 ft is an existing condition. The proposed project is not expected to add any vehicles or contribute any queue to this movement. Therefore, the proposed project is not anticipated to impact the operation of this intersection, and it is recommended that the westbound left-turn lane remain in its current configuration.

Opening Year (2027) with Cumulative Projects without and with Project Intersection Queuing Analysis

Table G summarizes the results of the Opening Year (2027) with Cumulative Projects without and with Project a.m. and p.m. peak-hour queuing analysis for the study area intersections. Appendix D provides the Opening Year (2027) with Cumulative Projects without and with Project HCM queuing worksheets. As this table indicates, the vehicle queues of the following turning movements exceed the storage length, but no operational improvements are required or recommended as justified below.

LSA

Table G: Opening Year (2027) with Cumulative Projects without and with Project Intersection Queuing Analysis

Intersection		Turn Lane	Storage Length (feet per Lane)	Opening Year (2027) without Project				Opening Year (2027) with Project			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Volume	Queue[1]	Volume	Queue[1]	Volume	Queue[1]	Volume	Queue[1]
1	Bake Parkway/Commercentre Drive	NBL	285	70	116	84	129	70	116	84	150
		NBR[2]	200	315	89	179	105	339	57	191	85
		SBL	285	15	41	9	24	15	41	9	24
		SBR[2]	175	147	22	146	68	147	8	146	13
		EBL[3]	155	108	163	151	200	108	163	151	202
		WBL	345	165	159	304	230	--	--	--	--
		Dual WBL[4]		--	--	--	--	175	123	328	196
2	Dimension Drive/Bake Parkway	Dual NBL	165	62	57	99	84	62	57	99	84
		NBR	165	110	15	161	54	111	17	165	58
		SBL	165	87	138	75	114	87	138	75	114
		SBR	165	60	0	34	0	60	0	34	0
		EBL	285	29	61	86	123	29	65	86	133
		EBR[2]	225	64	0	41	0	64	3	41	0
		WBL[5]	290	132	190	171	214	--	--	--	--
			430	--	--	--	--	136	195	172	216
		WBR[2]	200	115	27	87	8	115	27	87	8
3	Dimension Drive/Commercentre Drive – Enterprise Way	NBL	195	229	110	176	100	229	150	176	157
		NBR[2]	125	96	21	27	0	130	28	43	0
		SBL	190	25	24	28	29	29	36	29	45
		SBR[2]	125	36	0	38	0	36	0	38	0
		EBL	195	19	18	56	40	19	25	56	63
		EBR	195	217	42	314	51	217	55	314	73
		WBL	140	29	23	95	58	41	45	128	124
4	Lake Forest Drive/Dimension Drive	NBL[6]	140	178	180	130	146	--	--	--	--
			250	--	--	--	--	192	191	137	154
		NBR[2]	190	12	0	16	0	12	0	16	0
		SBL	105	13	23	32	43	13	24	32	43
		SBR[2]	200	307	174	208	126	327	180	217	130
		EBL[7]	155	195	121	379	193	--	--	--	--
			205	--	--	--	--	202	122	399	202
		EBR	150	86	0	123	19	91	0	136	27
		WBL[8]	30	4	13	29	47	4	13	29	47
5	Lake Forest Drive/Rancho Parkway	NBL[9]	330	120	116	160	220	--	--	--	--
			470	--	--	--	--	120	115	160	219
		NBR[10]	200	142	104	298	212	--	--	--	--
			225	--	--	--	--	146	106	310	222
		SBL[11]	330	123	130	178	254	--	--	--	--
			440	--	--	--	--	123	130	178	254
		SBR[2]	195	64	0	58	0	64	0	58	0
		EBL	250	33	53	45	66	33	53	45	66
		EBR[2]	195	77	9	119	34	77	9	119	34
		Dual WBL	250	226	148	158	86	238	157	163	90
		WBR	100	52	0	99	21	52	0	99	21

Source: Compiled by LSA (2024).

= exceeds the storage length

[1] Queue is reported in feet. One vehicle is approximately 25 feet.
The queue length is reported for the lane with the highest queue in the lane group.

[2] Defacto right-turn lane

[3] Although the striped Bake Parkway/Commercentre Drive EBL lane is approximately 155 feet, an opening that becomes a continuous two-way left-turn lane (TWLTL) median provides an additional 250 feet of storage.

[4] The WBL configuration has one dedicated left-turn lane plus one shared-lane for through and left-turn volumes. The proposed project would improve this WBL to dual left-turn lanes.

[5] The proposed project would extend this WBL lane from 290 feet to 430 feet.

[6] The proposed project would extend this NBL lane from 140 feet to 250 feet.

[7] The existing EBL has one dedicated left-turn lane plus one shared-lane for through and left-turn volumes. The proposed project would extend the dedicated EBL lane from 155 feet to 205 feet.

[8] The striped Lake Forest Drive/Dimension Drive WBL lane is approximately 30 feet and has additional 25 feet of storage space.

[9] The proposed project would extend this NBL lane from 330 feet to 470 feet.

[10] The proposed project would improve this NBR lane from a defacto right-turn lane to a 225-foot dedicated right-turn lane.

[11] The proposed project would extend this SBL lane from 330 feet to 440 feet.

NBR = northbound right, NBL = northboud left, SBR = southbound right, SBL = southbound left
EBR = eastbound right, EBL = eastbound left, WBR = westbound right, WBL = westbound left

- **Bake Parkway/Commercentre Drive Eastbound Left-turn**. The 163 ft a.m. peak-hour vehicle queue and the 200 ft p.m. peak-hour vehicle queue exceed the 155 ft storage length of the eastbound left-turn lane by 8 ft (less than one car length) and 45 ft (approximately equivalent to two cars) at this location during the a.m. and p.m. peak hours, respectively, in the Opening Year (2027) with Cumulative Projects without Project condition. The 163 ft a.m. peak-hour vehicle queue and the 202 ft p.m. peak-hour vehicle queue exceed the 155 ft storage length of the eastbound left-turn lane by 8 ft (less than one car length) and 47 ft (approximately equivalent to two cars) at this location during the a.m. and p.m. peak hours, respectively, in the Opening Year (2027) with Cumulative Projects with Project condition.

  Although the striped Bake Parkway/Commercentre Drive eastbound left-turn lane is approximately 155 ft, an opening that becomes a continuous TWLT median provides an additional 250 ft of storage. The 250 ft additional storage space is sufficient to accommodate the Opening Year without and with Project queues. It should be noted that a shortage of 8 ft in the a.m. peak hour and 45 ft in the p.m. peak hour occur in the Opening Year without Project condition. The proposed project is not expected to add any vehicles to this movement. Therefore, the proposed project is not anticipated to impact the operation of this intersection, and it is recommended that the eastbound left-turn lane remain in its current configuration.

- **Lake Forest Drive/Dimension Drive Northbound Left-turn**. The 180 ft a.m. peak-hour vehicle queue and the 146 ft p.m. peak-hour vehicle queue exceed the 140 ft storage length of the northbound left-turn lane by 40 ft (less than two vehicle lengths) and 6 ft (less than one car length) at this location during the a.m. and p.m. peak hours, respectively, in the Opening Year (2027) with Cumulative Projects without Project condition. The striped Lake Forest Drive/ Dimension Drive northbound left-turn lane is approximately 140 ft with an 85 ft transition. The 85 ft transition provides the additional storage space to accommodate the shortage of the Opening Year without Project queue.

  In the Opening Year (2027) with Cumulative Projects with Project condition, the proposed project would extend the northbound left-turn lane from 140 ft to 250 ft at this location, as a project design feature. With implementation of this improvement, the vehicle queues (191 ft in the a.m. and 154 ft in the p.m. peak hour, respectively) of this turning movement would not exceed the extended turn lane (250 ft) and therefore, no operational impact is anticipated at this location.

- **Lake Forest Drive/Dimension Drive Eastbound Left-turn**. The eastbound approach at this intersection provides one dedicated left-turn lane and one shared lane for through and left-turn traffic. The 193 ft vehicle queue exceeds the 155 ft storage length of the eastbound left-turn lane by 38 ft (less than two vehicle lengths) at this location during the p.m. peak hour in the Opening Year (2027) with Cumulative Projects without Project condition. The striped Lake Forest Drive/Dimension Drive eastbound left-turn lane is approximately 155 ft with a 70 ft transition. The 70 ft transition provides the additional storage space to accommodate the Opening Year without Project queue.

  In the Opening Year (2027) with Cumulative Projects with Project condition, the proposed project would extend the eastbound left-turn lane from 155 ft to 205 ft at this location, as a project design feature. With implementation of this improvement, the vehicle queues (122 ft in

the a.m. and 202 ft in the p.m. peak hour, respectively) of this turning movement would not exceed the extended turn lane (205 ft) and therefore, no operational impact is anticipated at this location.

- **Lake Forest Drive/Dimension Drive Westbound Left-turn**. The 47 ft vehicle queue exceeds the 30 ft storage length of the westbound left-turn lane by 17 ft (less than one vehicle length) at this location during the p.m. peak hour in the Opening Year (2027) with Cumulative Projects without Project condition. The 47 ft vehicle queue exceeds the 30 ft storage length of the westbound left-turn lane by 17 ft (less than one vehicle length) at this location during the p.m. peak hour in the Opening Year (2027) with Cumulative Projects with Project condition.

  The striped Lake Forest Drive/Dimension Drive westbound left-turn lane is approximately 30 ft and has additional 25 ft of storage space. The additional 25 ft storage space can accommodate the Opening Year without and with Project queues. In addition, the shortage of 17 ft occurs in the Opening Year without Project condition. The proposed project is not expected to add any vehicles or contribute any queue to this movement. Therefore, the proposed project is not anticipated to impact the operation of this intersection, and it is recommended that westbound left-turn lane remain in its current configuration.

- **Lake Forest Drive/Rancho Parkway Northbound Right-turn**. The existing northbound approach at this location has a defacto right-turn lane. The 212 ft vehicle queue exceeds the 200 ft storage length of the northbound right-turn lane by 12 ft (less than one vehicle length) at this location during the p.m. peak hour in the Opening Year (2027) with Cumulative Projects without Project condition. In the Opening Year (2027) with Cumulative Projects with Project condition, the proposed project would add a 225 ft dedicated right-turn lane at this location, as a project design feature. With implementation of this improvement, the vehicle queues (106 ft in the a.m. and 222 ft in the p.m. peak hour, respectively) of this turning movement would not exceed the extended turn lane (225 ft) and therefore, no operational impact is anticipated at this location.

DRIVEWAY LOS ANALYSIS

As indicated on the conceptual site plan (Figure 2), access to the project site would be provided via two existing full-access driveways on Enterprise Way for WB-67 trucks and passenger cars.

An LOS analysis has been conducted for the project driveways as previously discussed in this TIA. Tables D and E provide the driveway LOS summary for Existing (2024) with Project and Opening Year (2027) with Cumulative Projects with Project conditions. Based on the results of this analysis, the project driveways are forecast to operate at satisfactory LOS (B or better) during both the a.m. and p.m. peak hours.

SIGHT DISTANCE ANALYSIS

A sight distance analysis was conducted along Enterprise Way at the project driveways to ensure driver visibility and safety. For purposes of this analysis, the stopping sight distance has been evaluated.

According to the California Department of Transportation (Caltrans) *Highway Design Manual* (HDM) (dated July 2020), the stopping sight distance is the minimum sight distance along a roadway required to allow a driver to decrease their speed from the design speed to a complete stop.

The stopping sight distance was evaluated on the major roadways abutting the project (i.e., Enterprise Way). In the project vicinity, the speed limit along Enterprise Way is 25 mph. As stated in Table 201.1 of the HDM, the minimum stopping sight distance is 150 ft for a design speed of 25 mph. Therefore, the minimum stopping sight distance has been considered as 150 ft for the project driveways along Enterprise Way.

Figure 13 illustrates the sight distances at the proposed project driveways. There are no sight distance obstructions at the proposed project driveway. The sight distances at the project driveways along Enterprise Way exceed 150 ft looking left and 150 ft looking right. Therefore, the proposed project driveways would meet the minimum sight distance requirements specified in the HDM.

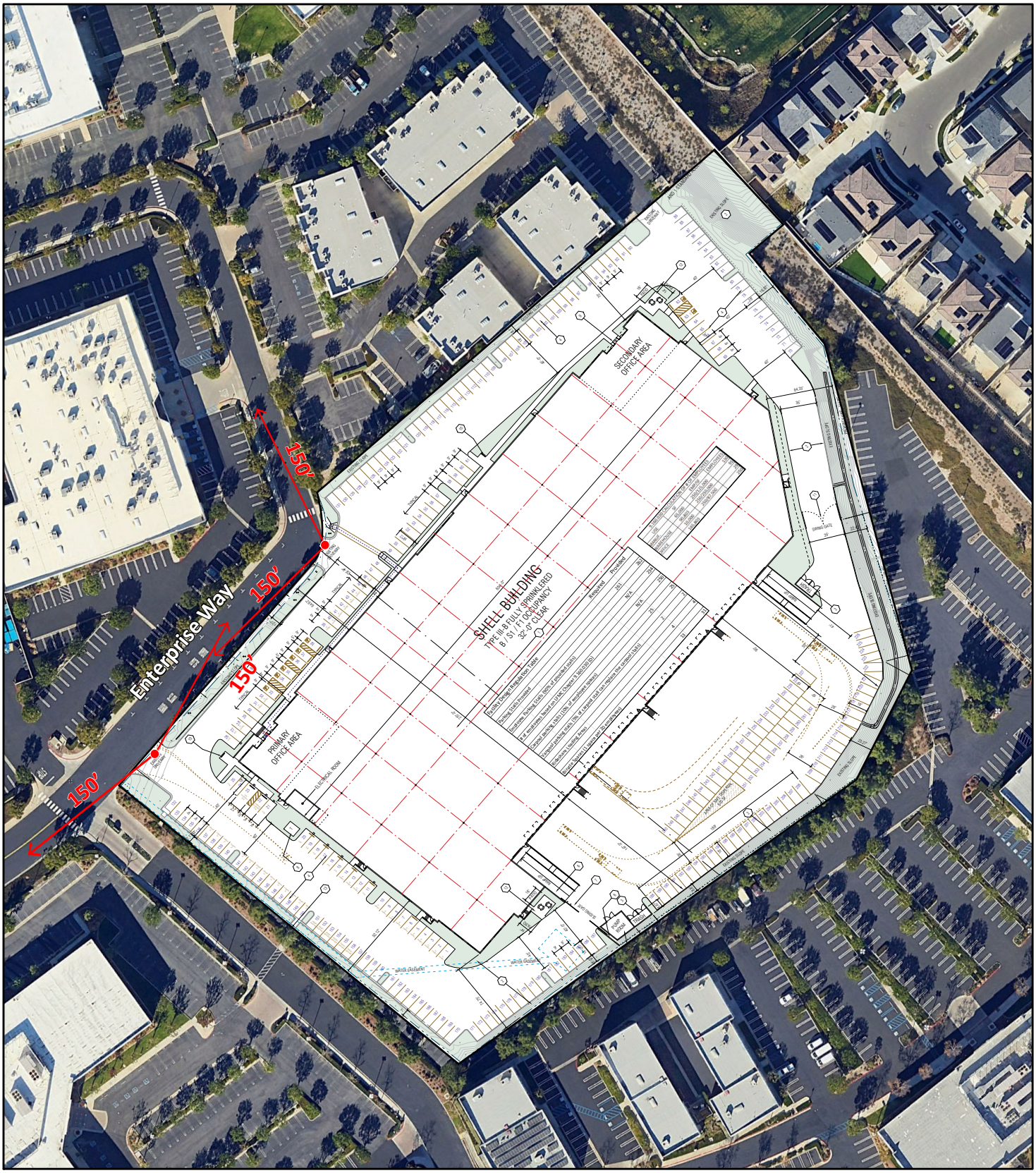
TRUCK TURNING TEMPLATE ANALYSIS

LSA used the AutoTurns Pro (Computer-Aided Design [CAD]) program and Google Earth aerial photos to estimate the maneuverability of the inbound and outbound turning movements at the following study area intersections:

- Bake Parkway/Commercentre Drive: northbound right-turn (inbound) and westbound left-turn (outbound)
- Dimension Drive/Commercentre Drive – Enterprise Way: northbound right-turn (inbound) and westbound left-turn (outbound)
- Lake Forest Drive/Dimension Drive: northbound left-turn (inbound), southbound right-turn (inbound), eastbound left-turn (outbound), and eastbound right-turn (outbound)
- Lake Forest Drive/Rancho Parkway: northbound right-turn (outbound) and westbound left-turn (inbound)

The turning movements were determined to be feasible for trucks if the following conditions were met:

1. A truck did not encroach beyond the nearside curb;
2. A truck did not encroach beyond the center median;
3. A truck did not encroach into opposing traffic lanes; or
4. A truck would not conflict with an opposing truck turning left.



LSA

FIGURE 13

0 110 220
FEET

SOURCE: Google Earth 2023

I:\C\CLF2101.04A\G\Sight_Distances.ai (8/19/24)

IPT Enterprise Business Center LLC Project
Traffic Impact Analysis
Driveway Sight Distances

A WB-67 truck was evaluated for this analysis, and the turn templates (WB-67) and vehicle profiles are included in Appendix F. As a result of the WB-67 truck turn templates, the inbound and outbound turning movements at the study area intersections are considered feasible, except for northbound right-turn (inbound) movement at Dimension Drive/Commercentre Drive – Enterprise Way. However, the proposed project would include a curb radius modification at the southeast corner of Dimension Drive/Commercentre Drive – Enterprise Way to accommodate WB-67 truck turns (northbound right turn). With implementation of this improvement, all inbound and outbound truck turning movements at the study area intersections are considered feasible.

VEHICLE MILES TRAVELED ANALYSIS

BACKGROUND

On December 28, 2018, the California Office of Administrative Law cleared the revised California CEQA Guidelines for use. Among the changes to the guidelines was removal of vehicle delay and LOS from consideration under CEQA. Senate Bill (SB) 743 mandates that VMT replace LOS as the transportation metric under CEQA. As a result, the City of Lake Forest updated their TA Guidelines (July 21, 2020) to require a VMT analysis for CEQA documents.

SCREENING CRITERIA

Per the City's TA guidelines, there are five types of screening that lead agencies can apply to effectively screen projects from project-level assessment. These are summarized below:

- Small Project Screening (net daily trips less than 100 daily trips)
- Map-Based (Low VMT Area) Screening for Residential and Office/Employment Projects
- Proximity to High-Quality Transit Screening
- Project Type Screening based on Local-Serving Uses
- Affordable Residential Development Screening

As mentioned before, the proposed project is located at 26200 Enterprise Way. The proposed project would demolish the existing 144,906 sf of office/industrial building and construct a 165,803-sf industrial building, including approximately 10,000 sf of office use, up to 65,000 sf of manufacturing use, and the remainder to be utilized as warehouse use. The existing building is currently vacant and, therefore, full project trips are analyzed. The proposed project is estimated to generate 727 daily trips, including 94 trips (70 inbound and 24 outbound) in the a.m. peak hour and 99 trips (31 inbound and 68 outbound) in the p.m. peak hour in PCEs.

The proposed project cannot be screened out as explained below:

- **Small Project Screening:** The proposed project is expected to generate 727 daily trips, which is more than 100 daily trips. Therefore, this screening criteria does not apply.
- **Map-Based (Low VMT Area) Screening for Residential and Office/Employment Projects:** The project site does not fall into the low-VMT area based on Attachment A-2 from the City's VMT Look-Up Table (Excel file). Therefore, this screening criteria does not apply.
- **Proximity to High-Quality Transit Screening:** No major transit stops or stops along a high-quality transit corridor were identified within 0.5 mile of the project site. Therefore, this screening criteria does not apply.

- **Project Type Screening based on Local-Serving Uses:** The proposed project is not a local-serving project. Therefore, this screening criteria does not apply.

- **Affordable Residential Development Screening:** The proposed project is not an affordable residential development. Therefore, this screening criteria does not apply.

VMT METHODOLOGY AND ANALYSIS

Since the proposed project does not screen out based on any of the above criteria, a VMT analysis is required. As requested by the City, LSA has prepared VMT assessment for this proposed project using both the Lake Forest VMT Look-Up Table and the Orange County Transportation Analysis Model (OCTAM).

Lake Forest VMT Look-Up Table

A VMT analysis was performed based on the Lake Forest VMT Look-Up Table and the following methodology per the City's TA Guidelines:

1. Based on the proposed project's location, identify the applicable Lake Forest Transportation Analysis Model (LFTAM) Traffic Analysis Zone (TAZ).

2. Using the VMT Look-Up Table, find the applicable Home-Based Work (HBW) VMT per employee for an office/employment project.

3. Compare LFTAM TAZ VMT data against the applicable VMT threshold (i.e., countywide Home-Based Work VMT per employee for an office/employment project).

4. Mitigate the net difference between the LFTAM VMT per employee and the countywide (for employment project) VMT threshold.

The proposed project is located in LFTAM TAZ 45 and is considered a non-residential office/ employment project. Table H shows the VMT reduction targets per the latest City's TA Guidelines. As shown in Table H, the project VMT rate exceeds the City's VMT threshold (Target VMT Rate) by 20 percent. Therefore, the proposed project would have a significant VMT impact.

Table H: City of Lake Forest VMT Reduction Targets

VMT Analysis Scenario	VMT Rate	
	VMT	Metric
Countywide VMT Threshold[1]	20.5	VMT/Employee
Project VMT Rate[2]	24.6	VMT/Employee
Above or Below Citywide VMT Threshold	**Above**	
Significant Impact?	**Yes**	
VMT Reduction Required	**4.1 (20%)**	

Source: Compiled by LSA (2024).
[1] Per the City of Lake Forest Transportation Analysis Guidelines, July 2020.
[2] Project VMT rate was from City of Lake Forest SB 743 VMT Look-Up Table, as provided in Appendix G.
SB = Senate Bill
VMT = vehicle miles traveled

OCTAM

A VMT analysis based on the latest version of the OCTAM (version 5.1), a regional travel model, was also performed.

Project Traffic Analysis Zone Update

The first step in the preparation of this analysis was to update the TAZ in the OCTAM that includes the project site. The proposed project needs to be isolated in its own TAZ to estimate/determine the project VMT. OCTAM does not have the ability to split/add new TAZs. Therefore, the following steps were conducted to isolate the proposed project in its own TAZ:

The project site contains an existing 144,906 sf office/industrial building, which would be demolished for the development of a 165,803 sf industrial building, including approximately 10,000 sf of office use, up to 65,000 sf of manufacturing use, and the remainder to be utilized for warehouse use. The OCTAM is a socioeconomic data-based model. Therefore, the square footages of the existing and proposed uses were converted into employment for modeling purposes. The ITE *Trip Generation* Manual (11th Edition) was used to develop the conversion factors. The ITE *Trip Generation* Manual includes trip rates for different land uses by multiple unit types that were used to develop land use square footage-to-employee conversion factors (i.e., employees per thousand square feet). The conversion factor yielded approximately 472 employees for the existing use and 187 employees for the proposed use.

An analysis of baseline scenario (2019) was conducted for the proposed project. The existing office/ industrial building is currently vacant; however, it was occupied in 2019. Therefore, for the baseline year (2019), 472 employees were removed from the OCTAM parent TAZ 1379 where the project is located, and the remainder of the socioeconomic data from TAZ 1379 was moved to the adjacent TAZ 1387. The proposed project (187 employees) was included in the project TAZ 1379 for modeling.

Analysis Metrics

The City's TA Guidelines recommend using HBW VMT per employee as the VMT metric to evaluate the office/employment projects. Also, the TA Guidelines recommend using a threshold of 14.6, which is 15 percent below the existing Countywide HBW VMT per employee (17.2) for the office/ employment projects.

VMT Analysis

As recommended in the City's TA Guidelines, model runs were conducted for both baseline (2019) without and with the proposed project by using the latest version of the OCTAM (version 5.1). No circulation/ network modifications were included in the OCTAM network.

The proposed project would have a significant VMT impact if the HBW VMT per employee of the proposed project is greater than the threshold (14.6), which is 15 percent below the existing Countywide HBW VMT per employee (17.2) for the office/employment projects.

Table I below shows the project VMT results using the latest version of OCTAM (version 5.1). As shown in Table I, the project HBW VMT per employee (15.7) is higher than the threshold (14.6) in the baseline scenario (2019) and exceeds the threshold by 7.5 percent. Therefore, the proposed project would have a significant VMT impact and would be required to implement feasible Traffic Demand Management (TDM) measures to reduce project VMT.

Table I: Project and Regional Home-Based Work VMT Per Employment Comparison

VMT Analysis Scenario	VMT Rate	
	VMT	Metric
Existing Countywide VMT[1]	17.2	HBW VMT/Employee
VMT Threshold (15% below the Countywide existing baseline)	14.6	HBW VMT/Employee
Project VMT Rate[2]	15.7	HBW VMT/Employee
Above or Below Citywide VMT Threshold	**Above**	
Significant Impact?	**Yes**	
VMT Reduction Required	**1.1 (7.5%)**	

Source: Compiled by LSA (2024).
[1] Obtained using 2019 "No project" LSA model run (OCTAM Version 5.1).
[2] Obtained using 2019 "With project" LSA model run (OCTAM Version 5.1).
HBW = Home-Based Work
OCTAM = Orange County Transportation Analysis Model
VMT = vehicle miles traveled

VMT MITIGATION MEASURES

Since the project VMT rate exceeds the City's VMT threshold by 20 percent based on the Lake Forest VMT Look-Up Table and by 7.5 percent based on the latest version of OCTAM (version 5.1), the proposed project is required to implement the following TDM measure to reduce the VMT impact:

Bike Lanes. Prior to issuance of a certificate of occupancy for the proposed industrial building, the project Applicant shall retain a licensed Civil Engineer by the State of California to prepare Civil Street Improvements and Signing and Striping Plans (collectively Construction Plans) for the implementation of bike lanes in both directions on Commercentre Drive between Alton Parkway and Dimension Drive. These bike lanes on Commercentre Drive would connect the proposed project site on Enterprise Way to the existing bike lanes on Alton Parkway, which eventually connects to the Irvine Transportation Center, a multi-model transit hub including Metrolink and Amtrak commuter train services and OCTA bus services.

Based on a preliminary design assessment, the Construction Plans shall include an asphalt slurry seal of Commercentre Drive to modify the existing lane striping for the addition of standard striped bike lanes and green bike markings. The project Applicant shall use these Construction Plans to obtain a Public Works Encroachment Permit to construct said improvements for bike lanes on Commercentre Drive. The construction of said improvements shall be completed per the plans and to the satisfaction of the Public Works Department. The project Applicant shall use these Construction Plans to obtain a Public Works Encroachment Permit to construct said improvements for bike lanes on Commercentre Drive.

Providing bike lanes and an enhanced bikeway network can increase access to and from transit hubs. This encourages a mode shift from vehicles to bicycles and displaces VMT. According to the California Air Pollution Control Officers Association (CAPCOA) Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (October 2024) (CAPCOA Handbook), the addition of bike lanes (T-20 Expand Bikeway Network) can provide a maximum VMT reduction of 0.5 percent. Assuming this TDM measure could achieve the maximum 0.5 percent VMT reduction, the reduction achieved would not reduce the project's VMT to below the City's VMT threshold. Therefore, even with implementation of the TDM measure (addition of bike lanes), the project's VMT impact would be significant and unavoidable.

CONCLUSIONS

Based on the results of this TIA, implementation of the proposed project (including proposed off-site improvements at five study area intersections) would not result in any significant impacts to the surrounding roadway system. The evaluation of the study area intersection LOS shows that the addition of project traffic would not cause an intersection operation to deteriorate below the City's performance threshold.

LSA evaluated truck turning templates for the inbound and outbound turning movements at the study area intersections. As a result of the WB-67 truck turn templates, the inbound and outbound turning movements at the study area intersections are considered feasible, except for the northbound right-turn (inbound) movement at Dimension Drive/Commercentre Drive – Enterprise Way. However, the proposed project would include a curb radius modification at the southeast corner of Dimension Drive/Commercentre Drive – Enterprise Way at this location to accommodate WB-67 truck turns (northbound right turn). Therefore, with implementation of this improvement, all inbound and outbound truck turning movements at the study area intersections are considered feasible.

In compliance with the 2022 California Green Building Standards Code, the proposed project would provide 31 bicycle racks. The proposed project would maintain the existing walkways/sidewalks in the vicinity of the project site.

The proposed project is a non-residential office/employment project. Based on the latest City's TA Guidelines, the project VMT rate exceeds the City's VMT threshold by 20 percent based on the Lake Forest VMT Look-Up Table and by 7.5 percent based on the latest version of the OCTAM (version 5.1). With implementation of the VMT reduction/TDM measure (addition of bike lanes) that would promote alternative transportation with the intent of reducing VMT, the project's VMT impact could be reduced but not to below a level of significance. According to the CAPCOA Handbook, the addition of bike lanes (T-20 Expand Bikeway Network) can provide a maximum VMT reduction of 0.5 percent. Assuming this TDM measure could achieve the maximum 0.5 percent VMT reduction, the reduction achieved would not reduce the project's VMT impact to below the City's VMT threshold. Therefore, even with implementation of the TDM measure (addition of bike lanes), the project's VMT impact would be significant and unavoidable.

REFERENCES

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APPENDIX A

STUDY AREA INTERSECTION IMPROVEMENTS

SHAVE MEDIAN NOSE 5'

SHAVE MEDIAN NOSE 5'

TS

MODIFY EXISTING TRAFFIC SIGNAL SYSTEM

- Install video/radar detection system
- Install Cobalt controller
- Install B40 Box with splice @ cabinet (SIC and signal wires)
- Retrofit LED safety light luminaires for the entire intersection
- Install CCTV camera on signal pole adjacent to controller cabinet
- Install APS push buttons for the entire intersection
- Rewire intersection
- Install Clary BBS

2" Conduit to be installed from cabinet to Serrano Summit/Commercentre intersection. Any damaged conduit along the rest of the way shall be repaired by the developer. Fiber shall be 72 SMFO with 12 SMFO going to each cabinet along stretch. Pull boxes (#6) every 100 feet and 50-feet of slack at every B40 Box. B40 Box shall be provided at Serrano Summit that the 72 SMFO runs through with a splice canister and the 12 SMFO drop cable be connected into the cabinet with the appropriate switch. See City Standards and Specs for the traffic signal.

For the signal, the additional requirement will be the requirement for the fiber connection back to Civic Center/Commercentre from Bake/Commercentre, with appropriate switch.

EX. R/W

BAKE PKWY.

COMMERCENTRE DR.

EXISTING C&G

MODIFY CURB RETURN AND RECONSTRUCT ADA RAMP WITHIN EXISTING ROW

RELOCATE TYPE I-A POLE

NEW TYPE 26-4-100 SIGNAL POLE WITH 40' MAST ARM

RECONSTRUCT CATCH BASIN IF NECESSARY TO ACCOMMODATE NEW CURB RETURN

R40'

2' OFFSET @ 45MPH = 90'

4' OFFSET @45 MPH = 180'

26' 13' 10' 11' 16' 8'

54' 50' 42'

10' 13' 14' 8'

19' 10' 10' 12' 13'

32' 40'

32' 40'

344' 344'

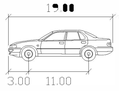
15' 12' 10' 12' 15'

LEGEND:

EXISTING STRIPING & MARKINGS TO REMAIN.

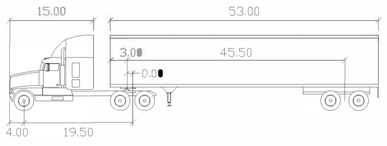
PROPOSED STRIPING & MARKINGS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE



Passenger Car
Not to Scale

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.6



WB-67
Not to Scale

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

NOTE: SEE COST ESTIMATE (UCE-1)

SCALE: 1" = 30' (ON 24" x 36" SHEET)

0 15 30 60 90 120

EXHIBIT 1-1: BAKE PARKWAY & COMMERCENTRE DRIVE CONCEPT STRIPING PLAN WITH RIGHT TURN LANE (WB-67) WITH TRUCK TURNS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE: 949-660-1994

DIMENSION DR.

430'

BAKE PKWY

90' TRANSITION

PROP. MEDIAN

EXIST. MEDIAN

AS APPROPRIATE, RELOCATE STREET LIGHTS FROM MEDIAN TO PARKWAY.

SHAVE MEDIAN NOSE 5'

TS

MODIFY EXISTING TRAFFIC SIGNAL SYSTEM

NEW TYPE 29-5-100 SIGNAL POLE WITH 55' MAST ARM

MODIFY CURB RAMP TO MEET ADA STANDARDS

RELOCATE TYPE 1-A POLE

RELOCATE TYPE 1-A POLE

MODIFY CURB RAMP TO MEET ADA STANDARDS

NEW TYPE 26-4-100 SIGNAL POLE WITH 40' MAST ARM

- Install video/radar detection system
- Install Cobalt controller
- Install B40 Box with splice @ cabinet (SIC and signal wires)
- Retrofit LED safety light luminaires for the entire intersection
- Install CCTV camera on signal pole adjacent to controller cabinet
- Install APS push buttons for the entire intersection
- Rewire intersection
- Install Clary BBS

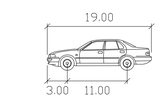
Refer to City Standard Plans & Specs for the traffic signal for fiber requirement to connect the cabinet and the B40 Box. Existing city project will run new 72 SMFO fiber with 12 SMFO drop cable with splice canister with 50-foot of slack. Project will verify.

LEGEND:

EXISTING STRIPING & MARKINGS TO REMAIN.

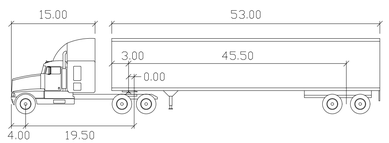
PROPOSED STRIPING & MARKINGS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE



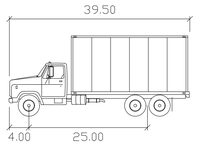
Passenger Car
Not to Scale

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	6.0
Steering Angle	: 31.6



WB-67
Not to Scale

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



SU-40
Not to Scale

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	6.0
Steering Angle	: 31.8

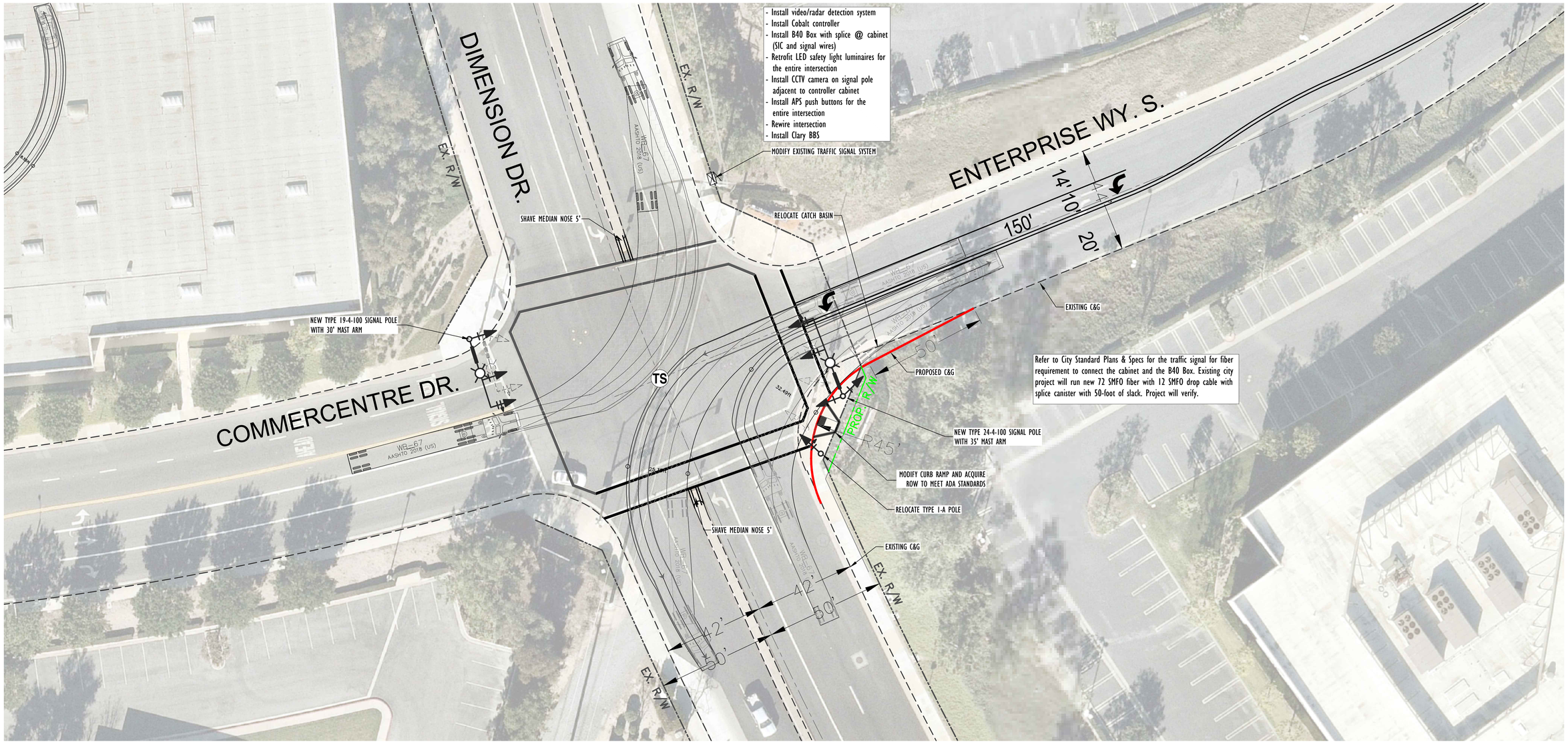
NOTE: SEE COST ESTIMATE (UCE-8)

SCALE: 1" = 30' (ON 24" x 36" SHEET)

0 15 30 60 90 120

EXHIBIT 5-1: BAKE PARKWAY & DIMENSION DRIVE CONCEPT STRIPING PLAN WITH WB-67 TRUCK TURNS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE: 949-660-1994

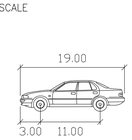


LEGEND:

EXISTING STRIPING & MARKINGS TO REMAIN.

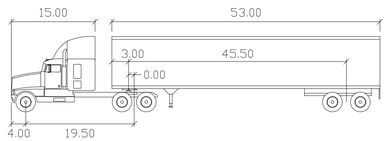
PROPOSED STRIPING & MARKINGS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE



Passenger Car
Not to Scale

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	6.0
Steering Angle	: 31.6



WB-67
Not to Scale

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

NOTE: SEE COST ESTIMATE (UCE-5)

SCALE: 1" = 20' (ON 24" x 36" SHEET)

0 10 20 40 60 80

EXHIBIT 3-2: DIMENSION DR. & COMMERCENTRE DR./ENTERPRISE WY.
CONCEPT STRIPING PLAN WITH WB-67 TRUCK TURNS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE: 949-660-1994

EX. R/W

DIMENSION DR.

AS APPROPRIATE, RELOCATE STREET LIGHTS FROM MEDIAN TO PARKWAY.

EXIST. MEDIAN

90' TRANSITION

PROP. MEDIAN

50'

205'

50'

EX. R/W

SHAVE MEDIAN NOSE 5' & NARROW TO 2' WIDE

TS

SHAVE MEDIAN NOSE 5' & NARROW TO 2' WIDE

MODIFY EXISTING TRAFFIC SIGNAL SYSTEM

- Install video/radar detection system
- Install Cobalt controller
- Install B40 Box with splice @ cabinet (SIC and signal wires)
- Retrofit LED safety light luminaires for the entire intersection
- Install CCTV camera on signal pole adjacent to controller cabinet
- Install APS push buttons for the entire intersection
- Rewire intersection
- Install Clary BBS

Refer to City Standard Plans & Specs for the traffic signal for fiber requirement to connect the cabinet and the B40 Box. Existing city project will run new 72 SMFO fiber with 12 SMFO drop cable with splice canister with 50-foot of slack. Project will verify.

EX. R/W

50'

LAKE FOREST DR.

250'

50'

EX. R/W

EXIST. MEDIAN

AS APPROPRIATE, RELOCATE STREET LIGHTS FROM MEDIAN TO PARKWAY.

90' TRANSITION

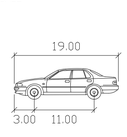
PROP. MEDIAN

LEGEND:

EXISTING STRIPING & MARKINGS TO REMAIN.

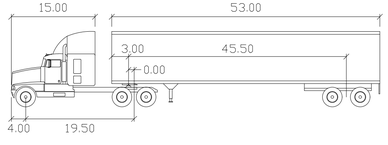
PROPOSED STRIPING & MARKINGS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE



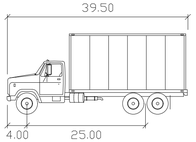
Passenger Car
Not to Scale

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	6.0
Steering Angle	: 31.6



WB-67
Not to Scale

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		



SU-40
Not to Scale

	feet
Width	: 8.00
Track	: 8.00
Lock to Lock Time	6.0
Steering Angle	: 31.8

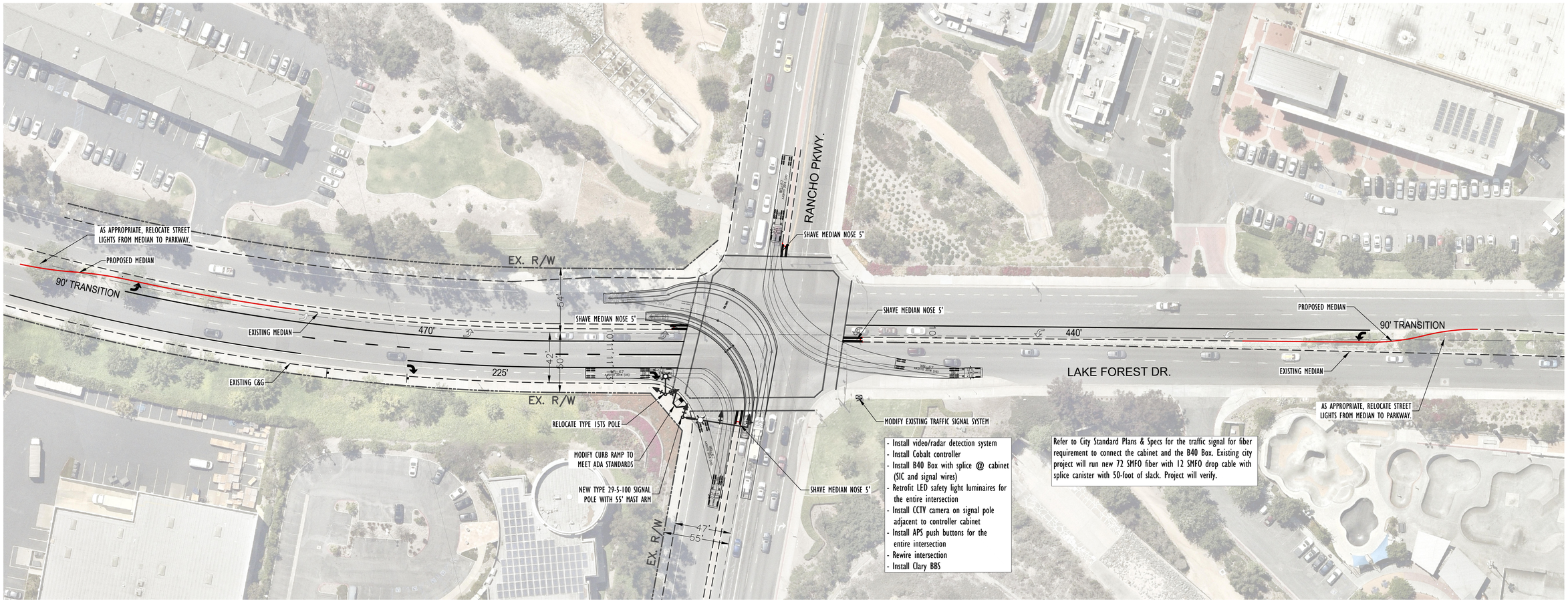
NOTE: SEE COST ESTIMATE (UCE-9)

SCALE: 1" = 30' (ON 24" x 36" SHEET)

0 15 30 60 90 120

EXHIBIT 6-1: DIMENSION DRIVE & LAKE FOREST CONCEPT STRIPING PLAN WITH WB-67 TRUCK TURNS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE: 949-660-1994

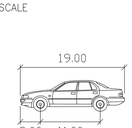


LEGEND:

EXISTING STRIPING & MARKINGS TO REMAIN.

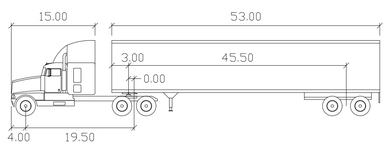
PROPOSED STRIPING & MARKINGS TO BE INSTALLED BY CONTRACTOR

NOT TO SCALE



Passenger Car
Not to Scale

	feet
Width	: 7.00
Track	: 6.00
Lock to Lock Time	6.0
Steering Angle	: 31.6



WB-67
Not to Scale

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

NOTE: SEE COST ESTIMATE (UCE-7)

SCALE: 1" = 40' (ON 24" x 36" SHEET)

0 20 40 80 120 160

EXHIBIT 4-2: RANCHO PARKWAY & LAKE FOREST DRIVE CONCEPT STRIPING PLAN WITH RIGHT TURN LANE (WB-67) WITH TRUCK TURNS

URBAN CROSSROADS
WWW.URBANXROADS.COM
TELEPHONE: 949-660-1994

APPENDIX B

OCTA BUS INFORMATION

South County
System Map

OCBUS
OCbus.com

1 Local Routes (1-99)

100 Community Routes (100-199)

400 Metrolink Stationlink Routes (400-499)
Weekday Rush Hour Only

500 OC Bus Rapid Limited Stop Service (500-599)

800 City Shuttle

Rail Stations

OC Bus Transit Centers

Project Site

IRVINE STATION

NEWPORT TRANSPORTATION CENTER

LAGUNA HILLS TRANSPORTATION CENTER

LAGUNA BEACH BUS STATION

MISSION VIEJO LAGUNA NIGUEL STATION

SAN JUAN CAPISTRANO STATION

SAN CLEMENTE STATION

OC Flex Zone

Unlimited rides only $5 a day!
Serving parts of Aliso Viejo/
Laguna Niguel/Mission Viejo.

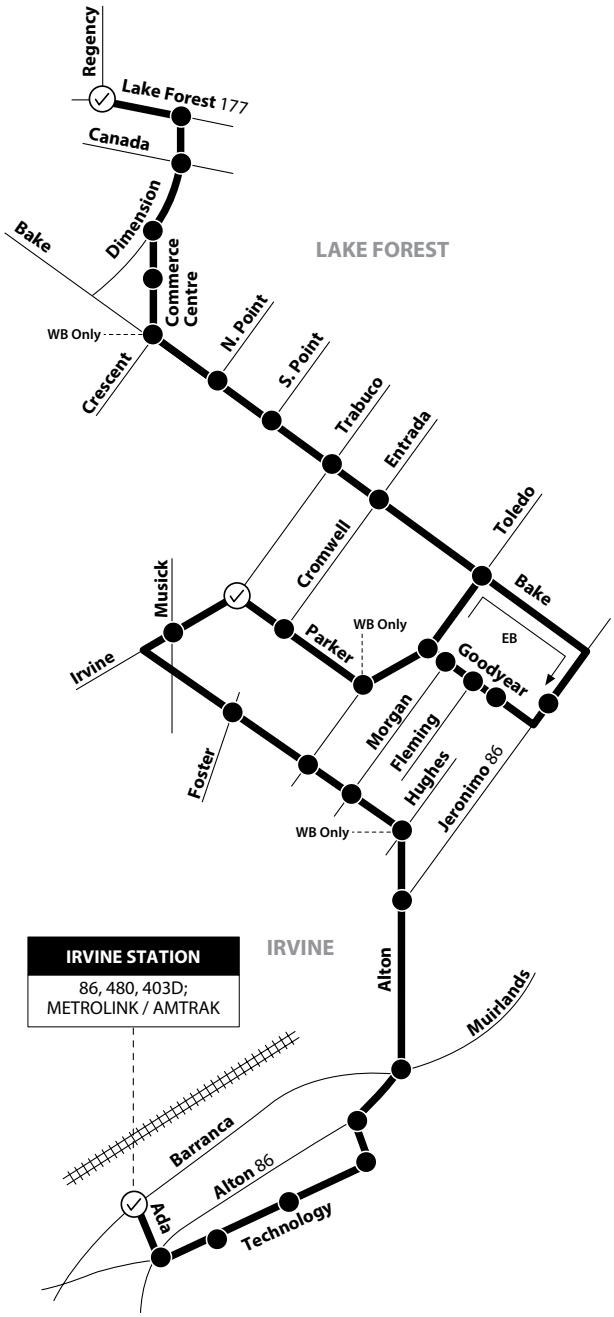
OCFLEX

Use West/Central County Ride Guide for routes serving West and Central County. | For Tustin, Villa Park, Anaheim Hills and Yorba Linda use the North Coun

NOTE: No weekend service.
NOTA: *No hay servicio los fines de semana.*

Irvine Metrolink Station to Lake Forest
via Alton Pkwy / Bake Pkwy / Lake Forest Dr

480



Route 480 is a limited-stop route, making stops only at time check points ✓ and other designated stops ●.

LEGEND ***LEYENDA***

✓ Scheduled Departure — Regular Routing

N — MAP NOT TO SCALE

Route 480/062523

Numbers on streets indicate transfers. *Números en la calle indican transbordos.*

Monday - Friday
EASTBOUND To: Lake Forest

Irvine Station	Parker & Irvine **(F)**	Lake Forest & Regency **(F)**	
6:05	6:19	6:34	**AM**
6:42	6:56	7:11	
6:53	7:09	7:25	
7:26	7:42	7:58	
7:36	7:52	8:08	
8:38	8:53	9:08	

F = Times are approximate./*Los horarios son aproximados.*

Monday - Friday
WESTBOUND To:
Irvine Metrolink Station

Lake Forest & Regency	Irvine & Parker	Irvine Station	
3:21	**3:35**	**3:52**	**PM**
4:18	**4:34**	**4:52**	
4:44	**4:59**	**5:15**	

SERVICE TO / SERVICIO A

Irvine
- Irvine Spectrum
- Irvine Station Area (Metrolink/Amtrak)

Lake Forest
- Commercentre

NOTE: Limited Stop Service. No service on weekends, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day or New Years Day.Routing and times subject to change.

Morning buses will depart the station once the train arrives and all passengers have boarded. This may be up to six minutes earlier than the time shown above. Afternoon buses are scheduled to arrive a few minutes before the departing train. Stationlink passengers must present fare media to the coach operator each time they board the bus.

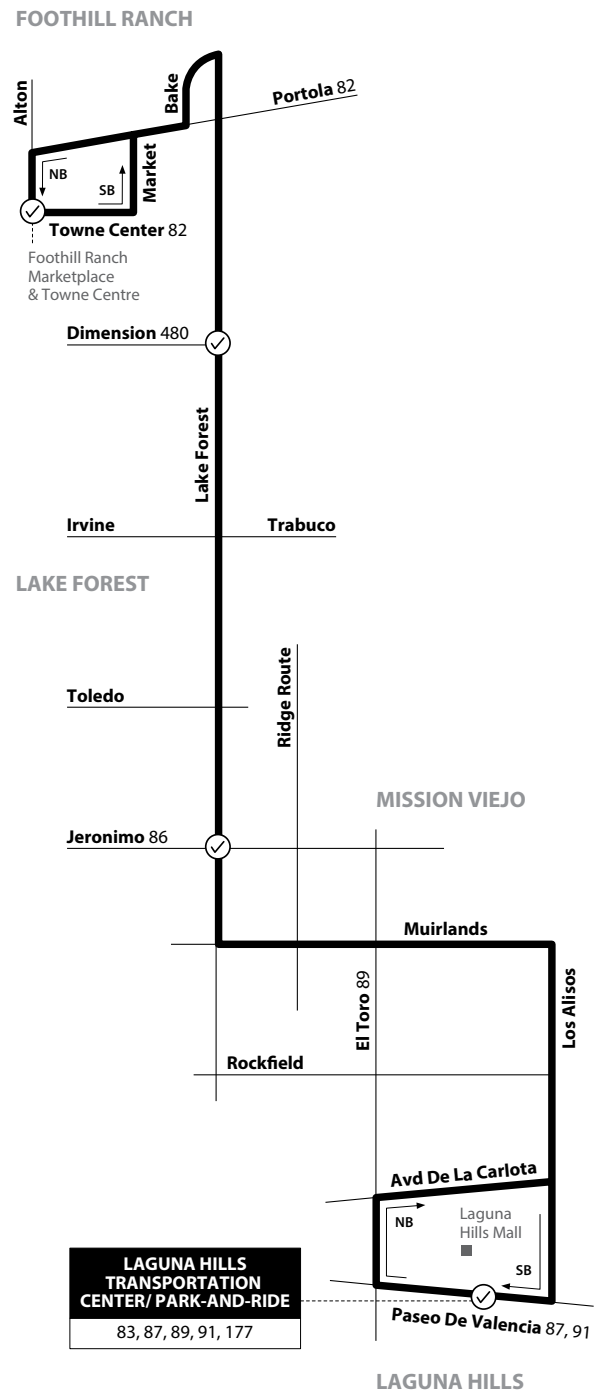
NOTA: *Servicio de paradas limitadas. No hay servicio los fines de semana, Día de los Caídos, Día de la Independencia, Día del Trabajador, Día de Acción de Gracias, Navidad o Año Nuevo. Rutas y horarios sujetos a cambios.*

Los autobuses de la mañana saldrán de la estación cuando el tren llegue y todos los pasajeros han embarcado. Esto puede ser hasta seis minutos antes que el tiempo mostrado arriba. Por la tarde, los autobuses están programados para llegar unos minutos antes del tren que sale. Los pasajeros de Stationlink deben presentar su medio de tarifa al operador cada vez que suben al autobús.

NOTE: No service on Sundays.
NOTA: *No hay servicio los domingos.*

Foothill Ranch to Laguna Hills
via Lake Forest Dr / Muirlands Blvd / Los Alisos Blvd

177



LEGEND *LEYENDA*

Scheduled Departure

Regular Routing

N

MAP NOT TO SCALE

Route 177/121322

Numbers on streets indicate transfers. *Números en la calle indican transbordos.*

Monday - Friday
NORTHBOUND To:
Foothill Ranch

Laguna Hills Transportation Center	Lake Forest & Jeronimo	Lake Forest & Dimension	Towne Centre & Alton
5:44	6:02	6:11	6:23
6:28	6:46	6:55	7:07
7:13	7:31	7:40	7:52
7:59	8:17	8:26	8:38
8:45	9:03	9:11	9:22
9:30	9:48	9:56	10:07
10:15	10:33	10:41	10:52
11:00	11:18	11:26	11:37
11:43	**12:02**	**12:11**	**12:22**
12:28	**12:47**	**12:56**	**1:07**
1:15	**1:32**	**1:40**	**1:50**
1:53	**2:15**	**2:25**	**2:36**
2:32	**2:52**	**3:02**	**3:14**
3:26	**3:46**	**3:56**	**4:08**
4:11	**4:31**	**4:41**	**4:53**
5:00	**5:20**	**5:30**	**5:42**
6:00	**6:20**	**6:30**	**6:42**

Monday - Friday
SOUTHBOUND To:
Laguna Hills

Towne Centre & Alton	Lake Forest & Dimension	Lake Forest & Jeronimo	Laguna Hills Transportation Center
5:47	5:54	6:01	6:13
6:32	6:39	6:46	6:58
7:09	7:20	7:32	7:49
7:54	8:05	8:17	8:34
8:42	8:51	9:01	9:14
9:27	9:36	9:46	9:59
10:12	10:21	10:31	10:44
10:57	11:06	11:16	11:29
11:42	11:51	**12:01**	**12:14**
12:27	**12:36**	**12:46**	**12:59**
1:17	**1:29**	**1:37**	**1:51**
1:56	**2:08**	**2:16**	**2:30**
2:41	**2:53**	**3:01**	**3:15**
3:26	**3:38**	**3:46**	**4:00**
4:11	**4:23**	**4:31**	**4:45**
4:56	**5:08**	**5:16**	**5:30**
5:47	**5:58**	**6:06**	**6:19**
6:45	**6:56**	**7:04**	**7:17**

Saturday
NORTHBOUND To:
Foothill Ranch

Laguna Hills Transportation Center	Lake Forest & Jeronimo	Lake Forest & Dimension	Towne Centre & Alton
8:02	8:20	8:27	8:35
9:26	9:44	9:51	9:59
10:50	11:10	11:17	11:27
12:14	**12:34**	**12:41**	**12:51**
1:41	**2:01**	**2:08**	**2:18**
3:05	**3:25**	**3:32**	**3:42**
4:32	**4:52**	**4:59**	**5:09**
5:59	**6:19**	**6:26**	**6:36**

Saturday
SOUTHBOUND To:
Laguna Hills

Towne Centre & Alton	Lake Forest & Dimension	Lake Forest & Jeronimo	Laguna Hills Transportation Center
7:25	7:34	7:40	7:52
8:49	8:58	9:04	9:16
10:13	10:22	10:28	10:40
11:37	11:46	11:52	**12:04**
1:01	**1:11**	**1:18**	**1:31**
2:25	**2:35**	**2:42**	**2:55**
3:52	**4:02**	**4:09**	**4:22**
5:19	**5:29**	**5:36**	**5:49**
6:45	**6:55**	**7:02**	**7:15**

APPENDIX C

EXISTING TRAFFIC COUNTS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Lake Forest
N/S: Bake Parkway
E/W: Commercentre Drive
Weather: Clear

File Name : 01_LKF_Bake_ComCtr AM
Site Code : 00324155
Start Date : 2/27/2024
Page No : 1

Groups Printed- Total Volume

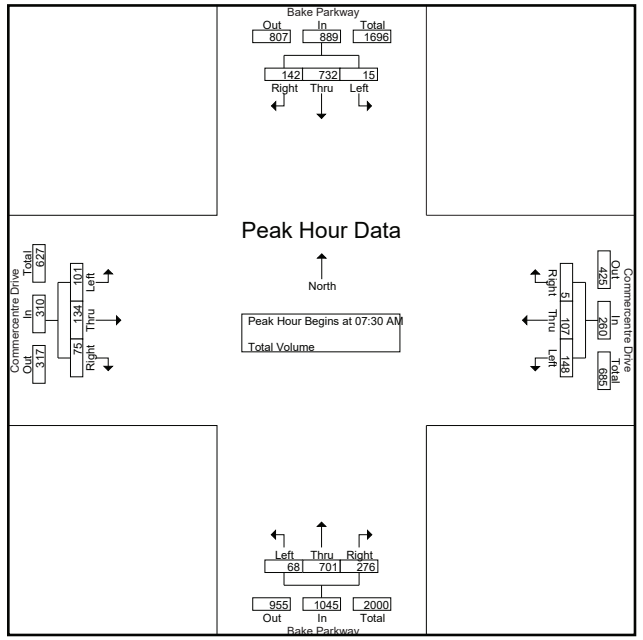
	Bake Parkway Southbound				Commercentre Drive Westbound				Bake Parkway Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	163	10	174	25	12	0	37	16	153	75	244	10	18	17	45	500
07:15 AM	1	189	21	211	26	13	0	39	14	141	26	181	24	26	17	67	498
07:30 AM	2	207	30	239	40	33	1	74	8	147	74	229	23	24	14	61	603
07:45 AM	2	171	25	198	34	25	1	60	20	209	96	325	25	37	21	83	666
Total	6	730	86	822	125	83	2	210	58	650	271	979	82	105	69	256	2267
08:00 AM	6	184	39	229	40	30	1	71	22	142	44	208	27	42	25	94	602
08:15 AM	5	170	48	223	34	19	2	55	18	203	62	283	26	31	15	72	633
08:30 AM	3	144	24	171	35	23	0	58	28	192	32	252	36	44	13	93	574
08:45 AM	2	165	18	185	41	28	3	72	35	214	54	303	18	34	8	60	620
Total	16	663	129	808	150	100	6	256	103	751	192	1046	107	151	61	319	2429
Grand Total	22	1393	215	1630	275	183	8	466	161	1401	463	2025	189	256	130	575	4696
Apprch %	1.3	85.5	13.2		59	39.3	1.7		8	69.2	22.9		32.9	44.5	22.6		
Total %	0.5	29.7	4.6	34.7	5.9	3.9	0.2	9.9	3.4	29.8	9.9	43.1	4	5.5	2.8	12.2	

	Bake Parkway Southbound				Commercentre Drive Westbound				Bake Parkway Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	2	**207**	30	**239**	**40**	**33**	1	**74**	8	147	74	229	23	24	14	61	603
07:45 AM	2	171	25	198	34	25	1	60	20	**209**	**96**	**325**	25	37	21	83	**666**
08:00 AM	**6**	184	39	229	40	30	1	71	**22**	142	44	208	**27**	**42**	**25**	**94**	602
08:15 AM	5	170	**48**	223	34	19	**2**	55	18	203	62	283	26	31	15	72	633
Total Volume	15	732	142	889	148	107	5	260	68	701	276	1045	101	134	75	310	2504
% App. Total	1.7	82.3	16		56.9	41.2	1.9		6.5	67.1	26.4		32.6	43.2	24.2		
PHF	.625	.884	.740	.930	.925	.811	.625	.878	.773	.839	.719	.804	.935	.798	.750	.824	.940

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Lake Forest
N/S: Bake Parkway
E/W: Commercentre Drive
Weather: Clear

File Name : 01_LKF_Bake_ComCtr AM
Site Code : 00324155
Start Date : 2/27/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	2	**207**	30	**239**	**40**	**33**	1	**74**	20	**209**	**96**	**325**	25	37	21	83
+15 mins.	2	171	25	198	34	25	1	60	22	142	44	208	27	42	**25**	**94**
+30 mins.	**6**	184	39	229	40	30	1	71	18	203	62	283	26	31	15	72
+45 mins.	5	170	**48**	223	34	19	**2**	55	**28**	192	32	252	**36**	**44**	13	93
Total Volume	15	732	142	889	148	107	5	260	88	746	234	1068	114	154	74	342
% App. Total	1.7	82.3	16		56.9	41.2	1.9		8.2	69.9	21.9		33.3	45	21.6	
PHF	.625	.884	.740	.930	.925	.811	.625	.878	.786	.892	.609	.822	.792	.875	.740	.910

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Lake Forest
N/S: Bake Parkway
E/W: Commercentre Drive
Weather: Clear

File Name : 01_LKF_Bake_ComCtr PM
Site Code : 00324155
Start Date : 2/27/2024
Page No : 1

Groups Printed- Total Volume

	Bake Parkway Southbound				Commercentre Drive Westbound				Bake Parkway Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	170	24	196	76	43	3	122	17	222	36	275	36	27	18	81	674
04:15 PM	2	164	25	191	49	37	4	90	14	203	37	254	31	34	11	76	611
04:30 PM	5	162	25	192	83	58	4	145	26	241	39	306	27	31	19	77	720
04:45 PM	8	141	30	179	59	54	2	115	17	242	38	297	32	26	13	71	662
Total	17	637	104	758	267	192	13	472	74	908	150	1132	126	118	61	305	2667
05:00 PM	6	200	45	251	121	62	5	188	21	241	36	298	37	24	27	88	825
05:15 PM	0	129	33	162	58	29	2	89	21	293	35	349	47	32	19	98	698
05:30 PM	1	167	30	198	56	56	1	113	16	273	41	330	29	31	9	69	710
05:45 PM	2	191	30	223	30	31	1	62	24	253	47	324	33	34	9	76	685
Total	9	687	138	834	265	178	9	452	82	1060	159	1301	146	121	64	331	2918
Grand Total	26	1324	242	1592	532	370	22	924	156	1968	309	2433	272	239	125	636	5585
Apprch %	1.6	83.2	15.2		57.6	40	2.4		6.4	80.9	12.7		42.8	37.6	19.7		
Total %	0.5	23.7	4.3	28.5	9.5	6.6	0.4	16.5	2.8	35.2	5.5	43.6	4.9	4.3	2.2	11.4	

	Bake Parkway Southbound				Commercentre Drive Westbound				Bake Parkway Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	**6**	**200**	**45**	**251**	**121**	**62**	**5**	**188**	21	241	36	298	37	24	**27**	88	**825**
05:15 PM	0	129	33	162	58	29	2	89	21	**293**	35	**349**	**47**	32	19	**98**	698
05:30 PM	1	167	30	198	56	56	1	113	16	273	41	330	29	31	9	69	710
05:45 PM	2	191	30	223	30	31	1	62	**24**	253	**47**	324	33	**34**	9	76	685
Total Volume	9	687	138	834	265	178	9	452	82	1060	159	1301	146	121	64	331	2918
% App. Total	1.1	82.4	16.5		58.6	39.4	2		6.3	81.5	12.2		44.1	36.6	19.3		
PHF	.375	.859	.767	.831	.548	.718	.450	.601	.854	.904	.846	.932	.777	.890	.593	.844	.884

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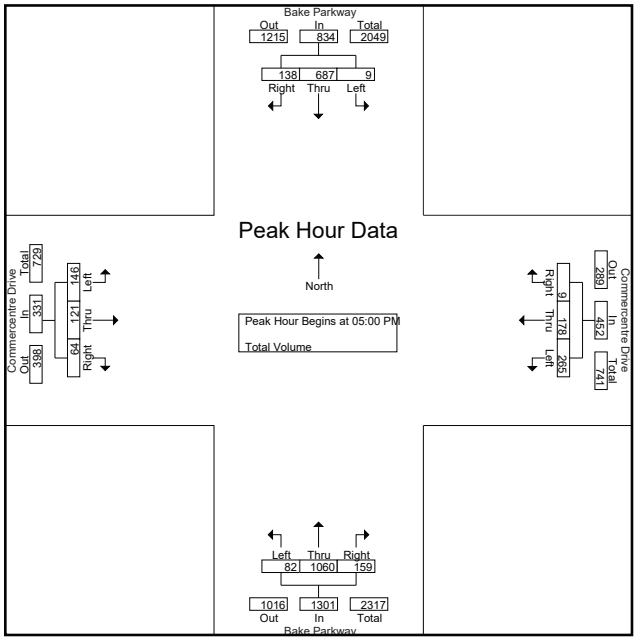
City of Lake Forest
N/S: Bake Parkway
E/W: Commercentre Drive
Weather: Clear

File Name : 01_LKF_Bake_ComCtr PM
Site Code : 00324155
Start Date : 2/27/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:15 PM				05:00 PM				04:30 PM			
+0 mins.	**6**	**200**	**45**	**251**	49	37	4	90	21	241	36	298	27	31	19	77
+15 mins.	0	129	33	162	83	58	4	145	21	**293**	35	**349**	32	26	13	71
+30 mins.	1	167	30	198	59	54	2	115	16	273	41	330	37	24	**27**	88
+45 mins.	2	191	30	223	**121**	**62**	**5**	**188**	**24**	253	**47**	324	**47**	**32**	19	**98**
Total Volume	9	687	138	834	312	211	15	538	82	1060	159	1301	143	113	78	334
% App. Total	1.1	82.4	16.5		58	39.2	2.8		6.3	81.5	12.2		42.8	33.8	23.4	
PHF	.375	.859	.767	.831	.645	.851	.750	.715	.854	.904	.846	.932	.761	.883	.722	.852

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City of Lake Forest
N/S: Dimension Drive
E/W: Bake Parkway
Weather: Clear

File Name : 02_LKF_Dim_Bake AM
Site Code : 00324155
Start Date : 2/27/2024
Page No : 1

Groups Printed- Total Volume

	Dimension Drive Southbound				Bake Parkway Westbound				Dimension Drive Northbound				Bake Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	16	17	44	10	159	4	173	11	2	8	21	5	104	21	130	368
07:15 AM	11	21	16	48	22	184	5	211	10	6	9	25	6	148	13	167	451
07:30 AM	31	21	21	73	26	220	6	252	14	16	21	51	2	131	15	148	524
07:45 AM	46	32	30	108	36	173	16	225	12	8	28	48	1	154	19	174	555
Total	99	90	84	273	94	736	31	861	47	32	66	145	14	537	68	619	1898
08:00 AM	36	34	21	91	29	219	24	272	14	9	22	45	5	170	14	189	597
08:15 AM	27	29	18	74	37	196	38	271	17	28	24	69	10	175	12	197	611
08:30 AM	6	23	8	37	25	151	32	208	15	27	25	67	7	198	15	220	532
08:45 AM	15	37	11	63	24	177	17	218	12	16	33	61	6	196	17	219	561
Total	84	123	58	265	115	743	111	969	58	80	104	242	28	739	58	825	2301
Grand Total	183	213	142	538	209	1479	142	1830	105	112	170	387	42	1276	126	1444	4199
Apprch %	34	39.6	26.4		11.4	80.8	7.8		27.1	28.9	43.9		2.9	88.4	8.7		
Total %	4.4	5.1	3.4	12.8	5	35.2	3.4	43.6	2.5	2.7	4	9.2	1	30.4	3	34.4	

	Dimension Drive Southbound				Bake Parkway Westbound				Dimension Drive Northbound				Bake Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	**36**	34	**21**	**91**	29	**219**	24	**272**	14	9	22	45	5	170	14	189	597
08:15 AM	27	29	18	74	**37**	196	**38**	271	**17**	**28**	24	**69**	**10**	175	12	197	**611**
08:30 AM	6	23	8	37	25	151	32	208	15	27	25	67	7	**198**	15	**220**	532
08:45 AM	15	**37**	11	63	24	177	17	218	12	16	**33**	61	6	196	**17**	219	561
Total Volume	84	123	58	265	115	743	111	969	58	80	104	242	28	739	58	825	2301
% App. Total	31.7	46.4	21.9		11.9	76.7	11.5		24	33.1	43		3.4	89.6	7		
PHF	.583	.831	.690	.728	.777	.848	.730	.891	.853	.714	.788	.877	.700	.933	.853	.938	.941

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City of Lake Forest
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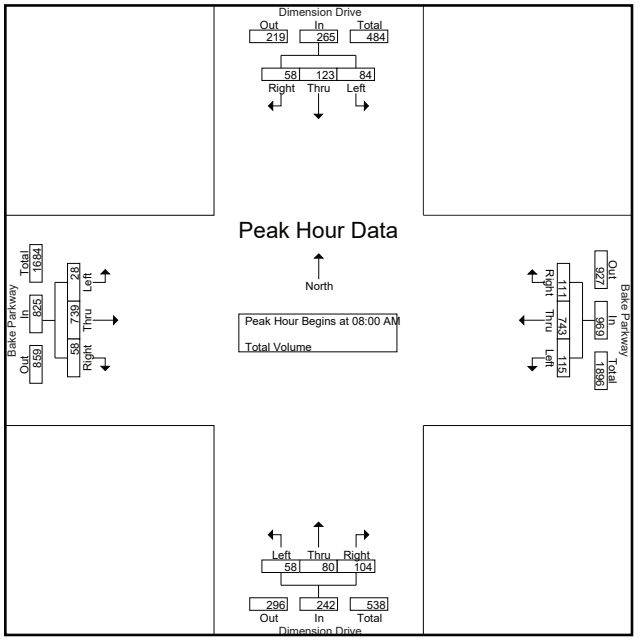

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				08:00 AM				08:00 AM			
+0 mins.	31	21	21	73	26	**220**	6	252	14	9	22	45	5	170	14	189
+15 mins.	**46**	32	**30**	**108**	36	173	16	225	**17**	**28**	24	**69**	**10**	175	12	197
+30 mins.	36	**34**	21	91	29	219	24	**272**	15	27	25	67	7	**198**	15	**220**
+45 mins.	27	29	18	74	**37**	196	**38**	271	12	16	**33**	61	6	196	**17**	219
Total Volume	140	116	90	346	128	808	84	1020	58	80	104	242	28	739	58	825
% App. Total	40.5	33.5	26		12.5	79.2	8.2		24	33.1	43		3.4	89.6	7	
PHF	.761	.853	.750	.801	.865	.918	.553	.938	.853	.714	.788	.877	.700	.933	.853	.938

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Groups Printed- Total Volume

	Dimension Drive Southbound				Bake Parkway Westbound				Dimension Drive Northbound				Bake Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	18	17	6	41	36	171	27	234	23	18	35	76	21	218	7	246	597
04:15 PM	15	23	9	47	32	153	25	210	17	21	42	80	21	212	13	246	583
04:30 PM	24	23	7	54	37	173	15	225	22	28	40	90	14	243	7	264	633
04:45 PM	18	22	7	47	47	141	18	206	27	31	38	96	17	265	9	291	640
Total	75	85	29	189	152	638	85	875	89	98	155	342	73	938	36	1047	2453
05:00 PM	20	17	9	46	42	210	24	276	22	24	40	86	25	243	11	279	687
05:15 PM	15	17	6	38	41	145	18	204	16	34	37	87	27	289	11	327	656
05:30 PM	19	29	11	59	30	165	23	218	23	30	32	85	14	284	8	306	668
05:45 PM	9	17	4	30	58	192	26	276	12	24	29	65	16	244	5	265	636
Total	63	80	30	173	171	712	91	974	73	112	138	323	82	1060	35	1177	2647
Grand Total	138	165	59	362	323	1350	176	1849	162	210	293	665	155	1998	71	2224	5100
Apprch %	38.1	45.6	16.3		17.5	73	9.5		24.4	31.6	44.1		7	89.8	3.2		
Total %	2.7	3.2	1.2	7.1	6.3	26.5	3.5	36.3	3.2	4.1	5.7	13	3	39.2	1.4	43.6	

	Dimension Drive Southbound				Bake Parkway Westbound				Dimension Drive Northbound				Bake Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	18	22	7	47	**47**	141	18	206	**27**	31	38	**96**	17	265	9	291	640
05:00 PM	**20**	17	9	46	42	**210**	**24**	**276**	22	24	**40**	86	25	243	**11**	279	**687**
05:15 PM	15	17	6	38	41	145	18	204	16	**34**	37	87	**27**	**289**	11	**327**	656
05:30 PM	19	**29**	**11**	**59**	30	165	23	218	23	30	32	85	14	284	8	306	668
Total Volume	72	85	33	190	160	661	83	904	88	119	147	354	83	1081	39	1203	2651
% App. Total	37.9	44.7	17.4		17.7	73.1	9.2		24.9	33.6	41.5		6.9	89.9	3.2		
PHF	.900	.733	.750	.805	.851	.787	.865	.819	.815	.875	.919	.922	.769	.935	.886	.920	.965

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City of Lake Forest
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Weather: Clear

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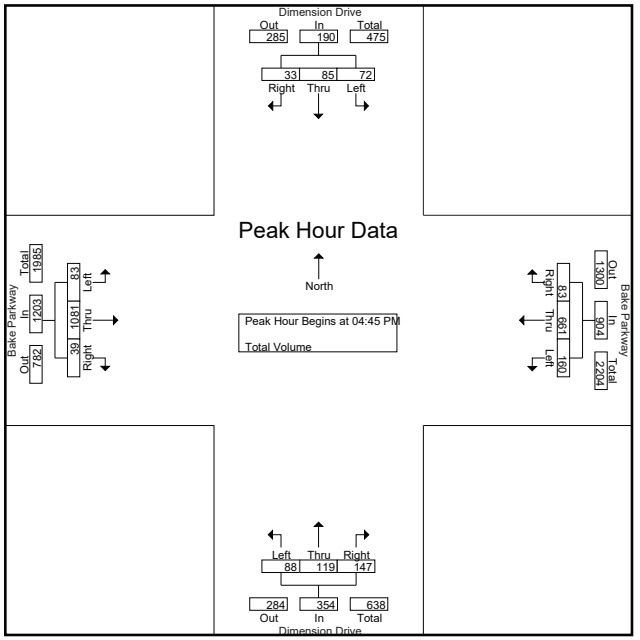

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:30 PM				04:45 PM			
+0 mins.	15	**23**	**9**	47	42	**210**	24	**276**	22	28	**40**	90	17	265	9	291
+15 mins.	**24**	23	7	**54**	41	145	18	204	**27**	31	38	**96**	25	243	**11**	279
+30 mins.	18	22	7	47	30	165	23	218	22	24	40	86	**27**	**289**	11	**327**
+45 mins.	20	17	9	46	**58**	192	**26**	276	16	**34**	37	87	14	284	8	306
Total Volume	77	85	32	194	171	712	91	974	87	117	155	359	83	1081	39	1203
% App. Total	39.7	43.8	16.5		17.6	73.1	9.3		24.2	32.6	43.2		6.9	89.9	3.2	
PHF	.802	.924	.889	.898	.737	.848	.875	.882	.806	.860	.969	.935	.769	.935	.886	.920

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City of Lake Forest
N/S: Dimension Drive
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File Name : 03_LKF_Dim_ComCtr AM
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Groups Printed- Total Volume

	Dimension Drive Southbound				Enterprise Way Westbound				Dimension Drive Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	23	3	28	3	0	0	3	26	21	6	53	1	3	35	39	123
07:15 AM	1	37	3	41	1	1	2	4	33	23	6	62	4	6	40	50	157
07:30 AM	2	33	3	38	1	1	1	3	48	41	14	103	8	7	43	58	202
07:45 AM	1	45	9	55	0	1	1	2	59	36	14	109	4	7	64	75	241
Total	6	138	18	162	5	3	4	12	166	121	40	327	17	23	182	222	723
08:00 AM	4	59	7	70	3	1	0	4	47	40	14	101	5	8	53	66	241
08:15 AM	5	50	8	63	3	1	2	6	62	53	9	124	7	2	43	52	245
08:30 AM	10	37	9	56	5	3	2	10	54	51	8	113	2	4	51	57	236
08:45 AM	7	51	6	64	0	1	1	2	39	57	16	112	5	5	44	54	232
Total	26	197	30	253	11	6	5	22	202	201	47	450	19	19	191	229	954
Grand Total	32	335	48	415	16	9	9	34	368	322	87	777	36	42	373	451	1677
Apprch %	7.7	80.7	11.6		47.1	26.5	26.5		47.4	41.4	11.2		8	9.3	82.7		
Total %	1.9	20	2.9	24.7	1	0.5	0.5	2	21.9	19.2	5.2	46.3	2.1	2.5	22.2	26.9	

	Dimension Drive Southbound				Enterprise Way Westbound				Dimension Drive Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	45	**9**	55	0	1	1	2	59	36	**14**	109	4	7	**64**	**75**	241
08:00 AM	4	**59**	7	**70**	3	1	0	4	47	40	14	101	5	**8**	53	66	241
08:15 AM	5	50	8	63	3	1	**2**	6	**62**	**53**	9	**124**	**7**	2	43	52	**245**
08:30 AM	**10**	37	9	56	**5**	**3**	2	**10**	54	51	8	113	2	4	51	57	236
Total Volume	20	191	33	244	11	6	5	22	222	180	45	447	18	21	211	250	963
% App. Total	8.2	78.3	13.5		50	27.3	22.7		49.7	40.3	10.1		7.2	8.4	84.4		
PHF	.500	.809	.917	.871	.550	.500	.625	.550	.895	.849	.804	.901	.643	.656	.824	.833	.983

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File Name : 03_LKF_Dim_ComCtr AM
Site Code : 00324155
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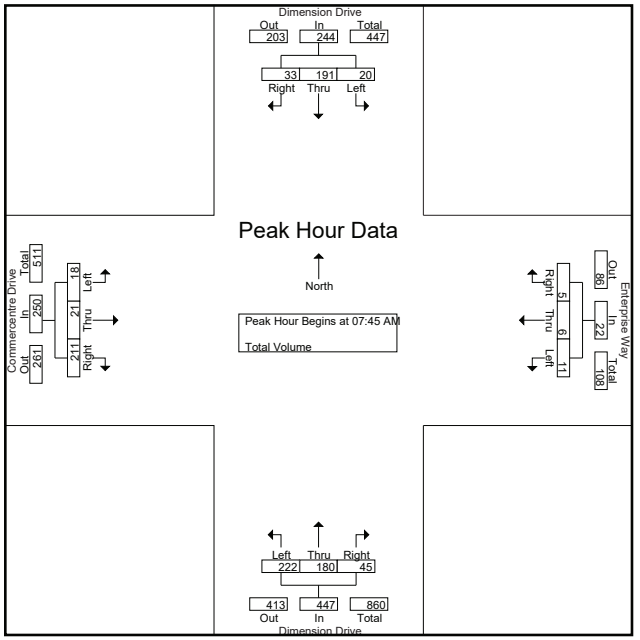

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				08:00 AM				07:30 AM			
+0 mins.	4	**59**	7	**70**	0	1	1	2	47	40	14	101	**8**	7	43	58
+15 mins.	5	50	8	63	3	1	0	4	**62**	53	9	**124**	4	7	**64**	**75**
+30 mins.	**10**	37	**9**	56	3	1	**2**	6	54	51	8	113	5	**8**	53	66
+45 mins.	7	51	6	64	**5**	**3**	2	**10**	39	**57**	**16**	112	7	2	43	52
Total Volume	26	197	30	253	11	6	5	22	202	201	47	450	24	24	203	251
% App. Total	10.3	77.9	11.9		50	27.3	22.7		44.9	44.7	10.4		9.6	9.6	80.9	
PHF	.650	.835	.833	.904	.550	.500	.625	.550	.815	.882	.734	.907	.750	.750	.793	.837

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File Name : 03_LKF_Dim_ComCtr PM
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Groups Printed- Total Volume

	Dimension Drive Southbound				Enterprise Way Westbound				Dimension Drive Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	56	3	64	17	11	5	33	25	42	5	72	18	0	64	82	251
04:15 PM	6	62	6	74	9	8	5	22	39	44	1	84	11	3	66	80	260
04:30 PM	5	64	8	77	13	10	4	27	43	56	0	99	16	4	88	108	311
04:45 PM	5	77	13	95	8	5	4	17	44	70	3	117	8	3	66	77	306
Total	21	259	30	310	47	34	18	99	151	212	9	372	53	10	284	347	1128
05:00 PM	10	74	8	92	15	8	2	25	45	52	1	98	17	0	85	102	317
05:15 PM	11	61	8	80	8	1	3	12	25	61	0	86	6	0	70	76	254
05:30 PM	4	68	18	90	6	5	1	12	68	70	0	138	8	1	61	70	310
05:45 PM	1	64	14	79	6	3	1	10	33	47	2	82	5	1	51	57	228
Total	26	267	48	341	35	17	7	59	171	230	3	404	36	2	267	305	1109
Grand Total	47	526	78	651	82	51	25	158	322	442	12	776	89	12	551	652	2237
Apprch %	7.2	80.8	12		51.9	32.3	15.8		41.5	57	1.5		13.7	1.8	84.5		
Total %	2.1	23.5	3.5	29.1	3.7	2.3	1.1	7.1	14.4	19.8	0.5	34.7	4	0.5	24.6	29.1	

	Dimension Drive Southbound				Enterprise Way Westbound				Dimension Drive Northbound				Commercentre Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	6	62	6	74	9	8	**5**	22	39	44	1	84	11	3	66	80	260
04:30 PM	5	64	8	77	13	**10**	4	**27**	43	56	0	99	16	**4**	**88**	**108**	311
04:45 PM	5	**77**	**13**	**95**	8	5	4	17	44	**70**	**3**	**117**	8	3	66	77	306
05:00 PM	**10**	74	8	92	**15**	8	2	25	**45**	52	1	98	**17**	0	85	102	**317**
Total Volume	26	277	35	338	45	31	15	91	171	222	5	398	52	10	305	367	1194
% App. Total	7.7	82	10.4		49.5	34.1	16.5		43	55.8	1.3		14.2	2.7	83.1		
PHF	.650	.899	.673	.889	.750	.775	.750	.843	.950	.793	.417	.850	.765	.625	.866	.850	.942

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City of Lake Forest
N/S: Dimension Drive
E/W: Commercentre Drive/Enterprise Way
Weather: Clear

File Name : 03_LKF_Dim_ComCtr PM
Site Code : 00324155
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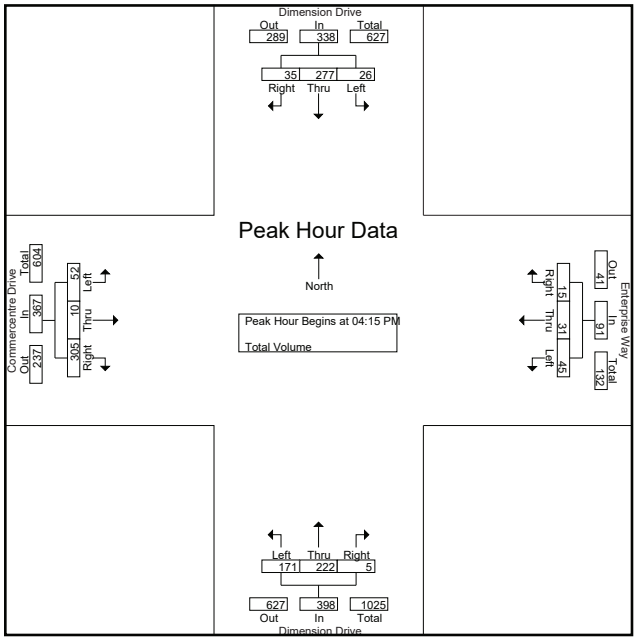

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:45 PM				04:15 PM			
+0 mins.	5	**77**	13	**95**	**17**	**11**	**5**	**33**	44	**70**	**3**	117	11	3	66	80
+15 mins.	10	74	8	92	9	8	5	22	45	52	1	98	16	**4**	**88**	**108**
+30 mins.	**11**	61	8	80	13	10	4	27	25	61	0	86	8	3	66	77
+45 mins.	4	68	**18**	90	8	5	4	17	**68**	70	0	**138**	**17**	0	85	102
Total Volume	30	280	47	357	47	34	18	99	182	253	4	439	52	10	305	367
% App. Total	8.4	78.4	13.2		47.5	34.3	18.2		41.5	57.6	0.9		14.2	2.7	83.1	
PHF	.682	.909	.653	.939	.691	.773	.900	.750	.669	.904	.333	.795	.765	.625	.866	.850

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City of Lake Forest
N/S: Lake Forest Drive
E/W: Dimension Drive
Weather: Clear

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Site Code : 00324155
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Groups Printed- Total Volume

	Lake Forest Drive Southbound				Lake Forest One Stop Driveway Westbound				Lake Forest Drive Northbound				Dimension Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	66	44	113	1	0	0	1	22	75	0	97	34	1	17	52	263
07:15 AM	2	101	47	150	1	0	2	3	22	90	0	112	36	0	10	46	311
07:30 AM	1	106	68	175	0	0	0	0	41	124	1	166	31	2	15	48	389
07:45 AM	6	138	75	219	0	0	0	0	36	109	0	145	41	0	22	63	427
Total	12	411	234	657	2	0	2	4	121	398	1	520	142	3	64	209	1390
08:00 AM	1	141	89	231	1	0	1	2	38	167	2	207	46	1	22	69	509
08:15 AM	3	95	52	150	1	0	2	3	46	182	6	234	52	2	13	67	454
08:30 AM	3	108	51	162	2	0	0	2	34	171	4	209	41	2	19	62	435
08:45 AM	4	96	52	152	1	3	0	4	31	153	4	188	56	2	5	63	407
Total	11	440	244	695	5	3	3	11	149	673	16	838	195	7	59	261	1805
Grand Total	23	851	478	1352	7	3	5	15	270	1071	17	1358	337	10	123	470	3195
Apprch %	1.7	62.9	35.4		46.7	20	33.3		19.9	78.9	1.3		71.7	2.1	26.2		
Total %	0.7	26.6	15	42.3	0.2	0.1	0.2	0.5	8.5	33.5	0.5	42.5	10.5	0.3	3.8	14.7	

	Lake Forest Drive Southbound				Lake Forest One Stop Driveway Westbound				Lake Forest Drive Northbound				Dimension Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	**6**	138	75	219	0	0	0	0	36	109	0	145	41	0	**22**	63	427
08:00 AM	1	**141**	**89**	**231**	1	0	1	2	38	167	2	207	46	1	22	**69**	**509**
08:15 AM	3	95	52	150	1	0	**2**	**3**	**46**	**182**	**6**	**234**	**52**	**2**	13	67	454
08:30 AM	3	108	51	162	**2**	0	0	2	34	171	4	209	41	2	19	62	435
Total Volume	13	482	267	762	4	0	3	7	154	629	12	795	180	5	76	261	1825
% App. Total	1.7	63.3	35		57.1	0	42.9		19.4	79.1	1.5		69	1.9	29.1		
PHF	.542	.855	.750	.825	.500	.000	.375	.583	.837	.864	.500	.849	.865	.625	.864	.946	.896

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City of Lake Forest
N/S: Lake Forest Drive
E/W: Dimension Drive
Weather: Clear

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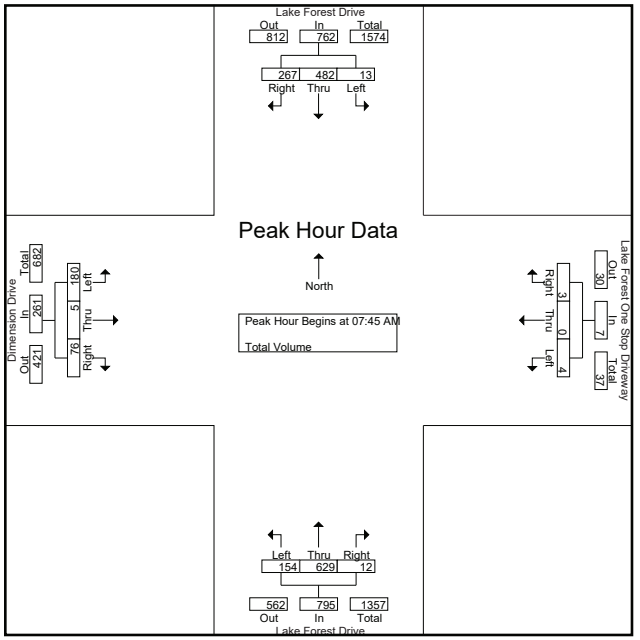

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				08:00 AM				07:45 AM			
+0 mins.	2	101	47	150	1	0	1	2	38	167	2	207	41	0	**22**	63
+15 mins.	1	106	68	175	1	0	**2**	3	**46**	**182**	**6**	**234**	46	1	22	**69**
+30 mins.	**6**	138	75	219	**2**	0	0	2	34	171	4	209	**52**	**2**	13	67
+45 mins.	1	**141**	**89**	**231**	1	**3**	0	**4**	31	153	4	188	41	2	19	62
Total Volume	10	486	279	775	5	3	3	11	149	673	16	838	180	5	76	261
% App. Total	1.3	62.7	36		45.5	27.3	27.3		17.8	80.3	1.9		69	1.9	29.1	
PHF	.417	.862	.784	.839	.625	.250	.375	.688	.810	.924	.667	.895	.865	.625	.864	.946

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City of Lake Forest
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Weather: Clear

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Site Code : 00324155
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Groups Printed- Total Volume

	Lake Forest Drive Southbound				Lake Forest One Stop Driveway Westbound				Lake Forest Drive Northbound				Dimension Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	8	164	32	204	1	2	1	4	24	199	4	227	52	2	17	71	506
04:15 PM	15	130	44	189	3	1	2	6	30	179	5	214	71	2	20	93	502
04:30 PM	6	182	41	229	4	2	4	10	27	157	12	196	98	3	27	128	563
04:45 PM	3	142	49	194	3	0	0	3	32	181	2	215	94	5	23	122	534
Total	32	618	166	816	11	5	7	23	113	716	23	852	315	12	87	414	2105
05:00 PM	5	187	52	244	5	0	0	5	24	189	2	215	105	1	30	136	600
05:15 PM	7	146	42	195	8	0	2	10	29	181	8	218	74	2	23	99	522
05:30 PM	11	168	50	229	5	3	4	12	34	168	3	205	95	4	22	121	567
05:45 PM	8	143	44	195	10	1	1	12	30	218	3	251	64	3	26	93	551
Total	31	644	188	863	28	4	7	39	117	756	16	889	338	10	101	449	2240
Grand Total	63	1262	354	1679	39	9	14	62	230	1472	39	1741	653	22	188	863	4345
Apprch %	3.8	75.2	21.1		62.9	14.5	22.6		13.2	84.5	2.2		75.7	2.5	21.8		
Total %	1.4	29	8.1	38.6	0.9	0.2	0.3	1.4	5.3	33.9	0.9	40.1	15	0.5	4.3	19.9	

	Lake Forest Drive Southbound				Lake Forest One Stop Driveway Westbound				Lake Forest Drive Northbound				Dimension Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	5	**187**	**52**	**244**	5	0	0	5	24	189	2	215	**105**	1	**30**	**136**	**600**
05:15 PM	7	146	42	195	8	0	2	10	29	181	**8**	218	74	2	23	99	522
05:30 PM	**11**	168	50	229	5	**3**	**4**	**12**	**34**	168	3	205	95	**4**	22	121	567
05:45 PM	8	143	44	195	**10**	1	1	12	30	**218**	3	**251**	64	3	26	93	551
Total Volume	31	644	188	863	28	4	7	39	117	756	16	889	338	10	101	449	2240
% App. Total	3.6	74.6	21.8		71.8	10.3	17.9		13.2	85	1.8		75.3	2.2	22.5		
PHF	.705	.861	.904	.884	.700	.333	.438	.813	.860	.867	.500	.885	.805	.625	.842	.825	.933

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City of Lake Forest
N/S: Lake Forest Drive
E/W: Dimension Drive
Weather: Clear

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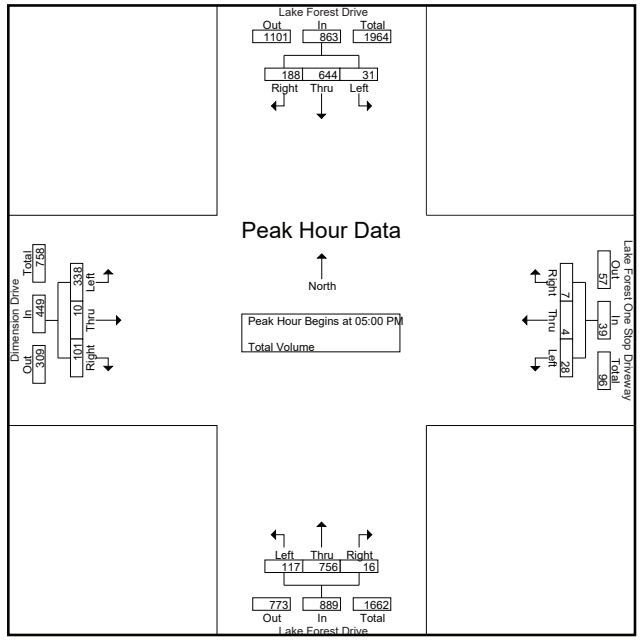

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				04:30 PM			
+0 mins.	5	**187**	**52**	**244**	5	0	0	5	24	189	2	215	98	3	27	128
+15 mins.	7	146	42	195	8	0	2	10	29	181	**8**	218	94	**5**	23	122
+30 mins.	**11**	168	50	229	5	**3**	**4**	**12**	**34**	168	3	205	**105**	1	**30**	**136**
+45 mins.	8	143	44	195	**10**	1	1	12	30	**218**	3	**251**	74	2	23	99
Total Volume	31	644	188	863	28	4	7	39	117	756	16	889	371	11	103	485
% App. Total	3.6	74.6	21.8		71.8	10.3	17.9		13.2	85	1.8		76.5	2.3	21.2	
PHF	.705	.861	.904	.884	.700	.333	.438	.813	.860	.867	.500	.885	.883	.550	.858	.892

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City of Lake Forest
N/S: Lake Forest Drive
E/W: Rancho Parkway
Weather: Clear

File Name : 05_LKF_LF_Rac AM
Site Code : 00324155
Start Date : 2/27/2024
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Groups Printed- Total Volume

	Lake Forest Drive Southbound				Rancho Parkway Westbound				Lake Forest Drive Northbound				Rancho Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	73	17	100	20	47	2	69	13	67	21	101	2	41	10	53	323
07:15 AM	22	88	14	124	31	83	5	119	11	82	21	114	4	57	7	68	425
07:30 AM	26	105	11	142	43	73	4	120	9	88	37	134	7	77	14	98	494
07:45 AM	17	128	14	159	59	116	10	185	16	90	31	137	11	100	22	133	614
Total	75	394	56	525	153	319	21	493	49	327	110	486	24	275	53	352	1856
08:00 AM	30	125	18	173	54	87	15	156	22	117	39	178	4	76	15	95	602
08:15 AM	39	106	10	155	48	113	11	172	34	121	33	188	2	57	13	72	587
08:30 AM	33	100	17	150	39	105	14	158	42	107	30	179	8	59	18	85	572
08:45 AM	35	106	27	168	40	98	12	150	40	80	32	152	5	69	20	94	564
Total	137	437	72	646	181	403	52	636	138	425	134	697	19	261	66	346	2325
Grand Total	212	831	128	1171	334	722	73	1129	187	752	244	1183	43	536	119	698	4181
Apprch %	18.1	71	10.9		29.6	64	6.5		15.8	63.6	20.6		6.2	76.8	17		
Total %	5.1	19.9	3.1	28	8	17.3	1.7	27	4.5	18	5.8	28.3	1	12.8	2.8	16.7	

	Lake Forest Drive Southbound				Rancho Parkway Westbound				Lake Forest Drive Northbound				Rancho Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	17	**128**	14	159	**59**	**116**	10	**185**	16	90	31	137	**11**	**100**	**22**	**133**	**614**
08:00 AM	30	125	**18**	**173**	54	87	**15**	156	22	117	**39**	178	4	76	15	95	602
08:15 AM	**39**	106	10	155	48	113	11	172	34	**121**	33	**188**	2	57	13	72	587
08:30 AM	33	100	17	150	39	105	14	158	**42**	107	30	179	8	59	18	85	572
Total Volume	119	459	59	637	200	421	50	671	114	435	133	682	25	292	68	385	2375
% App. Total	18.7	72.1	9.3		29.8	62.7	7.5		16.7	63.8	19.5		6.5	75.8	17.7		
PHF	.763	.896	.819	.921	.847	.907	.833	.907	.679	.899	.853	.907	.568	.730	.773	.724	.967

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City of Lake Forest
N/S: Lake Forest Drive
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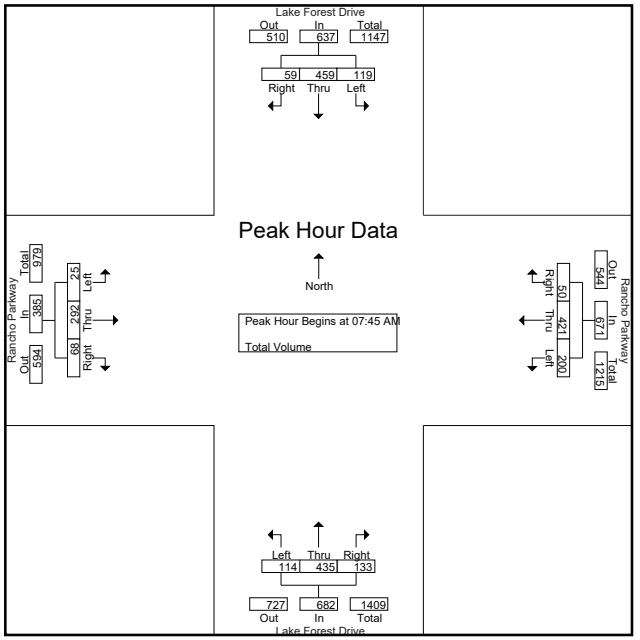

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				08:00 AM				07:30 AM			
+0 mins.	30	**125**	18	**173**	**59**	**116**	10	**185**	22	117	**39**	178	7	77	14	98
+15 mins.	**39**	106	10	155	54	87	**15**	156	34	**121**	33	**188**	**11**	**100**	**22**	**133**
+30 mins.	33	100	17	150	48	113	11	172	**42**	107	30	179	4	76	15	95
+45 mins.	35	106	**27**	168	39	105	14	158	40	80	32	152	2	57	13	72
Total Volume	137	437	72	646	200	421	50	671	138	425	134	697	24	310	64	398
% App. Total	21.2	67.6	11.1		29.8	62.7	7.5		19.8	61	19.2		6	77.9	16.1	
PHF	.878	.874	.667	.934	.847	.907	.833	.907	.821	.878	.859	.927	.545	.775	.727	.748

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City of Lake Forest
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Weather: Clear

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Groups Printed- Total Volume

	Lake Forest Drive Southbound				Rancho Parkway Westbound				Lake Forest Drive Northbound				Rancho Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	38	121	14	173	29	74	23	126	33	139	50	222	11	113	30	154	675
04:15 PM	32	113	11	156	33	70	15	118	28	129	64	221	11	135	29	175	670
04:30 PM	27	122	8	157	31	85	20	136	47	116	71	234	7	112	46	165	692
04:45 PM	44	124	13	181	33	64	18	115	34	151	62	247	12	130	30	172	715
Total	141	480	46	667	126	293	76	495	142	535	247	924	41	490	135	666	2752
05:00 PM	31	134	14	179	40	102	22	164	37	163	67	267	7	146	17	170	780
05:15 PM	52	130	15	197	34	93	18	145	39	138	65	242	12	153	29	194	778
05:30 PM	54	116	12	182	34	82	22	138	37	140	73	250	12	139	32	183	753
05:45 PM	36	113	8	157	39	83	34	156	35	134	67	236	8	152	33	193	742
Total	173	493	49	715	147	360	96	603	148	575	272	995	39	590	111	740	3053
Grand Total	314	973	95	1382	273	653	172	1098	290	1110	519	1919	80	1080	246	1406	5805
Apprch %	22.7	70.4	6.9		24.9	59.5	15.7		15.1	57.8	27		5.7	76.8	17.5		
Total %	5.4	16.8	1.6	23.8	4.7	11.2	3	18.9	5	19.1	8.9	33.1	1.4	18.6	4.2	24.2	

	Lake Forest Drive Southbound				Rancho Parkway Westbound				Lake Forest Drive Northbound				Rancho Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	31	**134**	14	179	**40**	**102**	22	**164**	37	**163**	67	**267**	7	146	17	170	**780**
05:15 PM	52	130	**15**	**197**	34	93	18	145	**39**	138	65	242	**12**	**153**	29	**194**	778
05:30 PM	**54**	116	12	182	34	82	22	138	37	140	**73**	250	12	139	32	183	753
05:45 PM	36	113	8	157	39	83	**34**	156	35	134	67	236	8	152	**33**	193	742
Total Volume	173	493	49	715	147	360	96	603	148	575	272	995	39	590	111	740	3053
% App. Total	24.2	69	6.9		24.4	59.7	15.9		14.9	57.8	27.3		5.3	79.7	15		
PHF	.801	.920	.817	.907	.919	.882	.706	.919	.949	.882	.932	.932	.813	.964	.841	.954	.979

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City of Lake Forest
N/S: Lake Forest Drive
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File Name : 05_LKF_LF_Rac PM
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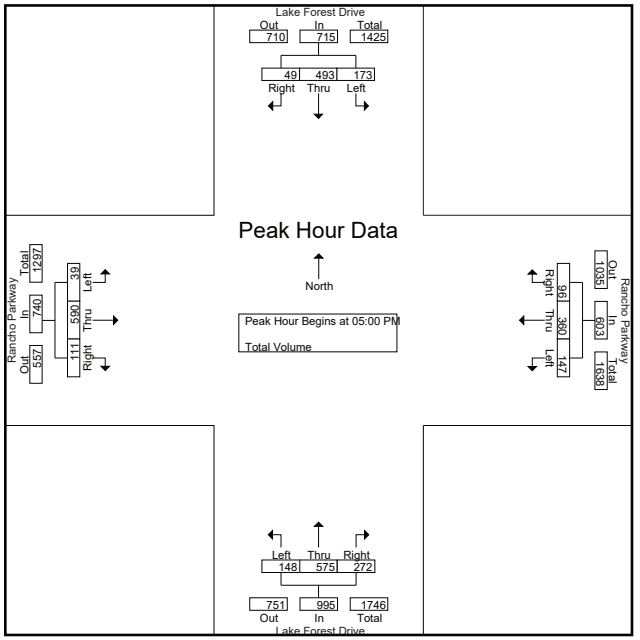


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	44	124	13	181	**40**	**102**	22	**164**	34	151	62	247	7	146	17	170
+15 mins.	31	**134**	14	179	34	93	18	145	37	**163**	67	**267**	**12**	**153**	29	**194**
+30 mins.	52	130	**15**	**197**	34	82	22	138	**39**	138	65	242	12	139	32	183
+45 mins.	**54**	116	12	182	39	83	**34**	156	37	140	**73**	250	8	152	**33**	193
Total Volume	181	504	54	739	147	360	96	603	147	592	267	1006	39	590	111	740
% App. Total	24.5	68.2	7.3		24.4	59.7	15.9		14.6	58.8	26.5		5.3	79.7	15	
PHF	.838	.940	.900	.938	.919	.882	.706	.919	.942	.908	.914	.942	.813	.964	.841	.954

APPENDIX D

ICU/HCM WORKSHEETS

1. Existing (2024) Conditions
2. Existing (2024) with Project Conditions
3. Opening Year (2027) with Cumulative Projects without Project Conditions
4. Opening Year (2027) with Cumulative Projects with Project Conditions

1. Existing (2024) Conditions

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **1**
NORTH/SOUTH: **Bake Parkway**
EAST/WEST: **Commercentre Drive**

Move-ment	Lane		Capacity	Existing (2024) Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	68	82	0.04 *	0.05
NBT	2.0		3,400	701	1,060	0.21	0.31 *
NBR	1.0	D	1,700	276	159	0.00	0.00
SBL	1.0		1,700	15	9	0.01	0.01 *
SBT	2.0		3,400	732	687	0.22 *	0.20
SBR	1.0	D	1,700	142	138	0.00	0.00
EBL							
EBT	3		5,100	310	331	0.06 *	0.06 *
EBR							
WBL							
WBT	3		5,100	260	452	0.05 *	0.09 *
WBR							
N/S Critical Movements						0.26	0.32
E/W Critical Movements						0.11	0.15
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.42	0.52
Level of Service (LOS)						A	A

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **2**
NORTH/SOUTH: **Dimension Drive**
EAST/WEST: **Bake Parkway**

Move-ment	Lane		Capacity	Existing (2024) Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	2.0		3,400	58	88	0.02	0.03
NBT	1.0		1,700	80	119	0.05 *	0.07 *
NBR	1.0	U	1,700	104	147	0.00	0.00
SBL	1.0		1,700	84	72	0.05 *	0.04 *
SBT	1.0		1,700	123	85	0.07	0.05
SBR	1.0	U	1,700	58	33	0.00	0.00
EBL	1.0		1,700	28	83	0.02	0.05
EBT	2.0		3,400	739	1,081	0.22 *	0.32 *
EBR	1.0	D	1,700	58	39	0.00	0.00
WBL	1.0		1,700	115	160	0.07 *	0.09 *
WBT	2.0		3,400	743	661	0.22	0.19
WBR	1.0	D	1,700	111	83	0.00	0.00
N/S Critical Movements						0.10	0.11
E/W Critical Movements						0.29	0.41
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.44	0.57
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 3
NORTH/SOUTH: Dimension Drive
EAST/WEST: Commercentre Drive/Enterprise Way

Move-ment	Lane		Capacity	Existing (2024) Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	222	171	0.13 *	0.10 *
NBT	2.0		3,400	180	222	0.05	0.07
NBR	1.0	D	1,700	45	5	0.00	0.00
SBL	1.0		1,700	20	26	0.01	0.02
SBT	2.0		3,400	191	277	0.06 *	0.08 *
SBR	1.0	D	1,700	33	35	0.00	0.00
EBL	1.0		1,700	18	52	0.01 *	0.03 *
EBT	1.0		1,700	21	10	0.01	0.01
EBR	1.0	U	1,700	211	305	0.01 *	0.07 *
WBL	1.0		1,700	11	45	0.01	0.03
WBT	1.0		1,700	6	31	0.01 *	0.03 *
WBR	0.0		0	5	15	0.00	0.00
N/S Critical Movements						0.19	0.18
E/W Critical Movements						0.02	0.06
Right Turn Critical Movement						0.01	0.07
Clearance Interval						0.05	0.05
ICU						0.27	0.36
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **4**
NORTH/SOUTH: **Lake Forest Drive**
EAST/WEST: **Dimension Drive**

Move-ment	Lane		Capacity	Existing (2024) Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	154	117	0.09 *	0.07 *
NBT	2.0		3,400	629	756	0.19	0.22
NBR	1.0	D	1,700	12	16	0.00	0.00
SBL	1.0		1,700	13	31	0.01	0.02
SBT	2.0		3,400	482	644	0.14 *	0.19 *
SBR	1.0	D	1,700	267	188	0.02 *	0.00
EBL							
EBT	3		5,100	261	449	0.05 *	0.09 *
EBR							
WBL							
WBT	2		3,400	7	39	0.00 *	0.01 *
WBR							
N/S Critical Movements						0.23	0.26
E/W Critical Movements						0.05	0.10
Right Turn Critical Movement						0.02	0.00
Clearance Interval						0.05	0.05
ICU						0.35	0.41
Level of Service (LOS)						A	A

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 5
NORTH/SOUTH: Lake Forest Drive
EAST/WEST: Rancho Parkway

Move-ment	Lane		Capacity	Existing (2024) Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	114	148	0.07 *	0.09
NBT	2.0		3,400	435	575	0.13	0.17 *
NBR	1.0	D	1,700	133	272	0.00	0.00
SBL	1.0		1,700	119	173	0.07	0.10 *
SBT	2.0		3,400	459	493	0.14 *	0.15
SBR	1.0	D	1,700	59	49	0.00	0.00
EBL	1.0		1,700	25	39	0.01	0.02
EBT	2.0		3,400	292	590	0.09 *	0.17 *
EBR	1.0	D	1,700	68	111	0.00	0.00
WBL	2.0		3,400	200	147	0.06 *	0.04 *
WBT	2.0		3,400	421	360	0.12	0.11
WBR	1.0	U	1,700	50	96	0.00	0.00
N/S Critical Movements						0.21	0.27
E/W Critical Movements						0.15	0.21
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.41	0.53
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	134	75	148	107	5	68	701	276	15	732	142
Future Volume (veh/h)	101	134	75	148	107	5	68	701	276	15	732	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	143	80	92	205	5	72	746	294	16	779	151
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	0	0	0
Cap, veh/h	160	201	107	139	285	7	92	2376	1060	30	2252	1005
Arrive On Green	0.09	0.09	0.09	0.08	0.08	0.08	0.05	0.66	0.66	0.02	0.62	0.62
Sat Flow, veh/h	1810	2281	1207	1810	3694	90	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	107	111	112	92	105	105	72	746	294	16	779	151
Grp Sat Flow(s),veh/h/ln	1810	1805	1683	1810	1900	1884	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	8.0	8.4	9.1	6.9	7.6	7.6	5.5	12.5	10.7	1.2	14.5	5.4
Cycle Q Clear(g_c), s	8.0	8.4	9.1	6.9	7.6	7.6	5.5	12.5	10.7	1.2	14.5	5.4
Prop In Lane	1.00		0.72	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	159	149	139	146	145	92	2376	1060	30	2252	1005
V/C Ratio(X)	0.67	0.70	0.75	0.66	0.72	0.72	0.78	0.31	0.28	0.53	0.35	0.15
Avail Cap(c_a), veh/h	376	375	350	375	394	390	172	2376	1060	72	2252	1005
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	0.89	0.89	0.89	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	61.8	62.0	62.3	62.8	63.1	63.1	65.7	10.3	10.0	68.3	12.6	10.9
Incr Delay (d2), s/veh	4.8	5.5	7.4	4.7	5.8	5.9	13.5	0.3	0.7	13.3	0.4	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	3.8	4.0	4.1	3.3	3.8	3.8	2.8	4.5	3.5	0.7	5.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.6	67.5	69.7	67.5	68.9	69.1	79.2	10.7	10.7	81.6	13.0	11.2
LnGrp LOS	E	E	E	E	E	E	E	B	B	F	B	B
Approach Vol, veh/h		330			302			1112			946	
Approach Delay, s/veh		68.0			68.5			15.1			13.9	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	98.3		18.2	11.7	93.6		16.6				
Change Period (Y+Rc), s	4.6	6.2		5.8	4.6	6.2		5.8				
Max Green Setting (Gmax), s	5.6	53.9		29.1	13.3	46.2		29.0				
Max Q Clear Time (g_c+I1), s	3.2	14.5		11.1	7.5	16.5		9.6				
Green Ext Time (p_c), s	0.0	6.1		1.3	0.1	5.5		1.2				

Intersection Summary		
HCM 7th Control Delay, s/veh	27.2	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	739	58	115	743	111	58	80	104	84	123	58
Future Volume (veh/h)	28	739	58	115	743	111	58	80	104	84	123	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	786	62	122	790	118	62	85	111	89	131	62
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	0	0	0
Cap, veh/h	45	2235	997	147	2440	1088	114	164	139	112	220	186
Arrive On Green	0.02	0.62	0.62	0.08	0.68	0.68	0.03	0.09	0.09	0.06	0.12	0.12
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	30	786	62	122	790	118	62	85	111	89	131	62
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	2.3	14.8	2.1	9.3	12.7	3.6	2.4	6.0	9.5	6.8	9.2	5.0
Cycle Q Clear(g_c), s	2.3	14.8	2.1	9.3	12.7	3.6	2.4	6.0	9.5	6.8	9.2	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	45	2235	997	147	2440	1088	114	164	139	112	220	186
V/C Ratio(X)	0.67	0.35	0.06	0.83	0.32	0.11	0.54	0.52	0.80	0.80	0.60	0.33
Avail Cap(c_a), veh/h	88	2235	997	277	2440	1088	150	410	347	238	589	499
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)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	13.0	10.6	63.4	9.4	7.9	66.7	61.1	62.7	64.8	58.8	56.9
Incr Delay (d2), s/veh	15.4	0.4	0.1	11.2	0.4	0.2	4.0	2.5	9.9	12.1	2.6	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	1.2	5.6	0.8	4.6	4.5	1.2	1.1	3.0	4.2	3.5	4.6	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.1	13.4	10.7	74.6	9.8	8.1	70.7	63.6	72.6	77.0	61.4	58.0
LnGrp LOS	F	B	B	E	A	A	E	E	E	E	E	E
Approach Vol, veh/h		878			1030			258			282	
Approach Delay, s/veh		15.6			17.3			69.2			65.5	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	92.9	9.2	22.0	8.0	100.8	13.2	17.9
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	21.4	48.8	6.0	* 43	6.8	63.4	18.4	30.2
Max Q Clear Time (g_c+I1), s	11.3	16.8	4.4	11.2	4.3	14.7	8.8	11.5
Green Ext Time (p_c), s	0.2	5.3	0.0	0.9	0.0	5.8	0.1	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	27.7
HCM 7th LOS	C

Notes

* HCM 7th 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)	18	21	211	11	6	5	222	180	45	20	191	33
Future Volume (veh/h)	18	21	211	11	6	5	222	180	45	20	191	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	21	215	11	6	5	227	184	46	20	195	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	483	428	363	420	216	180	293	1338	597	45	843	376
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.16	0.37	0.37	0.02	0.23	0.23
Sat Flow, veh/h	1426	1900	1610	1162	958	798	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	18	21	215	11	0	11	227	184	46	20	195	34
Grp Sat Flow(s),veh/h/ln	1426	1900	1610	1162	0	1756	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.4	0.4	5.1	0.3	0.0	0.2	5.1	1.4	0.8	0.5	1.9	0.7
Cycle Q Clear(g_c), s	0.6	0.4	5.1	0.7	0.0	0.2	5.1	1.4	0.8	0.5	1.9	0.7
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	428	363	420	0	396	293	1338	597	45	843	376
V/C Ratio(X)	0.04	0.05	0.59	0.03	0.00	0.03	0.78	0.14	0.08	0.45	0.23	0.09
Avail Cap(c_a), veh/h	1130	1291	1094	981	0	1242	526	2503	1116	220	1894	845
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	13.0	14.8	13.2	0.0	12.9	17.1	8.9	8.7	20.5	13.3	12.8
Incr Delay (d2), s/veh	0.0	0.0	1.5	0.0	0.0	0.0	4.4	0.0	0.1	6.8	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	0.1	0.1	1.8	0.1	0.0	0.1	2.0	0.4	0.2	0.2	0.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.2	13.0	16.3	13.2	0.0	12.9	21.5	9.0	8.8	27.4	13.4	12.9
LnGrp LOS	B	B	B	B		B	C	A	A	C	B	B
Approach Vol, veh/h		254			22			457			249	
Approach Delay, s/veh		15.8			13.1			15.2			14.5	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	21.6		15.4	11.5	15.8		15.4
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		* 5.8
Max Green Setting (Gmax), s	5.3	29.6		29.0	12.4	22.4		* 30
Max Q Clear Time (g_c+I1), s	2.5	3.4		7.1	7.1	3.9		2.7
Green Ext Time (p_c), s	0.0	1.1		0.8	0.3	1.0		0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.1
HCM 7th LOS	B

Notes

* HCM 7th 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)	180	5	76	4	0	3	154	629	12	13	482	267
Future Volume (veh/h)	180	5	76	4	0	3	154	629	12	13	482	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	204	0	84	4	0	3	171	699	13	14	536	297
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	0	161	32	0	28	203	2369	1057	29	2022	902
Arrive On Green	0.10	0.00	0.10	0.02	0.00	0.02	0.11	0.66	0.66	0.02	0.56	0.56
Sat Flow, veh/h	3619	0	1610	1810	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	204	0	84	4	0	3	171	699	13	14	536	297
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	5.4	0.0	5.0	0.2	0.0	0.2	9.3	8.3	0.3	0.8	7.7	9.9
Cycle Q Clear(g_c), s	5.4	0.0	5.0	0.2	0.0	0.2	9.3	8.3	0.3	0.8	7.7	9.9
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	362	0	161	32	0	28	203	2369	1057	29	2022	902
V/C Ratio(X)	0.56	0.00	0.52	0.13	0.00	0.11	0.84	0.30	0.01	0.48	0.27	0.33
Avail Cap(c_a), veh/h	977	0	435	181	0	161	232	2369	1057	90	2022	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	0.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	42.9	0.0	42.7	48.4	0.0	48.3	43.5	7.3	6.0	48.8	11.4	11.9
Incr Delay (d2), s/veh	1.4	0.0	2.6	1.7	0.0	1.6	21.4	0.3	0.0	10.7	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	2.4	0.0	2.1	0.1	0.0	0.1	5.1	2.6	0.1	0.4	2.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.3	0.0	45.3	50.1	0.0	49.9	64.9	7.6	6.0	59.5	11.7	12.8
LnGrp LOS	D		D	D		D	E	A	A	E	B	B
Approach Vol, veh/h		288			7			883			847	
Approach Delay, s/veh		44.6			50.0			18.7			12.8	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	71.6		15.8	15.8	62.0		6.4				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.6	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	2.8	10.3		7.4	11.3	11.9		2.2				
Green Ext Time (p_c), s	0.0	4.5		0.9	0.1	3.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.0
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	292	68	200	421	50	114	435	133	119	459	59
Future Volume (veh/h)	25	292	68	200	421	50	114	435	133	119	459	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	301	70	206	434	52	118	448	137	123	473	61
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	429	191	260	603	269	147	1852	826	152	1863	831
Arrive On Green	0.03	0.12	0.12	0.07	0.17	0.17	0.08	0.51	0.51	0.08	0.52	0.52
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	26	301	70	206	434	52	118	448	137	123	473	61
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.4	8.0	4.0	5.8	11.4	2.8	6.4	6.9	4.5	6.7	7.3	1.9
Cycle Q Clear(g_c), s	1.4	8.0	4.0	5.8	11.4	2.8	6.4	6.9	4.5	6.7	7.3	1.9
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	47	429	191	260	603	269	147	1852	826	152	1863	831
V/C Ratio(X)	0.56	0.70	0.37	0.79	0.72	0.19	0.80	0.24	0.17	0.81	0.25	0.07
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1852	826	170	1863	831
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	42.4	40.6	45.5	39.4	35.8	45.2	13.5	13.0	45.0	13.5	12.2
Incr Delay (d2), s/veh	10.1	2.1	1.2	15.4	1.6	0.3	20.3	0.3	0.4	22.4	0.3	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	0.8	3.6	1.6	3.0	5.0	1.1	3.6	2.6	1.6	3.8	2.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.2	44.5	41.8	60.9	41.1	36.2	65.5	13.8	13.4	67.4	13.8	12.3
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		397			692			703			657	
Approach Delay, s/veh		44.9			46.6			22.4			23.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	57.3	12.0	17.7	12.7	57.6	7.2	22.5
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	8.7	8.9	7.8	10.0	8.4	9.3	3.4	13.4
Green Ext Time (p_c), s	0.0	3.0	0.0	1.9	0.0	2.9	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	33.2
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	0	0	22	0	0
Future Vol, veh/h	86	0	0	22	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	0	0	24	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	117	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1514	-	883	969
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1514	-	883	969
Mov Cap-2 Maneuver	-	-	-	-	883	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1514	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	0	0	22	0	0
Future Vol, veh/h	86	0	0	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	0	0	24	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	93	0	117	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1514	-	883	969
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1514	-	883	969
Mov Cap-2 Maneuver	-	-	-	-	883	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1514	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	121	64	265	178	9	82	1060	159	9	687	138
Future Volume (veh/h)	146	121	64	265	178	9	82	1060	159	9	687	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	166	138	73	356	125	10	93	1205	181	10	781	157
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	208	268	134	448	215	17	116	2084	929	21	1895	845
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.58	0.58	0.01	0.52	0.52
Sat Flow, veh/h	1810	2328	1167	3619	1736	139	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	166	105	106	356	0	135	93	1205	181	10	781	157
Grp Sat Flow(s),veh/h/ln	1810	1805	1690	1810	0	1875	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.6	7.1	7.7	12.4	0.0	8.8	6.6	27.5	7.0	0.7	17.1	6.7
Cycle Q Clear(g_c), s	11.6	7.1	7.7	12.4	0.0	8.8	6.6	27.5	7.0	0.7	17.1	6.7
Prop In Lane	1.00		0.69	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	208	194	448	0	232	116	2084	929	21	1895	845
V/C Ratio(X)	0.80	0.51	0.54	0.80	0.00	0.58	0.80	0.58	0.19	0.47	0.41	0.19
Avail Cap(c_a), veh/h	404	403	377	807	0	418	145	2084	929	75	1895	845
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	0.94	0.00	0.94	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	56.0	54.1	54.3	55.4	0.0	53.8	60.0	17.4	13.1	63.8	18.7	16.3
Incr Delay (d2), s/veh	6.8	1.9	2.4	3.1	0.0	2.2	22.3	1.2	0.5	14.7	0.6	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	5.6	3.3	3.3	5.7	0.0	4.2	3.6	10.5	2.4	0.4	6.7	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.9	56.0	56.7	58.4	0.0	56.0	82.3	18.6	13.6	78.6	19.3	16.7
LnGrp LOS	E	E	E	E		E	F	B	B	E	B	B
Approach Vol, veh/h		377			491			1479			948	
Approach Delay, s/veh		59.2			57.7			22.0			19.5	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	81.2		20.8	12.9	74.4		21.9				
Change Period (Y+Rc), s	4.6	6.2		5.8	4.6	6.2		5.8				
Max Green Setting (Gmax), s	5.4	44.2		29.0	10.4	39.2		29.0				
Max Q Clear Time (g_c+I1), s	2.7	29.5		13.6	8.6	19.1		14.4				
Green Ext Time (p_c), s	0.0	7.1		1.3	0.0	5.1		1.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	30.9
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1081	39	160	661	83	88	119	147	72	85	33
Future Volume (veh/h)	83	1081	39	160	661	83	88	119	147	72	85	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1126	41	167	689	86	92	124	153	75	89	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	2025	903	194	2229	994	140	219	186	96	245	207
Arrive On Green	0.05	0.56	0.56	0.11	0.62	0.62	0.04	0.12	0.12	0.05	0.13	0.13
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	86	1126	41	167	689	86	92	124	153	75	89	34
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	6.2	25.9	1.5	11.8	11.7	2.8	3.4	8.0	12.1	5.3	5.6	2.4
Cycle Q Clear(g_c), s	6.2	25.9	1.5	11.8	11.7	2.8	3.4	8.0	12.1	5.3	5.6	2.4
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	92	2025	903	194	2229	994	140	219	186	96	245	207
V/C Ratio(X)	0.94	0.56	0.05	0.86	0.31	0.09	0.66	0.57	0.82	0.78	0.36	0.16
Avail Cap(c_a), veh/h	92	2025	903	270	2229	994	157	440	373	228	607	514
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	18.2	12.9	57.1	11.8	10.0	61.5	54.4	56.2	60.8	51.8	50.4
Incr Delay (d2), s/veh	62.1	0.8	0.1	17.8	0.4	0.2	8.3	2.3	8.8	12.7	0.9	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	4.3	9.9	0.5	6.2	4.3	1.0	1.6	3.9	5.3	2.8	2.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	123.6	19.0	12.9	74.9	12.1	10.2	69.9	56.7	65.0	73.4	52.7	50.8
LnGrp LOS	F	B	B	E	B	B	E	E	E	E	D	D
Approach Vol, veh/h		1253			942			369			198	
Approach Delay, s/veh		26.0			23.1			63.4			60.2	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	79.1	9.8	22.5	11.2	86.5	11.5	20.8
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	13.9	42.9	5.8	* 42	6.6	55.7	16.4	30.1
Max Q Clear Time (g_c+I1), s	13.8	27.9	5.4	7.6	8.2	13.7	7.3	14.1
Green Ext Time (p_c), s	0.2	6.3	0.0	0.6	0.0	4.8	0.1	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	32.5
HCM 7th LOS	C

Notes

* HCM 7th 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)	52	10	305	45	31	15	171	222	5	26	277	35
Future Volume (veh/h)	52	10	305	45	31	15	171	222	5	26	277	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	11	324	48	33	16	182	236	5	28	295	37
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	0	0	0
Cap, veh/h	497	494	419	439	314	152	239	1195	533	60	837	374
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.13	0.33	0.33	0.03	0.23	0.23
Sat Flow, veh/h	1378	1900	1610	1062	1209	586	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	11	324	48	0	49	182	236	5	28	295	37
Grp Sat Flow(s),veh/h/ln	1378	1900	1610	1062	0	1795	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.4	0.2	8.0	1.5	0.0	0.9	4.2	2.0	0.1	0.7	2.9	0.8
Cycle Q Clear(g_c), s	2.3	0.2	8.0	1.7	0.0	0.9	4.2	2.0	0.1	0.7	2.9	0.8
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	494	419	439	0	466	239	1195	533	60	837	374
V/C Ratio(X)	0.11	0.02	0.77	0.11	0.00	0.11	0.76	0.20	0.01	0.47	0.35	0.10
Avail Cap(c_a), veh/h	1066	1279	1084	907	0	1258	521	2481	1106	218	1877	837
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	11.9	14.8	12.5	0.0	12.1	18.0	10.3	9.7	20.5	13.8	13.0
Incr Delay (d2), s/veh	0.1	0.0	3.1	0.1	0.0	0.1	5.0	0.1	0.0	5.6	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	0.3	0.1	2.9	0.3	0.0	0.3	1.7	0.6	0.0	0.3	0.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.1	11.9	17.9	12.6	0.0	12.2	23.0	10.4	9.7	26.1	14.1	13.1
LnGrp LOS	B	B	B	B		B	C	B	A	C	B	B
Approach Vol, veh/h		390			97			423			360	
Approach Delay, s/veh		17.0			12.4			15.8			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.0	20.1		17.0	10.3	15.8		17.0
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		* 5.8
Max Green Setting (Gmax), s	5.3	29.6		29.0	12.4	22.4		* 30
Max Q Clear Time (g_c+I1), s	2.7	4.0		10.0	6.2	4.9		3.7
Green Ext Time (p_c), s	0.0	1.3		1.2	0.2	1.6		0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	15.7
HCM 7th LOS	B

Notes

* HCM 7th 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)	338	10	101	28	4	7	117	756	16	31	644	188
Future Volume (veh/h)	338	10	101	28	4	7	117	756	16	31	644	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	371	0	109	30	4	8	126	813	17	33	692	202
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	483	0	215	125	39	78	157	2014	898	54	1809	807
Arrive On Green	0.13	0.00	0.13	0.07	0.07	0.07	0.09	0.56	0.56	0.03	0.50	0.50
Sat Flow, veh/h	3619	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	371	0	109	30	0	12	126	813	17	33	692	202
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	9.9	0.0	6.3	1.6	0.0	0.7	6.8	12.9	0.5	1.8	11.8	7.2
Cycle Q Clear(g_c), s	9.9	0.0	6.3	1.6	0.0	0.7	6.8	12.9	0.5	1.8	11.8	7.2
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	483	0	215	125	0	117	157	2014	898	54	1809	807
V/C Ratio(X)	0.77	0.00	0.51	0.24	0.00	0.10	0.80	0.40	0.02	0.61	0.38	0.25
Avail Cap(c_a), veh/h	977	0	435	181	0	170	232	2014	898	90	1809	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	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	41.8	0.0	40.3	44.1	0.0	43.7	44.8	12.6	9.9	47.9	15.4	14.2
Incr Delay (d2), s/veh	2.6	0.0	1.9	1.0	0.0	0.4	11.9	0.6	0.0	9.7	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	4.4	0.0	2.6	0.7	0.0	0.3	3.4	4.6	0.2	0.9	4.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.5	0.0	42.1	45.1	0.0	44.0	56.7	13.2	9.9	57.6	16.0	14.9
LnGrp LOS	D		D	D		D	E	B	A	E	B	B
Approach Vol, veh/h		480			42			956			927	
Approach Delay, s/veh		43.9			44.8			18.9			17.2	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	61.8		19.1	13.3	56.1		11.5				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	3.0	14.9		11.9	8.8	13.8		3.6				
Green Ext Time (p_c), s	0.0	5.1		1.4	0.1	4.3		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	23.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	590	111	147	360	96	148	575	272	173	493	49
Future Volume (veh/h)	39	590	111	147	360	96	148	575	272	173	493	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	602	113	150	367	98	151	587	278	177	503	50
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	763	340	216	864	385	170	1528	681	170	1528	681
Arrive On Green	0.03	0.21	0.21	0.06	0.24	0.24	0.09	0.42	0.42	0.09	0.42	0.42
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	40	602	113	150	367	98	151	587	278	177	503	50
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.2	15.8	6.0	4.2	8.6	4.9	8.2	11.2	12.0	9.4	9.3	1.8
Cycle Q Clear(g_c), s	2.2	15.8	6.0	4.2	8.6	4.9	8.2	11.2	12.0	9.4	9.3	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	61	763	340	216	864	385	170	1528	681	170	1528	681
V/C Ratio(X)	0.66	0.79	0.33	0.70	0.42	0.25	0.89	0.38	0.41	1.04	0.33	0.07
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1528	681	170	1528	681
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	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	37.3	33.4	46.0	32.2	30.8	44.8	19.9	20.1	45.3	19.3	17.2
Incr Delay (d2), s/veh	11.5	2.4	0.6	6.2	0.3	0.3	35.9	0.7	1.6	80.1	0.6	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	1.1	6.9	2.3	1.9	3.6	1.9	5.2	4.4	4.5	7.8	3.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.3	39.7	34.0	52.2	32.5	31.2	80.7	20.5	21.7	125.4	19.9	17.4
LnGrp LOS	E	D	C	D	C	C	F	C	C	F	B	B
Approach Vol, veh/h		755			615			1016			730	
Approach Delay, s/veh		39.9			37.1			29.8			45.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	48.3	10.7	26.9	14.0	48.3	8.0	29.7
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	11.4	14.0	6.2	17.8	10.2	11.3	4.2	10.6
Green Ext Time (p_c), s	0.0	4.1	0.0	3.4	0.0	3.0	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	37.3
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	0	0	91	0	0
Future Vol, veh/h	41	0	0	91	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	45	0	0	99	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	143	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1577	-	854	1031
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	930	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1577	-	854	1031
Mov Cap-2 Maneuver	-	-	-	-	854	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	930	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1577	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

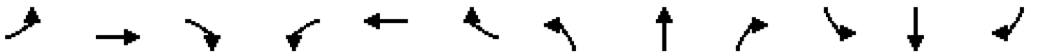
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	0	0	91	0	0
Future Vol, veh/h	41	0	0	91	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	45	0	0	99	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	143	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1577	-	854	1031
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	930	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1577	-	854	1031
Mov Cap-2 Maneuver	-	-	-	-	854	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	930	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	0
HCM LOS			A

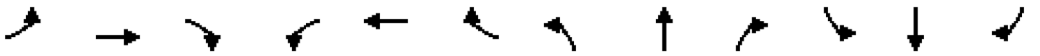
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1577	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	134	75	148	107	5	68	701	276	15	732	142
Future Volume (vph)	101	134	75	148	107	5	68	701	276	15	732	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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%	0%	0%	0%
Shared Lane Traffic (%)				42%								
Lane Group Flow (vph)	107	223	0	91	185	0	72	746	294	16	779	151
v/c Ratio	0.60	0.55		0.57	0.56		0.51	0.32	0.26	0.18	0.37	0.15
Control Delay (s/veh)	73.6	45.7		74.0	65.9		74.0	13.7	3.6	64.5	14.7	2.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.6	45.7		74.0	65.9		74.0	13.7	3.6	64.5	14.7	2.5
Queue Length 50th (ft)	95	70		89	89		64	132	12	14	146	1
Queue Length 95th (ft)	154	111		150	127		115	263	68	m41	177	20
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	375	765		340	702		176	2310	1123	88	2098	997
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.29		0.27	0.26		0.41	0.32	0.26	0.18	0.37	0.15

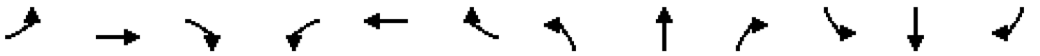
Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



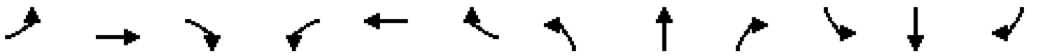
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	739	58	115	743	111	58	80	104	84	123	58
Future Volume (vph)	28	739	58	115	743	111	58	80	104	84	123	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	290		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			80			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	786	62	122	790	118	62	85	111	89	131	62
v/c Ratio	0.30	0.38	0.06	0.64	0.34	0.11	0.42	0.52	0.38	0.57	0.45	0.17
Control Delay (s/veh)	66.8	14.9	0.1	74.9	13.2	2.1	73.9	71.8	4.8	74.6	58.9	1.1
Queue Delay	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 Delay (s/veh)	66.8	14.9	0.1	74.9	13.2	2.1	73.9	71.8	4.8	74.6	58.9	1.1
Queue Length 50th (ft)	0	159	0	108	172	0	28	76	0	79	113	0
Queue Length 95th (ft)	60	187	0	171	265	25	54	130	9	134	168	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	290		175	165		165	165		165
Base Capacity (vph)	104	2053	989	275	2341	1092	150	409	480	237	589	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.38	0.06	0.44	0.34	0.11	0.41	0.21	0.23	0.38	0.22	0.10

Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	21	211	11	6	5	222	180	45	20	191	33
Future Volume (vph)	18	21	211	11	6	5	222	180	45	20	191	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	21	215	11	11	0	227	184	46	20	195	34
v/c Ratio	0.06	0.05	0.42	0.03	0.03		0.53	0.10	0.05	0.10	0.26	0.07
Control Delay (s/veh)	16.3	16.0	6.2	14.9	12.2		20.7	7.4	0.9	21.0	17.1	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.3	16.0	6.2	14.9	12.2		20.7	7.4	0.9	21.0	17.1	0.3
Queue Length 50th (ft)	4	5	0	2	1		54	11	0	5	24	0
Queue Length 95th (ft)	17	18	42	12	11		106	34	5	20	46	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	869	1158	1068	897	1126		470	2246	1043	197	1699	847
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.02	0.20	0.01	0.01		0.48	0.08	0.04	0.10	0.11	0.04

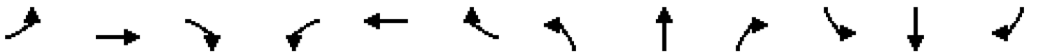
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	5	76	4	0	3	154	629	12	13	482	267
Future Volume (vph)	180	5	76	4	0	3	154	629	12	13	482	267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	30		0	140		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	70			25			85			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	102	104	84	4	3	0	171	699	13	14	536	297
v/c Ratio	0.49	0.50	0.24	0.02	0.01		0.63	0.27	0.01	0.12	0.28	0.30
Control Delay (s/veh)	49.0	49.2	1.6	41.0	0.0		50.0	7.8	0.0	43.8	23.9	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.0	49.2	1.6	41.0	0.0		50.0	7.8	0.0	43.8	23.9	12.9
Queue Length 50th (ft)	65	66	0	2	0		103	54	0	9	127	43
Queue Length 95th (ft)	116	118	0	13	0		164	202	0	m25	m240	m110
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	155			30			140		165	105		175
Base Capacity (vph)	463	465	569	180	436		282	2553	1180	115	1934	1003
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.22	0.15	0.02	0.01		0.61	0.27	0.01	0.12	0.28	0.30

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

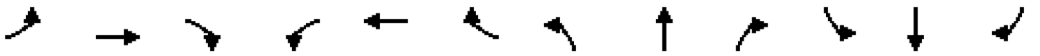


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	292	68	200	421	50	114	435	133	119	459	59
Future Volume (vph)	25	292	68	200	421	50	114	435	133	119	459	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		190	250		100	330		175	330		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			65			80		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	301	70	206	434	52	118	448	137	123	473	61
v/c Ratio	0.25	0.55	0.20	0.80	0.52	0.11	0.54	0.28	0.17	0.55	0.30	0.08
Control Delay (s/veh)	51.0	42.4	1.3	68.3	36.5	0.5	50.6	23.7	10.9	49.8	20.0	0.2
Queue Delay	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 Delay (s/veh)	51.0	42.4	1.3	68.3	36.5	0.5	50.6	23.7	10.9	49.8	20.0	0.2
Queue Length 50th (ft)	16	96	0	68	123	0	77	73	0	75	96	0
Queue Length 95th (ft)	43	128	3	#126	178	0	114	216	100	127	163	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		190	250		100	330		175	330		170
Base Capacity (vph)	106	1119	592	259	1173	614	224	1589	787	229	1601	789
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.27	0.12	0.80	0.37	0.08	0.53	0.28	0.17	0.54	0.30	0.08

Intersection Summary

Area Type: Other

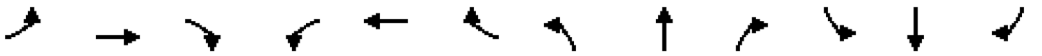
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	121	64	265	178	9	82	1060	159	9	687	138
Future Volume (vph)	146	121	64	265	178	9	82	1060	159	9	687	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	166	211	0	169	344	0	93	1205	181	10	781	157
v/c Ratio	0.69	0.41		0.69	0.68		0.55	0.60	0.19	0.11	0.48	0.19
Control Delay (s/veh)	67.7	35.9		66.2	58.4		68.0	23.1	8.4	63.1	25.0	6.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.7	35.9		66.2	58.4		68.0	23.1	8.4	63.1	25.0	6.1
Queue Length 50th (ft)	136	58		151	152		76	315	24	7	164	0
Queue Length 95th (ft)	196	89		217	189		127	570	87	m26	247	39
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	402	816		366	755		176	2022	953	87	1625	808
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.26		0.46	0.46		0.53	0.60	0.19	0.11	0.48	0.19

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



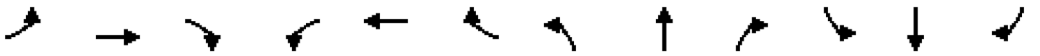
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1081	39	160	661	83	88	119	147	72	85	33
Future Volume (vph)	83	1081	39	160	661	83	88	119	147	72	85	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	290		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			80			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1126	41	167	689	86	92	124	153	75	89	34
v/c Ratio	0.47	0.60	0.04	0.70	0.35	0.09	0.59	0.53	0.43	0.51	0.31	0.09
Control Delay (s/veh)	52.3	29.6	0.7	69.1	18.4	0.6	76.6	62.5	7.7	68.2	50.0	0.5
Queue Delay	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 Delay (s/veh)	52.3	29.6	0.7	69.1	18.4	0.6	76.6	62.5	7.7	68.2	50.0	0.5
Queue Length 50th (ft)	73	220	0	137	165	0	40	102	0	62	68	0
Queue Length 95th (ft)	m120	534	m0	204	252	5	#71	161	40	111	111	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	290		175	165		165	165		165
Base Capacity (vph)	183	1865	920	280	1975	946	156	439	513	227	606	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.60	0.04	0.60	0.35	0.09	0.59	0.28	0.30	0.33	0.15	0.06

Intersection Summary

Area Type: Other

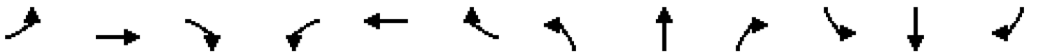
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	10	305	45	31	15	171	222	5	26	277	35
Future Volume (vph)	52	10	305	45	31	15	171	222	5	26	277	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	11	324	48	49	0	182	236	5	28	295	37
v/c Ratio	0.18	0.03	0.53	0.14	0.11		0.48	0.13	0.01	0.14	0.37	0.08
Control Delay (s/veh)	17.3	15.5	6.2	15.7	11.7		21.1	7.9	0.0	22.3	17.8	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.3	15.5	6.2	15.7	11.7		21.1	7.9	0.0	22.3	17.8	0.3
Queue Length 50th (ft)	12	2	0	10	7		42	14	0	7	35	0
Queue Length 95th (ft)	37	12	50	32	28		97	46	0	27	70	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	853	1176	1123	918	1170		477	2280	1057	200	1726	857
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.01	0.29	0.05	0.04		0.38	0.10	0.00	0.14	0.17	0.04

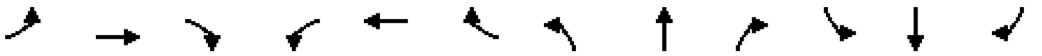
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	10	101	28	4	7	117	756	16	31	644	188
Future Volume (vph)	338	10	101	28	4	7	117	756	16	31	644	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	30		0	140		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	70			25			85			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	185	189	109	30	12	0	126	813	17	33	692	202
v/c Ratio	0.64	0.66	0.26	0.17	0.07		0.58	0.41	0.02	0.26	0.42	0.24
Control Delay (s/veh)	48.5	49.0	1.8	43.7	28.1		51.9	17.8	0.1	38.5	33.6	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.5	49.0	1.8	43.7	28.1		51.9	17.8	0.1	38.5	33.6	16.9
Queue Length 50th (ft)	117	121	0	18	2		77	186	0	21	231	36
Queue Length 95th (ft)	176	181	4	46	20		131	282	0	m43	303	116
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	155			30			140		165	105		175
Base Capacity (vph)	463	465	569	180	178		247	1994	951	127	1662	852
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.41	0.19	0.17	0.07		0.51	0.41	0.02	0.26	0.42	0.24

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	590	111	147	360	96	148	575	272	173	493	49
Future Volume (vph)	39	590	111	147	360	96	148	575	272	173	493	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		190	250		100	330		175	330		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			65			80		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	602	113	150	367	98	151	587	278	177	503	50
v/c Ratio	0.38	0.72	0.24	0.59	0.35	0.18	0.64	0.49	0.41	0.63	0.39	0.08
Control Delay (s/veh)	56.2	40.5	4.7	54.6	29.6	2.8	45.5	39.1	22.7	52.1	26.3	0.2
Queue Delay	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 Delay (s/veh)	56.2	40.5	4.7	54.6	29.6	2.8	45.5	39.1	22.7	52.1	26.3	0.2
Queue Length 50th (ft)	25	187	0	48	104	0	75	214	100	104	128	0
Queue Length 95th (ft)	59	227	30	81	134	19	#189	271	191	#235	182	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		190	250		100	330		175	330		170
Base Capacity (vph)	106	1119	592	259	1174	615	237	1194	676	281	1282	658
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.54	0.19	0.58	0.31	0.16	0.64	0.49	0.41	0.63	0.39	0.08

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

2. Existing (2024) with Project Conditions

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 1
NORTH/SOUTH: Bake Parkway
EAST/WEST: Commercentre Drive

Move-ment	Lane		Capacity	Existing (2024) with Project Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	68	82	0.04 *	0.05
NBT	2.0		3,400	701	1,060	0.21	0.31 *
NBR	1.0	D	1,700	300	171	0.00	0.00
SBL	1.0		1,700	15	9	0.01	0.01 *
SBT	2.0		3,400	732	687	0.22 *	0.20
SBR	1.0	D	1,700	142	138	0.00	0.00
EBL	1.0		1,700	101	146	0.06 *	0.09 *
EBT	2.0		3,400	142	123	0.06	0.06
EBR	0.0		0	75	64	0.00	0.00
WBL	2.0		3,400	158	289	0.05	0.09
WBT	1.0		1,700	108	185	0.07 *	0.11 *
WBR	0.0		0	5	9	0.00	0.00
N/S Critical Movements						0.26	0.32
E/W Critical Movements						0.13	0.20
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.44	0.57
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **2**
NORTH/SOUTH: **Dimension Drive**
EAST/WEST: **Bake Parkway**

	Existing (2024) with Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	2.0		3,400	58	88	0.02	0.03
NBT	1.0		1,700	80	119	0.05 *	0.07 *
NBR	1.0	U	1,700	105	151	0.00	0.00
SBL	1.0		1,700	84	72	0.05 *	0.04 *
SBT	1.0		1,700	123	85	0.07	0.05
SBR	1.0	U	1,700	58	33	0.00	0.00
EBL	1.0		1,700	28	83	0.02	0.05
EBT	2.0		3,400	739	1,081	0.22 *	0.32 *
EBR	1.0	D	1,700	58	39	0.00	0.00
WBL	1.0		1,700	119	161	0.07 *	0.09 *
WBT	2.0		3,400	743	661	0.22	0.19
WBR	1.0	D	1,700	111	83	0.00	0.00
N/S Critical Movements						0.10	0.11
E/W Critical Movements						0.29	0.41
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.44	0.57
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **3**
NORTH/SOUTH: **Dimension Drive**
EAST/WEST: **Commercentre Drive/Enterprise Way**

	Existing (2024) with Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	222	171	0.13 *	0.10 *
NBT	2.0		3,400	180	222	0.05	0.07
NBR	1.0	D	1,700	79	21	0.00	0.00
SBL	1.0		1,700	24	27	0.01	0.02
SBT	2.0		3,400	191	277	0.06 *	0.08 *
SBR	1.0	D	1,700	33	35	0.00	0.00
EBL	1.0		1,700	18	52	0.01	0.03 *
EBT	1.0		1,700	53	24	0.03 *	0.01
EBR	1.0	U	1,700	211	305	0.00	0.07 *
WBL	1.0		1,700	23	78	0.01 *	0.05
WBT	1.0		1,700	17	62	0.01	0.05 *
WBR	0.0		0	6	19	0.00	0.00
N/S Critical Movements						0.19	0.18
E/W Critical Movements						0.04	0.08
Right Turn Critical Movement						0.00	0.07
Clearance Interval						0.05	0.05
ICU						0.28	0.38
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 4
NORTH/SOUTH: Lake Forest Drive
EAST/WEST: Dimension Drive

Move-ment	Existing (2024) with Project							
				Volume		V/C Ratio		
	Lane		Capacity	AM	PM	AM		PM	
NBL	1.0		1,700	168	124	0.10	*	0.07	*
NBT	2.0		3,400	629	756	0.19		0.22	
NBR	1.0	D	1,700	12	16	0.00		0.00	
SBL	1.0		1,700	13	31	0.01		0.02	
SBT	2.0		3,400	482	644	0.14	*	0.19	*
SBR	1.0	D	1,700	287	197	0.03	*	0.00	
EBL									
EBT	3		5,100	273	482	0.05	*	0.09	*
EBR									
WBL									
WBT	2		3,400	7	39	0.00	*	0.01	*
WBR									
N/S Critical Movements						0.24		0.26	
E/W Critical Movements						0.05		0.10	
Right Turn Critical Movement						0.03		0.00	
Clearance Interval						0.05		0.05	
ICU						0.37		0.41	
Level of Service (LOS)						A		A	

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

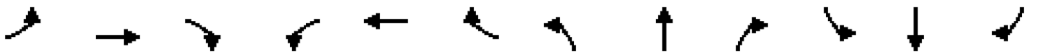
INTERSECTION NO.: 5
NORTH/SOUTH: Lake Forest Drive
EAST/WEST: Rancho Parkway

Move-ment	Existing (2024) with Project							
				Volume		V/C Ratio		
	Lane		Capacity	AM	PM	AM		PM
NBL	1.0		1,700	114	148	0.07	*	0.09
NBT	2.0		3,400	438	583	0.13		0.17 *
NBR	1.0	D	1,700	137	284	0.00		0.00
SBL	1.0		1,700	119	173	0.07		0.10 *
SBT	2.0		3,400	467	497	0.14	*	0.15
SBR	1.0	D	1,700	59	49	0.00		0.00
EBL	1.0		1,700	25	39	0.01		0.02
EBT	2.0		3,400	292	590	0.09	*	0.17 *
EBR	1.0	D	1,700	68	111	0.00		0.00
WBL	2.0		3,400	212	152	0.06	*	0.04 *
WBT	2.0		3,400	421	360	0.12		0.11
WBR	1.0	U	1,700	50	96	0.00		0.00
N/S Critical Movements						0.21		0.27
E/W Critical Movements						0.15		0.21
Right Turn Critical Movement						0.00		0.00
Clearance Interval						0.05		0.05
ICU						0.41		0.53
Level of Service (LOS)						A		A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	142	75	158	108	5	68	701	300	15	732	142
Future Volume (veh/h)	101	142	75	158	108	5	68	701	300	15	732	142
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	151	80	168	115	5	72	746	319	16	779	151
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	0	0	0
Cap, veh/h	132	229	115	222	145	6	92	2420	1079	30	2296	1024
Arrive On Green	0.07	0.10	0.10	0.06	0.08	0.08	0.05	0.67	0.67	0.02	0.64	0.64
Sat Flow, veh/h	1810	2325	1170	3510	1807	79	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	107	115	116	168	0	120	72	746	319	16	779	151
Grp Sat Flow(s),veh/h/ln	1810	1805	1689	1755	0	1886	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	8.2	8.6	9.3	6.6	0.0	8.8	5.5	12.0	11.4	1.2	14.0	3.0
Cycle Q Clear(g_c), s	8.2	8.6	9.3	6.6	0.0	8.8	5.5	12.0	11.4	1.2	14.0	3.0
Prop In Lane	1.00		0.69	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	132	178	166	222	0	151	92	2420	1079	30	2296	1024
V/C Ratio(X)	0.81	0.65	0.69	0.76	0.00	0.79	0.78	0.31	0.30	0.53	0.34	0.15
Avail Cap(c_a), veh/h	168	376	352	396	0	431	199	2420	1079	76	2296	1024
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	0.91	0.00	0.91	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	63.9	60.8	61.1	64.5	0.0	63.2	65.7	9.6	9.5	68.3	11.8	3.3
Incr Delay (d2), s/veh	20.3	4.0	5.1	4.7	0.0	8.2	13.4	0.3	0.7	13.3	0.4	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	4.4	4.1	4.1	3.0	0.0	4.5	2.8	4.2	3.9	0.7	5.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.3	64.7	66.2	69.2	0.0	71.5	79.1	9.9	10.2	81.6	12.2	3.5
LnGrp LOS	F	E	E	E		E	E	A	B	F	B	A
Approach Vol, veh/h		338			288			1137			946	
Approach Delay, s/veh		71.4			70.2			14.4			12.0	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	100.0	13.5	19.6	11.7	95.2	16.0	17.0
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	5.8	* 5.8
Max Green Setting (Gmax), s	5.9	67.9	15.8	29.2	15.4	58.4	13.0	* 32
Max Q Clear Time (g_c+I1), s	3.2	14.0	8.6	11.3	7.5	16.0	10.2	10.8
Green Ext Time (p_c), s	0.0	6.3	0.3	1.0	0.1	5.8	0.1	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	26.6
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

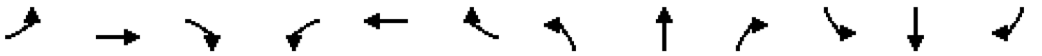
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	739	58	119	743	111	58	80	105	84	123	58
Future Volume (veh/h)	28	739	58	119	743	111	58	80	105	84	123	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	30	786	62	127	790	118	62	85	112	89	131	62
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	0	0	0
Cap, veh/h	45	2222	991	152	2437	1087	114	166	140	112	221	187
Arrive On Green	0.02	0.62	0.62	0.08	0.68	0.68	0.03	0.09	0.09	0.06	0.12	0.12
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	30	786	62	127	790	118	62	85	112	89	131	62
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	2.3	15.0	2.2	9.7	12.7	3.6	2.4	6.0	9.6	6.8	9.2	5.0
Cycle Q Clear(g_c), s	2.3	15.0	2.2	9.7	12.7	3.6	2.4	6.0	9.6	6.8	9.2	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	45	2222	991	152	2437	1087	114	166	140	112	221	187
V/C Ratio(X)	0.67	0.35	0.06	0.83	0.32	0.11	0.54	0.51	0.80	0.80	0.59	0.33
Avail Cap(c_a), veh/h	88	2222	991	277	2437	1087	150	410	347	238	589	499
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)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	13.2	10.8	63.2	9.5	8.0	66.7	61.1	62.7	64.8	58.7	56.9
Incr Delay (d2), s/veh	15.4	0.4	0.1	11.2	0.4	0.2	4.0	2.4	9.9	12.1	2.5	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	1.2	5.6	0.8	4.8	4.5	1.2	1.1	3.0	4.2	3.5	4.6	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.1	13.6	10.9	74.3	9.8	8.2	70.7	63.5	72.6	77.0	61.2	57.9
LnGrp LOS	F	B	B	E	A	A	E	E	E	E	E	E
Approach Vol, veh/h		878			1035			259			282	
Approach Delay, s/veh		15.8			17.5			69.1			65.5	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	92.4	9.2	22.1	8.0	100.7	13.2	18.0
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	21.4	48.8	6.0	* 43	6.8	63.4	18.4	30.2
Max Q Clear Time (g_c+I1), s	11.7	17.0	4.4	11.2	4.3	14.7	8.8	11.6
Green Ext Time (p_c), s	0.2	5.3	0.0	0.9	0.0	5.8	0.1	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	27.9
HCM 7th LOS	C

Notes

* HCM 7th 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)	18	53	211	23	17	6	222	180	79	24	191	33
Future Volume (veh/h)	18	53	211	23	17	6	222	180	79	24	191	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	54	215	23	17	6	227	184	81	24	195	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	49	363	307	49	256	90	296	1270	567	51	697	311
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.16	0.35	0.35	0.03	0.19	0.19
Sat Flow, veh/h	1810	1900	1610	1810	1341	473	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	18	54	215	23	0	23	227	184	81	24	195	34
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1815	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.5	1.2	3.4	0.6	0.0	0.5	6.2	1.8	1.8	0.7	2.4	0.9
Cycle Q Clear(g_c), s	0.5	1.2	3.4	0.6	0.0	0.5	6.2	1.8	1.8	0.7	2.4	0.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	49	363	307	49	0	347	296	1270	567	51	697	311
V/C Ratio(X)	0.37	0.15	0.70	0.47	0.00	0.07	0.77	0.14	0.14	0.47	0.28	0.11
Avail Cap(c_a), veh/h	325	1109	939	259	0	1034	1203	3780	1686	259	1897	846
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	17.4	5.3	24.8	0.0	17.2	20.7	11.5	11.4	24.8	17.8	17.2
Incr Delay (d2), s/veh	4.6	0.2	2.9	6.7	0.0	0.1	4.1	0.1	0.1	6.6	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	0.3	0.5	2.3	0.4	0.0	0.2	2.5	0.6	0.6	0.3	0.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.3	17.6	8.2	31.6	0.0	17.2	24.8	11.5	11.6	31.4	18.0	17.4
LnGrp LOS	C	B	A	C		B	C	B	B	C	B	B
Approach Vol, veh/h		287			46			492			253	
Approach Delay, s/veh		11.3			24.4			17.7			19.2	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	24.0	6.0	15.7	14.3	15.8	7.2	14.5
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 4.6
Max Green Setting (Gmax), s	7.4	54.2	7.4	30.2	34.4	* 27	9.3	* 30
Max Q Clear Time (g_c+I1), s	2.7	3.8	2.6	5.4	8.2	4.4	2.5	2.5
Green Ext Time (p_c), s	0.0	1.4	0.0	0.9	0.6	1.1	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

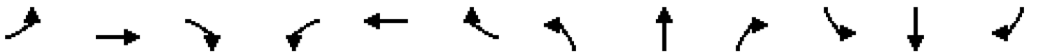
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	5	81	4	0	3	168	629	12	13	482	287
Future Volume (veh/h)	187	5	81	4	0	3	168	629	12	13	482	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	212	0	90	4	0	3	187	699	13	14	536	319
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	0	161	32	0	28	219	2369	1057	29	1991	888
Arrive On Green	0.10	0.00	0.10	0.02	0.00	0.02	0.12	0.66	0.66	0.02	0.55	0.55
Sat Flow, veh/h	3619	0	1610	1810	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	212	0	90	4	0	3	187	699	13	14	536	319
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	5.6	0.0	5.3	0.2	0.0	0.2	10.1	8.3	0.3	0.8	7.8	11.1
Cycle Q Clear(g_c), s	5.6	0.0	5.3	0.2	0.0	0.2	10.1	8.3	0.3	0.8	7.8	11.1
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	362	0	161	32	0	28	219	2369	1057	29	1991	888
V/C Ratio(X)	0.59	0.00	0.56	0.13	0.00	0.11	0.85	0.30	0.01	0.48	0.27	0.36
Avail Cap(c_a), veh/h	977	0	435	181	0	161	232	2369	1057	90	1991	888
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	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	43.0	0.0	42.9	48.4	0.0	48.3	43.1	7.3	6.0	48.8	11.8	12.5
Incr Delay (d2), s/veh	1.5	0.0	3.0	1.7	0.0	1.6	24.5	0.3	0.0	10.6	0.3	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	2.5	0.0	2.2	0.1	0.0	0.1	5.8	2.6	0.1	0.4	2.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.5	0.0	45.9	50.1	0.0	49.9	67.6	7.6	6.0	59.4	12.1	13.6
LnGrp LOS	D		D	D		D	E	A	A	E	B	B
Approach Vol, veh/h		302			7			899			869	
Approach Delay, s/veh		44.9			50.0			20.1			13.4	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	71.6		15.8	16.7	61.1		6.4				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	2.8	10.3		7.6	12.1	13.1		2.2				
Green Ext Time (p_c), s	0.0	4.5		0.9	0.0	3.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	21.0
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	292	68	212	421	50	114	438	137	119	467	59
Future Volume (veh/h)	25	292	68	212	421	50	114	438	137	119	467	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	301	70	219	434	52	118	452	141	123	481	61
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	429	191	260	603	269	147	1852	826	152	1863	831
Arrive On Green	0.03	0.12	0.12	0.07	0.17	0.17	0.08	0.51	0.51	0.08	0.52	0.52
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	26	301	70	219	434	52	118	452	141	123	481	61
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.4	8.0	4.0	6.2	11.4	2.8	6.4	7.0	4.7	6.7	7.4	1.9
Cycle Q Clear(g_c), s	1.4	8.0	4.0	6.2	11.4	2.8	6.4	7.0	4.7	6.7	7.4	1.9
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	47	429	191	260	603	269	147	1852	826	152	1863	831
V/C Ratio(X)	0.56	0.70	0.37	0.84	0.72	0.19	0.80	0.24	0.17	0.81	0.26	0.07
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1852	826	170	1863	831
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	42.4	40.6	45.7	39.4	35.8	45.2	13.6	13.0	45.0	13.5	12.2
Incr Delay (d2), s/veh	10.1	2.1	1.2	21.5	1.6	0.3	20.3	0.3	0.4	22.4	0.3	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	0.8	3.6	1.6	3.4	5.0	1.1	3.6	2.6	1.6	3.8	2.8	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.2	44.5	41.8	67.2	41.1	36.2	65.5	13.9	13.4	67.4	13.8	12.3
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		397			705			711			665	
Approach Delay, s/veh		44.9			48.8			22.3			23.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	57.3	12.0	17.7	12.7	57.6	7.2	22.5
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	8.7	9.0	8.2	10.0	8.4	9.4	3.4	13.4
Green Ext Time (p_c), s	0.0	3.0	0.0	1.9	0.0	2.9	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	33.8
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	101	55	0	25	21	0
Future Vol, veh/h	101	55	0	25	21	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	110	60	0	27	23	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	170	0	167	140
Stage 1	-	-	-	-	140	-
Stage 2	-	-	-	-	27	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1420	-	828	914
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	1001	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1420	-	828	914
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	1001	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	9.47
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	828	-	-	1420	-
HCM Lane V/C Ratio	0.028	-	-	-	-
HCM Control Delay (s/veh)	9.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	86	15	0	22	3	0
Future Vol, veh/h	86	15	0	22	3	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	93	16	0	24	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	110	0	126	102
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1493	-	874	959
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	1004	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1493	-	874	959
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	927	-
Stage 2	-	-	-	-	1004	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	9.13
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	874	-	-	1493	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s/veh)	9.1	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

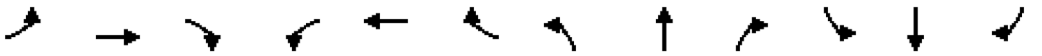
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	123	64	289	185	9	82	1060	171	9	687	138
Future Volume (veh/h)	146	123	64	289	185	9	82	1060	171	9	687	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	166	140	73	328	210	10	93	1205	194	10	781	157
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	192	328	162	395	247	12	116	2068	922	21	1879	838
Arrive On Green	0.11	0.14	0.14	0.11	0.14	0.14	0.06	0.57	0.57	0.01	0.52	0.52
Sat Flow, veh/h	1810	2340	1157	3510	1799	86	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	166	106	107	328	0	220	93	1205	194	10	781	157
Grp Sat Flow(s),veh/h/ln	1810	1805	1692	1755	0	1885	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.7	7.0	7.5	11.9	0.0	14.8	6.6	27.8	7.6	0.7	17.2	3.9
Cycle Q Clear(g_c), s	11.7	7.0	7.5	11.9	0.0	14.8	6.6	27.8	7.6	0.7	17.2	3.9
Prop In Lane	1.00		0.68	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	253	237	395	0	258	116	2068	922	21	1879	838
V/C Ratio(X)	0.86	0.42	0.45	0.83	0.00	0.85	0.80	0.58	0.21	0.47	0.42	0.19
Avail Cap(c_a), veh/h	212	403	377	605	0	525	131	2068	922	70	1879	838
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	0.93	0.00	0.93	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	57.2	51.1	51.3	56.5	0.0	54.8	60.0	17.8	13.5	63.8	19.1	5.7
Incr Delay (d2), s/veh	27.3	1.1	1.3	5.5	0.0	7.2	26.8	1.2	0.5	14.7	0.6	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	6.7	3.2	3.2	5.5	0.0	7.4	3.8	10.7	2.7	0.4	6.8	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.5	52.2	52.6	62.0	0.0	62.0	86.9	19.0	14.0	78.6	19.7	6.2
LnGrp LOS	F	D	D	E		E	F	B	B	E	B	A
Approach Vol, veh/h		379			548			1492			948	
Approach Delay, s/veh		66.5			62.0			22.6			18.1	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	80.7	19.2	24.0	12.9	73.9	19.6	23.6
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	5.8	* 5.8
Max Green Setting (Gmax), s	5.0	52.4	22.4	29.0	9.4	48.0	15.2	* 36
Max Q Clear Time (g_c+I1), s	2.7	29.8	13.9	9.5	8.6	19.2	13.7	16.8
Green Ext Time (p_c), s	0.0	8.8	0.7	1.0	0.0	5.6	0.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



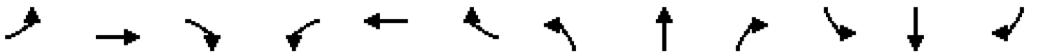
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1081	39	161	661	83	88	119	151	72	85	33
Future Volume (veh/h)	83	1081	39	161	661	83	88	119	151	72	85	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	86	1126	41	168	689	86	92	124	157	75	89	34
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	2014	898	195	2220	990	140	224	190	96	249	211
Arrive On Green	0.05	0.56	0.56	0.11	0.62	0.62	0.04	0.12	0.12	0.05	0.13	0.13
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	86	1126	41	168	689	86	92	124	157	75	89	34
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	6.2	26.0	1.5	11.9	11.8	2.8	3.4	8.0	12.4	5.3	5.6	2.4
Cycle Q Clear(g_c), s	6.2	26.0	1.5	11.9	11.8	2.8	3.4	8.0	12.4	5.3	5.6	2.4
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	92	2014	898	195	2220	990	140	224	190	96	249	211
V/C Ratio(X)	0.94	0.56	0.05	0.86	0.31	0.09	0.66	0.55	0.83	0.78	0.36	0.16
Avail Cap(c_a), veh/h	92	2014	898	270	2220	990	157	440	373	228	607	514
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	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	18.5	13.0	57.0	11.9	10.2	61.5	54.1	56.0	60.8	51.5	50.1
Incr Delay (d2), s/veh	62.6	0.9	0.1	18.1	0.4	0.2	8.2	2.1	8.7	12.7	0.9	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	4.3	10.0	0.5	6.2	4.3	1.0	1.6	3.9	5.4	2.8	2.7	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	124.1	19.3	13.1	75.1	12.3	10.3	69.8	56.2	64.8	73.4	52.3	50.5
LnGrp LOS	F	B	B	E	B	B	E	E	E	E	D	D
Approach Vol, veh/h		1253			943			373			198	
Approach Delay, s/veh		26.3			23.3			63.2			60.0	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	78.7	9.8	22.9	11.2	86.2	11.5	21.1
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	19.4	42.9	5.8	* 42	6.6	55.7	16.4	30.1
Max Q Clear Time (g_c+I1), s	13.9	28.0	5.4	7.6	8.2	13.8	7.3	14.4
Green Ext Time (p_c), s	0.2	6.2	0.0	0.6	0.0	4.8	0.1	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



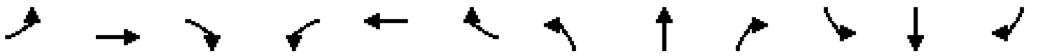
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	24	305	78	62	19	171	222	21	27	277	35
Future Volume (veh/h)	52	24	305	78	62	19	171	222	21	27	277	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	26	324	83	66	20	182	236	22	29	295	37
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	0	0	0
Cap, veh/h	121	362	307	121	267	81	240	1132	505	59	688	307
Arrive On Green	0.07	0.19	0.19	0.07	0.19	0.19	0.13	0.31	0.31	0.03	0.19	0.19
Sat Flow, veh/h	1810	1900	1610	1810	1400	424	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	55	26	324	83	0	86	182	236	22	29	295	37
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1824	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.5	0.6	5.6	2.4	0.0	2.1	5.1	2.5	0.5	0.8	3.8	1.0
Cycle Q Clear(g_c), s	1.5	0.6	5.6	2.4	0.0	2.1	5.1	2.5	0.5	0.8	3.8	1.0
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	121	362	307	121	0	347	240	1132	505	59	688	307
V/C Ratio(X)	0.45	0.07	1.06	0.69	0.00	0.25	0.76	0.21	0.04	0.49	0.43	0.12
Avail Cap(c_a), veh/h	462	1094	927	669	0	1300	841	2972	1326	221	1734	773
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	17.4	6.7	23.9	0.0	18.0	21.9	13.2	12.5	24.9	18.7	17.6
Incr Delay (d2), s/veh	2.7	0.1	40.4	6.7	0.0	0.4	4.8	0.1	0.0	6.1	0.4	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	0.7	0.2	6.5	1.2	0.0	0.9	2.2	0.8	0.2	0.4	1.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.2	17.5	47.2	30.6	0.0	18.4	26.8	13.3	12.6	31.0	19.1	17.8
LnGrp LOS	C	B	F	C		B	C	B	B	C	B	B
Approach Vol, veh/h		405			169			440			361	
Approach Delay, s/veh		42.4			24.4			18.8			20.0	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	22.2	8.1	15.8	12.8	15.8	9.3	14.6
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 4.6
Max Green Setting (Gmax), s	6.4	43.2	19.4	30.2	24.4	* 25	13.4	* 37
Max Q Clear Time (g_c+I1), s	2.8	4.5	4.4	7.6	7.1	5.8	3.5	4.1
Green Ext Time (p_c), s	0.0	1.5	0.1	1.2	0.4	1.7	0.1	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	26.8
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



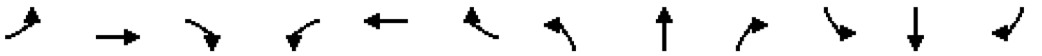
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	358	10	114	28	4	7	124	756	16	31	644	197
Future Volume (veh/h)	358	10	114	28	4	7	124	756	16	31	644	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	393	0	123	30	4	8	133	813	17	33	692	212
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	507	0	226	125	39	78	164	1989	887	54	1770	789
Arrive On Green	0.14	0.00	0.14	0.07	0.07	0.07	0.09	0.55	0.55	0.03	0.49	0.49
Sat Flow, veh/h	3619	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	393	0	123	30	0	12	133	813	17	33	692	212
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	10.5	0.0	7.1	1.6	0.0	0.7	7.2	13.1	0.5	1.8	12.1	7.7
Cycle Q Clear(g_c), s	10.5	0.0	7.1	1.6	0.0	0.7	7.2	13.1	0.5	1.8	12.1	7.7
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	507	0	226	125	0	117	164	1989	887	54	1770	789
V/C Ratio(X)	0.77	0.00	0.55	0.24	0.00	0.10	0.81	0.41	0.02	0.61	0.39	0.27
Avail Cap(c_a), veh/h	977	0	435	181	0	170	232	1989	887	90	1770	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	0.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	41.5	0.0	40.0	44.1	0.0	43.7	44.6	13.0	10.2	47.9	16.1	15.0
Incr Delay (d2), s/veh	2.6	0.0	2.0	1.0	0.0	0.4	13.4	0.6	0.0	9.6	0.6	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	4.7	0.0	2.9	0.7	0.0	0.3	3.7	4.7	0.2	0.9	4.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.0	0.0	42.1	45.1	0.0	44.0	58.0	13.6	10.2	57.5	16.7	15.7
LnGrp LOS	D		D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		516			42			963			937	
Approach Delay, s/veh		43.6			44.8			19.7			17.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	61.1		19.8	13.7	55.0		11.5				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	3.8	15.1		12.5	9.2	14.1		3.6				
Green Ext Time (p_c), s	0.0	5.1		1.5	0.1	4.3		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	24.5	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	590	111	152	360	96	148	583	284	173	497	49
Future Volume (veh/h)	39	590	111	152	360	96	148	583	284	173	497	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	40	602	113	155	367	98	151	595	290	177	507	50
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	61	763	340	221	869	388	170	1523	679	170	1523	679
Arrive On Green	0.03	0.21	0.21	0.06	0.24	0.24	0.09	0.42	0.42	0.09	0.42	0.42
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	40	602	113	155	367	98	151	595	290	177	507	50
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.2	15.8	6.0	4.3	8.6	4.9	8.2	11.4	12.7	9.4	9.4	1.9
Cycle Q Clear(g_c), s	2.2	15.8	6.0	4.3	8.6	4.9	8.2	11.4	12.7	9.4	9.4	1.9
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	61	763	340	221	869	388	170	1523	679	170	1523	679
V/C Ratio(X)	0.66	0.79	0.33	0.70	0.42	0.25	0.89	0.39	0.43	1.04	0.33	0.07
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1523	679	170	1523	679
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	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	37.3	33.4	45.9	32.1	30.7	44.8	20.0	20.4	45.3	19.5	17.3
Incr Delay (d2), s/veh	11.5	2.4	0.6	6.7	0.3	0.3	35.9	0.7	1.7	80.1	0.6	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	1.1	6.9	2.3	2.0	3.6	1.9	5.2	4.5	4.7	7.8	3.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.3	39.7	34.0	52.7	32.4	31.0	80.7	20.7	22.1	125.4	20.0	17.5
LnGrp LOS	E	D	C	D	C	C	F	C	C	F	C	B
Approach Vol, veh/h		755			620			1036			734	
Approach Delay, s/veh		39.9			37.3			29.8			45.3	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	48.2	10.9	26.9	14.0	48.2	8.0	29.9
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	11.4	14.7	6.3	17.8	10.2	11.4	4.2	10.6
Green Ext Time (p_c), s	0.0	4.1	0.0	3.4	0.0	3.0	0.0	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	37.3
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	45	27	0	105	54	0
Future Vol, veh/h	45	27	0	105	54	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	49	29	0	114	59	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	78	0	178	64
Stage 1	-	-	-	-	64	-
Stage 2	-	-	-	-	114	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1533	-	817	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	916	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1533	-	817	1007
Mov Cap-2 Maneuver	-	-	-	-	817	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	916	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	9.75
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	817	-	-	1533	-
HCM Lane V/C Ratio	0.072	-	-	-	-
HCM Control Delay (s/veh)	9.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

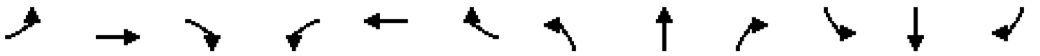
Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	4	0	91	14	0
Future Vol, veh/h	41	4	0	91	14	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	45	4	0	99	15	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	49	0	146	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1571	-	851	1028
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	930	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1571	-	851	1028
Mov Cap-2 Maneuver	-	-	-	-	851	-
Stage 1	-	-	-	-	981	-
Stage 2	-	-	-	-	930	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	9.3
HCM LOS			A

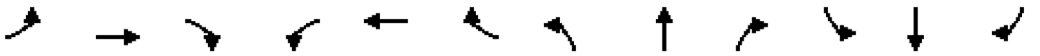
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	851	-	-	1571	-
HCM Lane V/C Ratio	0.018	-	-	-	-
HCM Control Delay (s/veh)	9.3	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	142	75	158	108	5	68	701	300	15	732	142
Future Volume (vph)	101	142	75	158	108	5	68	701	300	15	732	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	231	0	168	120	0	72	746	319	16	779	151
v/c Ratio	0.61	0.52		0.56	0.62		0.51	0.32	0.28	0.18	0.37	0.15
Control Delay (s/veh)	74.6	45.7		68.4	72.9		74.0	13.4	2.3	73.1	13.0	0.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.6	45.7		68.4	72.9		74.0	13.4	2.3	73.1	13.0	0.8
Queue Length 50th (ft)	95	76		77	106		64	132	0	15	121	0
Queue Length 95th (ft)	154	115		113	167		115	261	47	m42	147	7
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	190	762		395	432		198	2327	1154	89	2116	1019
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.30		0.43	0.28		0.36	0.32	0.28	0.18	0.37	0.15

Intersection Summary	
Area Type:	Other

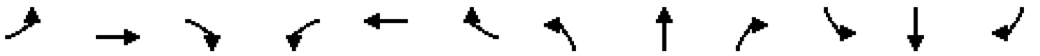
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	739	58	119	743	111	58	80	105	84	123	58
Future Volume (vph)	28	739	58	119	743	111	58	80	105	84	123	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	430		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	30	786	62	127	790	118	62	85	112	89	131	62
v/c Ratio	0.30	0.38	0.06	0.65	0.34	0.11	0.42	0.52	0.38	0.57	0.45	0.17
Control Delay (s/veh)	63.3	15.9	0.3	75.0	13.2	2.1	73.9	71.8	5.0	74.6	58.9	1.1
Queue Delay	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 Delay (s/veh)	63.3	15.9	0.3	75.0	13.2	2.1	73.9	71.8	5.0	74.6	58.9	1.1
Queue Length 50th (ft)	27	135	0	113	172	0	28	76	0	79	113	0
Queue Length 95th (ft)	m63	195	m0	176	265	25	54	130	10	134	168	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	430		175	165		165	165		165
Base Capacity (vph)	104	2043	985	275	2341	1092	150	409	480	237	589	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.38	0.06	0.46	0.34	0.11	0.41	0.21	0.23	0.38	0.22	0.10

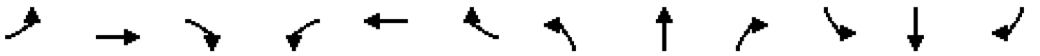
Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	53	211	23	17	6	222	180	79	24	191	33
Future Volume (vph)	18	53	211	23	17	6	222	180	79	24	191	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	54	215	23	23	0	227	184	81	24	195	34
v/c Ratio	0.08	0.14	0.43	0.10	0.06		0.52	0.10	0.09	0.11	0.27	0.07
Control Delay (s/veh)	23.7	21.4	7.4	24.8	18.4		22.4	9.4	0.7	24.8	20.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	23.7	21.4	7.4	24.8	18.4		22.4	9.4	0.7	24.8	20.7	0.3
Queue Length 50th (ft)	5	13	0	6	4		54	11	0	6	24	0
Queue Length 95th (ft)	23	49	53	29	25		142	50	5	30	67	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	333	1133	1050	263	1066		1226	3454	1552	263	1940	942
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.20	0.09	0.02		0.19	0.05	0.05	0.09	0.10	0.04

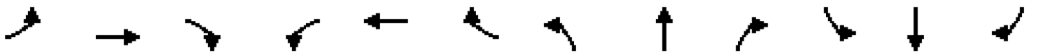
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	187	5	81	4	0	3	168	629	12	13	482	287
Future Volume (vph)	187	5	81	4	0	3	168	629	12	13	482	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	205		0	30		0	250		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			25			90			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	106	108	90	4	3	0	187	699	13	14	536	319
v/c Ratio	0.50	0.51	0.25	0.02	0.01		0.64	0.27	0.01	0.12	0.28	0.32
Control Delay (s/veh)	49.1	49.3	1.7	41.0	0.0		48.8	8.0	0.0	44.4	24.8	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.1	49.3	1.7	41.0	0.0		48.8	8.0	0.0	44.4	24.8	13.2
Queue Length 50th (ft)	68	69	0	2	0		112	55	0	9	126	52
Queue Length 95th (ft)	118	121	0	13	0		176	203	0	m25	m236	m112
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	205			30			250		165	105		175
Base Capacity (vph)	463	465	569	180	429		299	2546	1177	115	1883	995
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.16	0.02	0.01		0.63	0.27	0.01	0.12	0.28	0.32

Intersection Summary	
Area Type:	Other

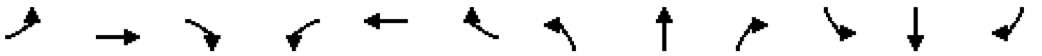
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	292	68	212	421	50	114	438	137	119	467	59
Future Volume (vph)	25	292	68	212	421	50	114	438	137	119	467	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	470		200	440		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	301	70	219	434	52	118	452	141	123	481	61
v/c Ratio	0.25	0.55	0.20	0.85	0.52	0.11	0.54	0.28	0.18	0.55	0.30	0.08
Control Delay (s/veh)	51.0	42.4	1.3	74.1	36.5	0.5	50.9	23.5	10.7	49.8	20.0	0.2
Queue Delay	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 Delay (s/veh)	51.0	42.4	1.3	74.1	36.5	0.5	50.9	23.5	10.7	49.8	20.0	0.2
Queue Length 50th (ft)	16	96	0	72	123	0	77	72	0	75	97	0
Queue Length 95th (ft)	43	128	3	#137	178	0	114	217	100	127	165	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	470		200	440		170
Base Capacity (vph)	106	1119	592	259	1173	614	224	1589	789	229	1601	789
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.27	0.12	0.85	0.37	0.08	0.53	0.28	0.18	0.54	0.30	0.08

Intersection Summary	
Area Type:	Other

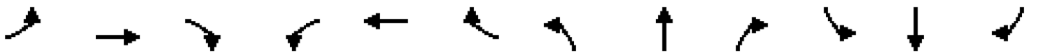
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	146	123	64	289	185	9	82	1060	171	9	687	138
Future Volume (vph)	146	123	64	289	185	9	82	1060	171	9	687	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	166	213	0	328	220	0	93	1205	194	10	781	157
v/c Ratio	0.68	0.35		0.70	0.74		0.60	0.59	0.20	0.12	0.47	0.19
Control Delay (s/veh)	66.9	33.4		61.9	66.3		73.4	22.6	6.0	71.8	20.0	2.5
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.9	33.4		61.9	66.3		73.4	22.6	6.0	71.8	20.0	2.5
Queue Length 50th (ft)	135	57		138	177		76	323	16	8	143	0
Queue Length 95th (ft)	199	86		177	244		#144	547	70	m26	171	12
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	254	816		603	526		159	2032	974	83	1653	820
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.26		0.54	0.42		0.58	0.59	0.20	0.12	0.47	0.19

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



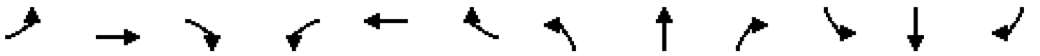
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1081	39	161	661	83	88	119	151	72	85	33
Future Volume (vph)	83	1081	39	161	661	83	88	119	151	72	85	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	430		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	1126	41	168	689	86	92	124	157	75	89	34
v/c Ratio	0.47	0.60	0.04	0.70	0.35	0.09	0.59	0.53	0.44	0.51	0.31	0.09
Control Delay (s/veh)	49.5	32.9	0.4	69.0	18.4	0.6	76.6	62.5	8.5	68.2	50.0	0.5
Queue Delay	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 Delay (s/veh)	49.5	32.9	0.4	69.0	18.4	0.6	76.6	62.5	8.5	68.2	50.0	0.5
Queue Length 50th (ft)	72	228	0	137	165	0	40	102	0	62	68	0
Queue Length 95th (ft)	m130	605	m0	205	252	5	#71	161	44	111	111	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	430		175	165		165	165		165
Base Capacity (vph)	183	1862	919	281	1975	946	156	439	513	227	606	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.60	0.04	0.60	0.35	0.09	0.59	0.28	0.31	0.33	0.15	0.06

Intersection Summary

Area Type: Other

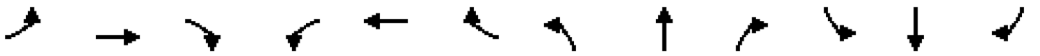
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	24	305	78	62	19	171	222	21	27	277	35
Future Volume (vph)	52	24	305	78	62	19	171	222	21	27	277	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	26	324	83	86	0	182	236	22	29	295	37
v/c Ratio	0.20	0.08	0.59	0.33	0.21		0.52	0.16	0.03	0.16	0.43	0.08
Control Delay (s/veh)	27.3	26.5	8.8	31.0	24.1		30.1	15.4	0.1	32.9	26.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.3	26.5	8.8	31.0	24.1		30.1	15.4	0.1	32.9	26.8	0.4
Queue Length 50th (ft)	18	8	0	29	24		62	26	0	10	53	0
Queue Length 95th (ft)	54	33	68	79	75		140	70	0	39	107	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	413	958	974	584	1150		735	2603	1206	192	1518	773
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.33	0.14	0.07		0.25	0.09	0.02	0.15	0.19	0.05

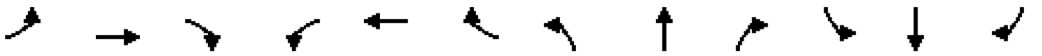
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	358	10	114	28	4	7	124	756	16	31	644	197
Future Volume (vph)	358	10	114	28	4	7	124	756	16	31	644	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	205		0	30		0	250		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			25			90			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	196	200	123	30	12	0	133	813	17	33	692	212
v/c Ratio	0.66	0.67	0.29	0.17	0.07		0.61	0.41	0.02	0.27	0.42	0.25
Control Delay (s/veh)	48.6	49.0	2.8	43.7	28.1		53.1	18.0	0.1	39.1	34.1	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.6	49.0	2.8	43.7	28.1		53.1	18.0	0.1	39.1	34.1	17.1
Queue Length 50th (ft)	124	127	0	18	2		81	188	0	22	232	39
Queue Length 95th (ft)	185	188	13	46	20		139	282	0	m44	302	120
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	205			30			250		165	105		175
Base Capacity (vph)	463	465	569	180	178		246	1977	944	124	1636	848
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.43	0.22	0.17	0.07		0.54	0.41	0.02	0.27	0.42	0.25

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	590	111	152	360	96	148	583	284	173	497	49
Future Volume (vph)	39	590	111	152	360	96	148	583	284	173	497	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	470		200	440		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	602	113	155	367	98	151	595	290	177	507	50
v/c Ratio	0.38	0.72	0.24	0.60	0.35	0.18	0.64	0.50	0.43	0.63	0.40	0.08
Control Delay (s/veh)	56.2	40.5	4.7	55.3	29.6	2.8	46.3	38.6	22.9	52.1	26.4	0.2
Queue Delay	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 Delay (s/veh)	56.2	40.5	4.7	55.3	29.6	2.8	46.3	38.6	22.9	52.1	26.4	0.2
Queue Length 50th (ft)	25	187	0	50	104	0	76	217	109	104	130	0
Queue Length 95th (ft)	59	227	30	83	134	19	#188	274	199	#235	184	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	470		200	440		170
Base Capacity (vph)	106	1119	592	259	1174	615	237	1194	675	281	1281	658
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.54	0.19	0.60	0.31	0.16	0.64	0.50	0.43	0.63	0.40	0.08

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

3. Opening Year (2027) with Cumulative Projects Without Project Conditions

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 1
NORTH/SOUTH: Bake Parkway
EAST/WEST: Commercentre Drive

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
			Opening Year (2027) with Cumulative Projects without Project				
NBL	1.0		1,700	70	84	0.04 *	0.05
NBT	2.0		3,400	743	1,136	0.22	0.33 *
NBR	1.0	D	1,700	315	179	0.00	0.00
SBL	1.0		1,700	15	9	0.01	0.01 *
SBT	2.0		3,400	792	741	0.23 *	0.22
SBR	1.0	D	1,700	147	146	0.00	0.00
EBL							
EBT	3		5,100	331	344	0.06 *	0.07 *
EBR							
WBL							
WBT	3		5,100	281	504	0.06 *	0.10 *
WBR							
N/S Critical Movements						0.27	0.34
E/W Critical Movements						0.12	0.17
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.44	0.56
Level of Service (LOS)						A	A

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **2**
NORTH/SOUTH: **Dimension Drive**
EAST/WEST: **Bake Parkway**

	Opening Year (2027) with Cumulative Projects without Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	2.0		3,400	62	99	0.02 *	0.03
NBT	1.0		1,700	82	124	0.05	0.07 *
NBR	1.0	U	1,700	110	161	0.00	0.00
SBL	1.0		1,700	87	75	0.05	0.04 *
SBT	1.0		1,700	128	88	0.08 *	0.05
SBR	1.0	U	1,700	60	34	0.00	0.00
EBL	1.0		1,700	29	86	0.02	0.05
EBT	2.0		3,400	780	1,159	0.23 *	0.34 *
EBR	1.0	D	1,700	64	41	0.00	0.00
WBL	1.0		1,700	132	171	0.08 *	0.10 *
WBT	2.0		3,400	804	709	0.24	0.21
WBR	1.0	D	1,700	115	87	0.00	0.00
N/S Critical Movements						0.10	0.11
E/W Critical Movements						0.31	0.44
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.46	0.60
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 3
NORTH/SOUTH: Dimension Drive
EAST/WEST: Commercentre Drive/Enterprise Way

	Opening Year (2027) with Cumulative Projects without Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	229	176	0.13 *	0.10 *
NBT	2.0		3,400	186	231	0.05	0.07
NBR	1.0	D	1,700	96	27	0.00	0.00
SBL	1.0		1,700	25	28	0.01	0.02
SBT	2.0		3,400	199	286	0.06 *	0.08 *
SBR	1.0	D	1,700	36	38	0.00	0.00
EBL	1.0		1,700	19	56	0.01	0.03 *
EBT	1.0		1,700	61	27	0.04 *	0.02
EBR	1.0	U	1,700	217	314	0.00	0.07 *
WBL	1.0		1,700	29	95	0.02 *	0.06
WBT	1.0		1,700	20	71	0.02	0.05 *
WBR	0.0		0	6	19	0.00	0.00
N/S Critical Movements						0.19	0.18
E/W Critical Movements						0.06	0.08
Right Turn Critical Movement						0.00	0.07
Clearance Interval						0.05	0.05
ICU						0.30	0.38
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **4**
NORTH/SOUTH: **Lake Forest Drive**
EAST/WEST: **Dimension Drive**

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
	Opening Year (2027) with Cumulative Projects without Project						
NBL	1.0		1,700	178	130	0.10 *	0.08 *
NBT	2.0		3,400	655	792	0.19	0.23
NBR	1.0	D	1,700	12	16	0.00	0.00
SBL	1.0		1,700	13	32	0.01	0.02
SBT	2.0		3,400	508	673	0.15 *	0.20 *
SBR	1.0	D	1,700	307	208	0.03 *	0.00
EBL							
EBT	3		5,100	286	512	0.06 *	0.10 *
EBR							
WBL							
WBT	2		3,400	7	40	0.00 *	0.01 *
WBR							
N/S Critical Movements						0.25	0.28
E/W Critical Movements						0.06	0.11
Right Turn Critical Movement						0.03	0.00
Clearance Interval						0.05	0.05
ICU						0.39	0.44
Level of Service (LOS)						A	A

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 5
NORTH/SOUTH: Lake Forest Drive
EAST/WEST: Rancho Parkway

	Opening Year (2027) with Cumulative Projects without Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1.0		1,700	120	160	0.07 *	0.09
NBT	2.0		3,400	458	612	0.13	0.18 *
NBR	1.0	D	1,700	142	298	0.00	0.00
SBL	1.0		1,700	123	178	0.07	0.10 *
SBT	2.0		3,400	491	520	0.14 *	0.15
SBR	1.0	D	1,700	64	58	0.00	0.00
EBL	1.0		1,700	33	45	0.02	0.03
EBT	2.0		3,400	316	618	0.09 *	0.18 *
EBR	1.0	D	1,700	77	119	0.00	0.00
WBL	2.0		3,400	226	158	0.07 *	0.05 *
WBT	2.0		3,400	440	388	0.13	0.11
WBR	1.0	U	1,700	52	99	0.00	0.00
N/S Critical Movements						0.21	0.28
E/W Critical Movements						0.16	0.23
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.42	0.56
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

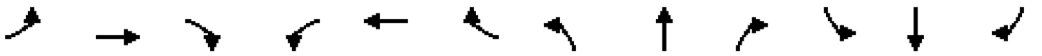
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	146	77	165	111	5	70	743	315	15	792	147
Future Volume (veh/h)	108	146	77	165	111	5	70	743	315	15	792	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	155	82	208	74	5	74	790	335	16	843	156
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	0	0	0
Cap, veh/h	168	215	108	281	136	9	94	2359	1052	30	2231	995
Arrive On Green	0.09	0.09	0.09	0.08	0.08	0.08	0.05	0.65	0.65	0.02	0.62	0.62
Sat Flow, veh/h	1810	2325	1169	3619	1760	119	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	115	119	118	208	0	79	74	790	335	16	843	156
Grp Sat Flow(s),veh/h/ln	1810	1805	1689	1810	0	1879	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	8.6	8.9	9.6	7.9	0.0	5.7	5.7	13.6	12.7	1.2	16.3	5.7
Cycle Q Clear(g_c), s	8.6	8.9	9.6	7.9	0.0	5.7	5.7	13.6	12.7	1.2	16.3	5.7
Prop In Lane	1.00		0.69	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	168	167	156	281	0	146	94	2359	1052	30	2231	995
V/C Ratio(X)	0.69	0.71	0.76	0.74	0.00	0.54	0.79	0.33	0.32	0.53	0.38	0.16
Avail Cap(c_a), veh/h	376	375	351	750	0	389	172	2359	1052	72	2231	995
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	0.90	0.00	0.90	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	61.5	61.7	62.0	63.2	0.0	62.2	65.6	10.8	10.6	68.3	13.3	11.3
Incr Delay (d2), s/veh	4.9	5.4	7.3	3.5	0.0	2.8	13.4	0.4	0.8	13.2	0.5	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	4.1	4.3	4.4	3.7	0.0	2.8	2.9	4.9	4.2	0.7	6.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.5	67.1	69.3	66.7	0.0	65.0	79.0	11.2	11.4	81.5	13.8	11.6
LnGrp LOS	E	E	E	E		E	E	B	B	F	B	B
Approach Vol, veh/h		352			287			1199			1015	
Approach Delay, s/veh		67.6			66.2			15.4			14.5	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	97.7		18.8	11.9	92.7		16.7				
Change Period (Y+Rc), s	4.6	6.2		5.8	4.6	6.2		5.8				
Max Green Setting (Gmax), s	5.6	53.9		29.1	13.3	46.2		29.0				
Max Q Clear Time (g_c+I1), s	3.2	15.6		11.6	7.7	18.3		9.9				
Green Ext Time (p_c), s	0.0	6.7		1.4	0.1	6.0		1.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	26.7
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



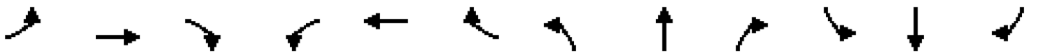
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	780	64	132	804	115	62	82	110	87	128	60
Future Volume (veh/h)	29	780	64	132	804	115	62	82	110	87	128	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	830	68	140	855	122	66	87	117	93	136	64
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	0	0	0
Cap, veh/h	45	2176	970	166	2416	1077	116	172	145	116	231	196
Arrive On Green	0.03	0.60	0.60	0.09	0.67	0.67	0.03	0.09	0.09	0.06	0.12	0.12
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	31	830	68	140	855	122	66	87	117	93	136	64
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	2.4	16.6	2.5	10.7	14.4	3.8	2.6	6.1	10.0	7.1	9.5	5.1
Cycle Q Clear(g_c), s	2.4	16.6	2.5	10.7	14.4	3.8	2.6	6.1	10.0	7.1	9.5	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	45	2176	970	166	2416	1077	116	172	145	116	231	196
V/C Ratio(X)	0.68	0.38	0.07	0.85	0.35	0.11	0.57	0.51	0.80	0.80	0.59	0.33
Avail Cap(c_a), veh/h	88	2176	970	277	2416	1077	150	410	347	238	589	499
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)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	14.4	11.5	62.6	10.0	8.3	66.7	60.7	62.5	64.6	58.2	56.3
Incr Delay (d2), s/veh	15.6	0.5	0.1	11.5	0.4	0.2	4.4	2.3	9.9	12.0	2.4	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	1.3	6.3	0.9	5.3	5.1	1.3	1.2	3.0	4.4	3.6	4.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.3	14.8	11.7	74.2	10.4	8.5	71.1	63.0	72.3	76.6	60.6	57.2
LnGrp LOS	F	B	B	E	B	A	E	E	E	E	E	E
Approach Vol, veh/h		929			1117			270			293	
Approach Delay, s/veh		16.9			18.2			69.0			64.9	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.4	90.6	9.2	22.8	8.1	99.9	13.6	18.4
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	21.4	48.8	6.0	* 43	6.8	63.4	18.4	30.2
Max Q Clear Time (g_c+I1), s	12.7	18.6	4.6	11.5	4.4	16.4	9.1	12.0
Green Ext Time (p_c), s	0.2	5.7	0.0	0.9	0.0	6.4	0.1	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	28.2
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



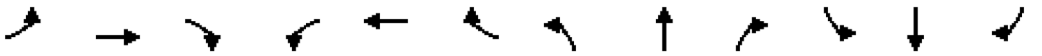
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	61	217	29	20	6	229	186	96	25	199	36
Future Volume (veh/h)	19	61	217	29	20	6	229	186	96	25	199	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	19	62	221	30	20	6	234	190	98	26	203	37
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	472	434	367	392	320	96	300	1321	589	56	834	372
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.17	0.37	0.37	0.03	0.23	0.23
Sat Flow, veh/h	1407	1900	1610	1114	1403	421	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	19	62	221	30	0	26	234	190	98	26	203	37
Grp Sat Flow(s),veh/h/ln	1407	1900	1610	1114	0	1824	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.5	1.1	5.3	1.0	0.0	0.5	5.4	1.5	1.8	0.6	2.0	0.8
Cycle Q Clear(g_c), s	0.9	1.1	5.3	2.1	0.0	0.5	5.4	1.5	1.8	0.6	2.0	0.8
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	472	434	367	392	0	416	300	1321	589	56	834	372
V/C Ratio(X)	0.04	0.14	0.60	0.08	0.00	0.06	0.78	0.14	0.17	0.46	0.24	0.10
Avail Cap(c_a), veh/h	1095	1275	1080	916	0	1274	519	2472	1103	218	1871	834
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	13.3	14.9	14.1	0.0	13.1	17.3	9.2	9.3	20.6	13.5	13.1
Incr Delay (d2), s/veh	0.0	0.1	1.6	0.1	0.0	0.1	4.4	0.0	0.1	5.8	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	0.1	0.4	1.8	0.2	0.0	0.2	2.1	0.4	0.4	0.3	0.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.5	13.5	16.5	14.2	0.0	13.1	21.6	9.2	9.4	26.4	13.7	13.2
LnGrp LOS	B	B	B	B		B	C	A	A	C	B	B
Approach Vol, veh/h		302			56			522			266	
Approach Delay, s/veh		15.7			13.7			14.8			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	21.6		15.7	11.8	15.8		15.7				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		* 5.8				
Max Green Setting (Gmax), s	5.2	29.6		29.0	12.4	22.4		* 30				
Max Q Clear Time (g_c+I1), s	2.6	3.8		7.3	7.4	4.0		4.1				
Green Ext Time (p_c), s	0.0	1.4		1.0	0.3	1.1		0.2				

Intersection Summary		
HCM 7th Control Delay, s/veh		15.0
HCM 7th LOS		B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



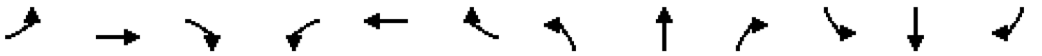
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	5	86	4	0	3	178	655	12	13	508	307
Future Volume (veh/h)	195	5	86	4	0	3	178	655	12	13	508	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	216	0	93	4	0	3	193	712	13	14	552	334
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	0	161	32	0	28	225	2369	1057	29	1979	883
Arrive On Green	0.10	0.00	0.10	0.02	0.00	0.02	0.12	0.66	0.66	0.02	0.55	0.55
Sat Flow, veh/h	3619	0	1610	1810	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	216	0	93	4	0	3	193	712	13	14	552	334
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	5.7	0.0	5.5	0.2	0.0	0.2	10.5	8.4	0.3	0.8	8.2	11.8
Cycle Q Clear(g_c), s	5.7	0.0	5.5	0.2	0.0	0.2	10.5	8.4	0.3	0.8	8.2	11.8
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	362	0	161	32	0	28	225	2369	1057	29	1979	883
V/C Ratio(X)	0.60	0.00	0.58	0.13	0.00	0.11	0.86	0.30	0.01	0.48	0.28	0.38
Avail Cap(c_a), veh/h	977	0	435	181	0	161	232	2369	1057	90	1979	883
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	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	43.1	0.0	43.0	48.4	0.0	48.3	42.9	7.4	6.0	48.8	12.0	12.9
Incr Delay (d2), s/veh	1.6	0.0	3.2	1.7	0.0	1.6	25.7	0.3	0.0	10.3	0.3	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	2.5	0.0	2.3	0.1	0.0	0.1	6.0	2.7	0.1	0.4	2.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.7	0.0	46.2	50.1	0.0	49.9	68.6	7.7	6.0	59.1	12.4	14.0
LnGrp LOS	D		D	D		D	E	A	A	E	B	B
Approach Vol, veh/h		309			7			918			900	
Approach Delay, s/veh		45.1			50.0			20.5			13.7	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	71.6		15.8	17.0	60.8		6.4				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	2.8	10.4		7.7	12.5	13.8		2.2				
Green Ext Time (p_c), s	0.0	4.6		0.9	0.0	3.9		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	21.3	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	316	77	226	440	52	120	458	142	123	491	64
Future Volume (veh/h)	33	316	77	226	440	52	120	458	142	123	491	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	326	79	233	454	54	124	472	146	127	506	66
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	458	204	260	615	274	153	1814	809	156	1821	812
Arrive On Green	0.03	0.13	0.13	0.07	0.17	0.17	0.08	0.50	0.50	0.09	0.50	0.50
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	34	326	79	233	454	54	124	472	146	127	506	66
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.9	8.7	4.5	6.6	11.9	2.9	6.7	7.5	5.0	6.9	8.1	2.1
Cycle Q Clear(g_c), s	1.9	8.7	4.5	6.6	11.9	2.9	6.7	7.5	5.0	6.9	8.1	2.1
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	55	458	204	260	615	274	153	1814	809	156	1821	812
V/C Ratio(X)	0.61	0.71	0.39	0.90	0.74	0.20	0.81	0.26	0.18	0.81	0.28	0.08
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1814	809	170	1821	812
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	41.9	40.1	45.9	39.4	35.6	45.0	14.2	13.6	44.9	14.3	12.8
Incr Delay (d2), s/veh	10.6	2.1	1.2	30.5	1.8	0.3	21.9	0.3	0.5	23.4	0.4	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	1.0	3.8	1.8	3.9	5.2	1.1	3.8	2.8	1.7	4.0	3.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.5	43.9	41.3	76.4	41.1	36.0	66.8	14.6	14.1	68.3	14.7	13.0
LnGrp LOS	E	D	D	E	D	D	E	B	B	E	B	B
Approach Vol, veh/h		439			741			742			699	
Approach Delay, s/veh		44.6			51.8			23.2			24.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	56.3	12.0	18.5	13.1	56.4	7.7	22.8
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	8.9	9.5	8.6	10.7	8.7	10.1	3.9	13.9
Green Ext Time (p_c), s	0.0	3.1	0.0	2.0	0.0	3.1	0.0	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	35.2
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	158	0	0	49	0	0
Future Vol, veh/h	158	0	0	49	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	172	0	0	53	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	172	0	225	172
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1418	-	768	877
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	768	877
Mov Cap-2 Maneuver	-	-	-	-	768	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	974	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1418	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

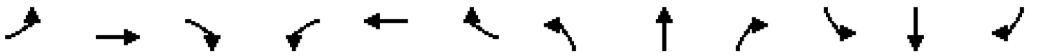
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	158	0	0	49	0	0
Future Vol, veh/h	158	0	0	49	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	172	0	0	53	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	172	0	225	172
Stage 1	-	-	-	-	172	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1418	-	768	877
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1418	-	768	877
Mov Cap-2 Maneuver	-	-	-	-	768	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	974	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1418	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



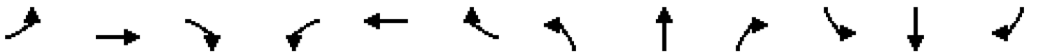
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	127	66	304	191	9	84	1136	179	9	741	146
Future Volume (veh/h)	151	127	66	304	191	9	84	1136	179	9	741	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	164	138	72	377	142	10	91	1235	195	10	805	159
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	206	267	132	471	228	16	114	2065	921	21	1880	839
Arrive On Green	0.11	0.11	0.11	0.13	0.13	0.13	0.06	0.57	0.57	0.01	0.52	0.52
Sat Flow, veh/h	1810	2340	1157	3619	1754	124	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	164	105	105	377	0	152	91	1235	195	10	805	159
Grp Sat Flow(s),veh/h/ln	1810	1805	1692	1810	0	1878	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.5	7.1	7.6	13.1	0.0	10.0	6.5	28.9	7.7	0.7	17.9	6.8
Cycle Q Clear(g_c), s	11.5	7.1	7.6	13.1	0.0	10.0	6.5	28.9	7.7	0.7	17.9	6.8
Prop In Lane	1.00		0.68	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	206	193	471	0	245	114	2065	921	21	1880	839
V/C Ratio(X)	0.80	0.51	0.55	0.80	0.00	0.62	0.80	0.60	0.21	0.47	0.43	0.19
Avail Cap(c_a), veh/h	404	403	377	807	0	419	145	2065	921	75	1880	839
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	0.94	0.00	0.94	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	56.1	54.2	54.4	54.9	0.0	53.5	60.1	18.1	13.6	63.8	19.2	16.6
Incr Delay (d2), s/veh	6.8	1.9	2.4	3.0	0.0	2.4	21.5	1.3	0.5	14.4	0.7	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	5.5	3.3	3.3	6.1	0.0	4.8	3.5	11.1	2.7	0.4	7.1	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	63.0	56.1	56.8	57.9	0.0	55.9	81.6	19.4	14.1	78.3	19.9	17.0
LnGrp LOS	E	E	E	E		E	F	B	B	E	B	B
Approach Vol, veh/h		374			529			1521			974	
Approach Delay, s/veh		59.3			57.3			22.4			20.0	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	80.5		20.6	12.8	73.9		22.7				
Change Period (Y+Rc), s	4.6	6.2		5.8	4.6	6.2		5.8				
Max Green Setting (Gmax), s	5.4	44.2		29.0	10.4	39.2		29.0				
Max Q Clear Time (g_c+I1), s	2.7	30.9		13.5	8.5	19.9		15.1				
Green Ext Time (p_c), s	0.0	6.9		1.3	0.0	5.2		1.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	31.2
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



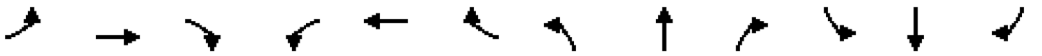
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1159	41	171	709	87	99	124	161	75	88	34
Future Volume (veh/h)	86	1159	41	171	709	87	99	124	161	75	88	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1207	43	178	739	91	103	129	168	78	92	35
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	1963	875	205	2188	976	152	237	201	100	260	220
Arrive On Green	0.05	0.54	0.54	0.11	0.61	0.61	0.04	0.12	0.12	0.06	0.14	0.14
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	90	1207	43	178	739	91	103	129	168	78	92	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	6.5	29.8	1.6	12.6	13.2	3.1	3.8	8.3	13.3	5.5	5.7	2.5
Cycle Q Clear(g_c), s	6.5	29.8	1.6	12.6	13.2	3.1	3.8	8.3	13.3	5.5	5.7	2.5
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	92	1963	875	205	2188	976	152	237	201	100	260	220
V/C Ratio(X)	0.98	0.62	0.05	0.87	0.34	0.09	0.68	0.54	0.84	0.78	0.35	0.16
Avail Cap(c_a), veh/h	92	1963	875	270	2188	976	157	440	373	228	607	514
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)	0.74	0.74	0.74	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	20.3	13.9	56.7	12.7	10.7	61.3	53.4	55.6	60.6	50.9	49.5
Incr Delay (d2), s/veh	74.2	1.1	0.1	20.1	0.4	0.2	10.7	1.9	8.7	12.4	0.8	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	4.8	11.6	0.6	6.7	4.9	1.1	1.9	4.0	5.7	2.9	2.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.9	21.4	14.0	76.8	13.1	10.9	72.0	55.3	64.3	73.1	51.7	49.9
LnGrp LOS	F	C	B	E	B	B	E	E	E	E	D	D
Approach Vol, veh/h		1340			1008			400			205	
Approach Delay, s/veh		28.9			24.1			63.4			59.5	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.3	76.9	10.2	23.6	11.2	85.0	11.8	22.0
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	19.4	42.9	5.8	* 42	6.6	55.7	16.4	30.1
Max Q Clear Time (g_c+I1), s	14.6	31.8	5.8	7.7	8.5	15.2	7.5	15.3
Green Ext Time (p_c), s	0.2	5.6	0.0	0.6	0.0	5.2	0.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	34.1
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



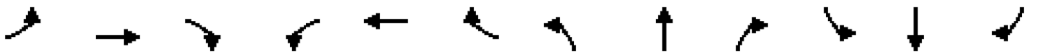
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	27	314	95	71	19	176	231	27	28	286	38
Future Volume (veh/h)	56	27	314	95	71	19	176	231	27	28	286	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	29	334	101	76	20	187	246	29	30	304	40
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	0	0	0
Cap, veh/h	464	509	431	429	388	102	245	1185	528	63	823	367
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.14	0.33	0.33	0.03	0.23	0.23
Sat Flow, veh/h	1320	1900	1610	1035	1450	382	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	60	29	334	101	0	96	187	246	29	30	304	40
Grp Sat Flow(s),veh/h/ln	1320	1900	1610	1035	0	1831	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.6	0.5	8.4	3.5	0.0	1.8	4.4	2.2	0.5	0.7	3.1	0.9
Cycle Q Clear(g_c), s	3.4	0.5	8.4	4.0	0.0	1.8	4.4	2.2	0.5	0.7	3.1	0.9
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	464	509	431	429	0	490	245	1185	528	63	823	367
V/C Ratio(X)	0.13	0.06	0.77	0.24	0.00	0.20	0.76	0.21	0.05	0.48	0.37	0.11
Avail Cap(c_a), veh/h	983	1256	1064	865	0	1261	511	2436	1086	214	1843	822
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	11.9	14.8	13.4	0.0	12.4	18.3	10.6	10.1	20.8	14.3	13.4
Incr Delay (d2), s/veh	0.1	0.0	3.0	0.3	0.0	0.2	4.9	0.1	0.0	5.4	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	0.4	0.2	3.0	0.7	0.0	0.7	1.8	0.6	0.1	0.3	1.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.8	12.0	17.9	13.7	0.0	12.6	23.2	10.7	10.1	26.2	14.6	13.5
LnGrp LOS	B	B	B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		423			197			462			374	
Approach Delay, s/veh		16.9			13.2			15.7			15.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	20.2		17.5	10.5	15.8		17.5				
Change Period (Y+Rc), s	4.6	5.8		5.8	4.6	5.8		* 5.8				
Max Green Setting (Gmax), s	5.2	29.6		29.0	12.4	22.4		* 30				
Max Q Clear Time (g_c+I1), s	2.7	4.2		10.4	6.4	5.1		6.0				
Green Ext Time (p_c), s	0.0	1.5		1.3	0.2	1.7		1.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		15.6	
HCM 7th LOS		B	

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



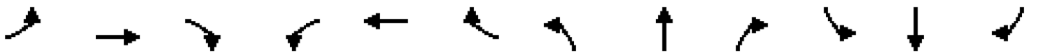
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	10	123	29	4	7	130	792	16	32	673	208
Future Volume (veh/h)	379	10	123	29	4	7	130	792	16	32	673	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	416	0	132	31	4	8	140	852	17	34	724	224
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	532	0	237	126	39	79	172	1959	874	55	1727	770
Arrive On Green	0.15	0.00	0.15	0.07	0.07	0.07	0.09	0.54	0.54	0.03	0.48	0.48
Sat Flow, veh/h	3619	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	416	0	132	31	0	12	140	852	17	34	724	224
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.1	0.0	7.6	1.6	0.0	0.7	7.6	14.1	0.5	1.9	13.1	8.4
Cycle Q Clear(g_c), s	11.1	0.0	7.6	1.6	0.0	0.7	7.6	14.1	0.5	1.9	13.1	8.4
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	532	0	237	126	0	118	172	1959	874	55	1727	770
V/C Ratio(X)	0.78	0.00	0.56	0.25	0.00	0.10	0.82	0.43	0.02	0.61	0.42	0.29
Avail Cap(c_a), veh/h	977	0	435	181	0	170	232	1959	874	90	1727	770
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	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	41.1	0.0	39.6	44.0	0.0	43.6	44.4	13.7	10.6	47.9	17.0	15.8
Incr Delay (d2), s/veh	2.6	0.0	2.0	1.0	0.0	0.4	15.0	0.7	0.0	9.6	0.7	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	4.9	0.0	3.1	0.8	0.0	0.3	4.0	5.2	0.2	0.9	5.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.7	0.0	41.7	45.0	0.0	44.0	59.4	14.4	10.6	57.5	17.7	16.7
LnGrp LOS	D		D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		548			43			1009			982	
Approach Delay, s/veh		43.2			44.7			20.6			18.8	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	60.3		20.5	14.1	53.8		11.6				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	3.9	16.1		13.1	9.6	15.1		3.6				
Green Ext Time (p_c), s	0.0	5.3		1.6	0.1	4.4		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	25.1
HCM 7th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	618	119	158	388	99	160	612	298	178	520	58
Future Volume (veh/h)	45	618	119	158	388	99	160	612	298	178	520	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	631	121	161	396	101	163	624	304	182	531	59
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	793	354	227	896	400	170	1486	663	170	1486	663
Arrive On Green	0.04	0.22	0.22	0.06	0.25	0.25	0.09	0.41	0.41	0.09	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	46	631	121	161	396	101	163	624	304	182	531	59
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.5	16.5	6.3	4.5	9.3	5.0	9.0	12.3	13.7	9.4	10.1	2.2
Cycle Q Clear(g_c), s	2.5	16.5	6.3	4.5	9.3	5.0	9.0	12.3	13.7	9.4	10.1	2.2
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	65	793	354	227	896	400	170	1486	663	170	1486	663
V/C Ratio(X)	0.70	0.80	0.34	0.71	0.44	0.25	0.96	0.42	0.46	1.07	0.36	0.09
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1486	663	170	1486	663
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	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	36.9	32.9	45.8	31.7	30.1	45.1	20.9	21.3	45.3	20.3	18.0
Incr Delay (d2), s/veh	13.0	2.7	0.6	7.4	0.3	0.3	52.2	0.8	2.0	88.8	0.7	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	1.3	7.2	2.4	2.1	3.9	1.9	6.3	4.9	5.2	8.2	4.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	39.6	33.5	53.3	32.1	30.5	97.4	21.7	23.3	134.1	21.0	18.2
LnGrp LOS	E	D	C	D	C	C	F	C	C	F	C	B
Approach Vol, veh/h		798			658			1091			772	
Approach Delay, s/veh		39.9			37.0			33.4			47.4	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	47.2	11.1	27.8	14.0	47.2	8.2	30.6
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	11.4	15.7	6.5	18.5	11.0	12.1	4.5	11.3
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	3.1	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	39.0
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	0	0	164	0	0
Future Vol, veh/h	73	0	0	164	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	79	0	0	178	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	258	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1532	-	736	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1532	-	736	987
Mov Cap-2 Maneuver	-	-	-	-	736	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1532	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

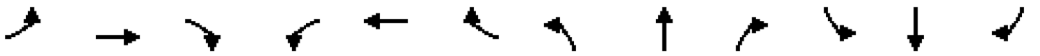
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	0	0	164	0	0
Future Vol, veh/h	73	0	0	164	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	79	0	0	178	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	79	0	258	79
Stage 1	-	-	-	-	79	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1532	-	736	987
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1532	-	736	987
Mov Cap-2 Maneuver	-	-	-	-	736	-
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

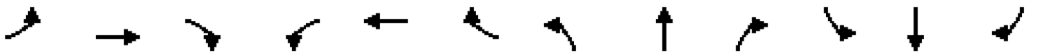
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1532	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	146	77	165	111	5	70	743	315	15	792	147
Future Volume (vph)	108	146	77	165	111	5	70	743	315	15	792	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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%	0%	0%	0%
Shared Lane Traffic (%)				44%								
Lane Group Flow (vph)	115	237	0	99	200	0	74	790	335	16	843	156
v/c Ratio	0.62	0.58		0.60	0.58		0.52	0.35	0.30	0.18	0.41	0.16
Control Delay (s/veh)	74.0	49.2		74.3	65.8		74.1	14.6	4.3	65.5	15.4	2.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.0	49.2		74.3	65.8		74.1	14.6	4.3	65.5	15.4	2.8
Queue Length 50th (ft)	102	81		96	96		66	147	19	14	158	2
Queue Length 95th (ft)	163	122		159	135		116	289	89	m41	190	22
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	375	760		340	701		176	2281	1119	88	2066	983
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.31		0.29	0.29		0.42	0.35	0.30	0.18	0.41	0.16

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	780	64	132	804	115	62	82	110	87	128	60
Future Volume (vph)	29	780	64	132	804	115	62	82	110	87	128	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	290		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			80			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	830	68	140	855	122	66	87	117	93	136	64
v/c Ratio	0.31	0.41	0.07	0.68	0.37	0.11	0.44	0.52	0.40	0.58	0.46	0.18
Control Delay (s/veh)	66.6	15.8	0.1	75.0	13.8	2.3	74.8	71.9	5.8	74.7	58.7	1.1
Queue Delay	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 Delay (s/veh)	66.6	15.8	0.1	75.0	13.8	2.3	74.8	71.9	5.8	74.7	58.7	1.1
Queue Length 50th (ft)	0	168	0	124	193	0	30	77	0	83	117	0
Queue Length 95th (ft)	61	197	0	190	295	27	57	132	15	138	173	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	290		175	165		165	165		165
Base Capacity (vph)	105	2007	971	276	2329	1088	150	409	480	237	589	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.41	0.07	0.51	0.37	0.11	0.44	0.21	0.24	0.39	0.23	0.11

Intersection Summary	
Area Type:	Other

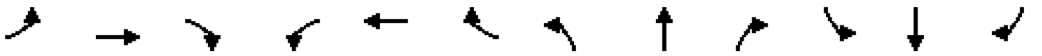
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	61	217	29	20	6	229	186	96	25	199	36
Future Volume (vph)	19	61	217	29	20	6	229	186	96	25	199	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	62	221	30	26	0	234	190	98	26	203	37
v/c Ratio	0.06	0.16	0.43	0.09	0.06		0.54	0.10	0.11	0.13	0.27	0.08
Control Delay (s/veh)	16.3	17.0	6.2	15.7	13.2		20.9	7.4	3.0	21.4	17.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.3	17.0	6.2	15.7	13.2		20.9	7.4	3.0	21.4	17.2	0.3
Queue Length 50th (ft)	4	15	0	7	4		56	11	0	7	25	0
Queue Length 95th (ft)	18	39	42	23	19		110	35	21	24	48	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	854	1154	1067	861	1162		468	2238	1040	196	1694	844
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.05	0.21	0.03	0.02		0.50	0.08	0.09	0.13	0.12	0.04

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	5	86	4	0	3	178	655	12	13	508	307
Future Volume (vph)	195	5	86	4	0	3	178	655	12	13	508	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	30		0	140		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	70			25			85			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	108	109	93	4	3	0	193	712	13	14	552	334
v/c Ratio	0.51	0.51	0.26	0.02	0.01		0.64	0.28	0.01	0.12	0.30	0.34
Control Delay (s/veh)	49.3	49.3	1.7	41.0	0.0		48.3	8.0	0.0	43.8	25.3	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.3	49.3	1.7	41.0	0.0		48.3	8.0	0.0	43.8	25.3	13.8
Queue Length 50th (ft)	69	70	0	2	0		115	56	0	9	131	70
Queue Length 95th (ft)	121	122	0	13	0		180	208	0	m23	m241	m174
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	155			30			140		165	105		175
Base Capacity (vph)	463	464	569	180	425		306	2544	1177	115	1863	995
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.23	0.16	0.02	0.01		0.63	0.28	0.01	0.12	0.30	0.34

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

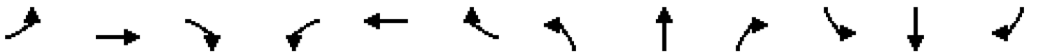


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	316	77	226	440	52	120	458	142	123	491	64
Future Volume (vph)	33	316	77	226	440	52	120	458	142	123	491	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	330		175	330		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			65			80		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	326	79	233	454	54	124	472	146	127	506	66
v/c Ratio	0.32	0.56	0.21	0.90	0.58	0.12	0.55	0.31	0.19	0.55	0.33	0.09
Control Delay (s/veh)	53.8	41.7	2.4	82.2	38.4	0.5	49.8	24.5	11.0	49.5	21.3	0.2
Queue Delay	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 Delay (s/veh)	53.8	41.7	2.4	82.2	38.4	0.5	49.8	24.5	11.0	49.5	21.3	0.2
Queue Length 50th (ft)	21	101	0	77	144	0	79	99	0	77	111	0
Queue Length 95th (ft)	53	136	9	#148	185	0	116	225	104	130	177	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	330		175	330		170
Base Capacity (vph)	106	1119	592	259	1173	614	230	1539	772	234	1548	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.29	0.13	0.90	0.39	0.09	0.54	0.31	0.19	0.54	0.33	0.09

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	127	66	304	191	9	84	1136	179	9	741	146
Future Volume (vph)	151	127	66	304	191	9	84	1136	179	9	741	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)				46%								
Lane Group Flow (vph)	164	210	0	178	370	0	91	1235	195	10	805	159
v/c Ratio	0.69	0.41		0.69	0.69		0.55	0.62	0.21	0.11	0.50	0.20
Control Delay (s/veh)	67.8	36.5		65.0	58.1		68.0	24.1	9.3	63.1	26.7	7.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.8	36.5		65.0	58.1		68.0	24.1	9.3	63.1	26.7	7.7
Queue Length 50th (ft)	134	58		159	164		75	332	30	8	167	0
Queue Length 95th (ft)	200	93		230	205		129	#661	105	m24	281	68
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	402	815		366	754		175	1999	944	87	1606	801
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.26		0.49	0.49		0.52	0.62	0.21	0.11	0.50	0.20

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1159	41	171	709	87	99	124	161	75	88	34
Future Volume (vph)	86	1159	41	171	709	87	99	124	161	75	88	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	290		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			80			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	1207	43	178	739	91	103	129	168	78	92	35
v/c Ratio	0.47	0.66	0.05	0.71	0.38	0.10	0.66	0.54	0.47	0.51	0.32	0.09
Control Delay (s/veh)	51.0	31.9	1.2	68.9	19.5	0.9	81.2	62.4	10.0	68.1	49.5	0.5
Queue Delay	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 Delay (s/veh)	51.0	31.9	1.2	68.9	19.5	0.9	81.2	62.4	10.0	68.1	49.5	0.5
Queue Length 50th (ft)	76	235	0	145	184	0	44	106	0	64	70	0
Queue Length 95th (ft)	m123	582	m0	214	279	8	#84	166	54	114	113	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	290		175	165		165	165		165
Base Capacity (vph)	192	1827	905	286	1940	932	156	439	513	227	606	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.66	0.05	0.62	0.38	0.10	0.66	0.29	0.33	0.34	0.15	0.06

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

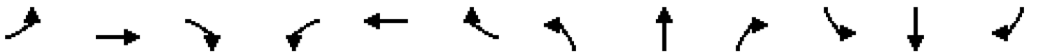
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	27	314	95	71	19	176	231	27	28	286	38
Future Volume (vph)	56	27	314	95	71	19	176	231	27	28	286	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	29	334	101	96	0	187	246	29	30	304	40
v/c Ratio	0.20	0.07	0.54	0.29	0.20		0.49	0.14	0.03	0.15	0.38	0.08
Control Delay (s/veh)	17.9	15.9	6.3	17.9	13.8		21.3	7.9	0.1	22.6	18.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.9	15.9	6.3	17.9	13.8		21.3	7.9	0.1	22.6	18.0	0.3
Queue Length 50th (ft)	13	6	0	22	16		44	15	0	8	37	0
Queue Length 95th (ft)	40	23	51	58	48		100	47	0	29	72	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	812	1169	1122	898	1186		474	2267	1051	199	1715	853
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.02	0.30	0.11	0.08		0.39	0.11	0.03	0.15	0.18	0.05

Intersection Summary	
Area Type:	Other

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	379	10	123	29	4	7	130	792	16	32	673	208
Future Volume (vph)	379	10	123	29	4	7	130	792	16	32	673	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	30		0	140		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	70			25			85			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	208	211	132	31	12	0	140	852	17	34	724	224
v/c Ratio	0.68	0.68	0.30	0.17	0.07		0.63	0.43	0.02	0.28	0.45	0.27
Control Delay (s/veh)	48.7	49.0	3.3	43.8	28.1		54.4	18.6	0.1	39.6	34.5	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.7	49.0	3.3	43.8	28.1		54.4	18.6	0.1	39.6	34.5	17.1
Queue Length 50th (ft)	132	134	0	18	2		85	203	0	22	244	46
Queue Length 95th (ft)	193	196	19	47	20		146	298	0	m43	316	126
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	155			30			140		165	105		175
Base Capacity (vph)	463	465	569	180	178		245	1959	936	122	1609	844
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.45	0.23	0.17	0.07		0.57	0.43	0.02	0.28	0.45	0.27

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	618	119	158	388	99	160	612	298	178	520	58
Future Volume (vph)	45	618	119	158	388	99	160	612	298	178	520	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	330		175	330		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			65			80		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	631	121	161	396	101	163	624	304	182	531	59
v/c Ratio	0.44	0.73	0.25	0.62	0.37	0.18	0.66	0.53	0.46	0.66	0.43	0.09
Control Delay (s/veh)	59.0	39.9	5.4	56.3	29.1	2.8	46.2	39.1	24.0	54.2	27.7	0.3
Queue Delay	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 Delay (s/veh)	59.0	39.9	5.4	56.3	29.1	2.8	46.2	39.1	24.0	54.2	27.7	0.3
Queue Length 50th (ft)	29	194	0	52	111	0	79	228	123	110	143	0
Queue Length 95th (ft)	66	236	34	86	143	21	#220	286	212	#254	193	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	330		175	330		170
Base Capacity (vph)	106	1119	592	259	1180	617	248	1167	660	276	1224	634
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.56	0.20	0.62	0.34	0.16	0.66	0.53	0.46	0.66	0.43	0.09

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

4. Opening Year (2027) with Cumulative Projects with Project Conditions

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 1
NORTH/SOUTH: Bake Parkway
EAST/WEST: Commercentre Drive

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
			Opening Year (2027) with Cumulative Projects with Project				
NBL	1.0		1,700	70	84	0.04 *	0.05
NBT	2.0		3,400	743	1,136	0.22	0.33 *
NBR	1.0	D	1,700	339	191	0.00	0.00
SBL	1.0		1,700	15	9	0.01	0.01 *
SBT	2.0		3,400	792	741	0.23 *	0.22
SBR	1.0	D	1,700	147	146	0.00	0.00
EBL	1.0		1,700	108	151	0.06 *	0.09 *
EBT	2.0		3,400	154	129	0.07	0.06
EBR	0.0		0	77	66	0.00	0.00
WBL	2.0		3,400	175	328	0.05	0.10
WBT	1.0		1,700	112	198	0.07 *	0.12 *
WBR	0.0		0	5	9	0.00	0.00
N/S Critical Movements						0.27	0.34
E/W Critical Movements						0.13	0.21
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.45	0.60
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **2**
NORTH/SOUTH: **Dimension Drive**
EAST/WEST: **Bake Parkway**

	Opening Year (2027) with Cumulative Projects with Project						
Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	2.0		3,400	62	99	0.02 *	0.03
NBT	1.0		1,700	82	124	0.05	0.07 *
NBR	1.0	U	1,700	111	165	0.00	0.00
SBL	1.0		1,700	87	75	0.05	0.04 *
SBT	1.0		1,700	128	88	0.08 *	0.05
SBR	1.0	U	1,700	60	34	0.00	0.00
EBL	1.0		1,700	29	86	0.02	0.05
EBT	2.0		3,400	780	1,159	0.23 *	0.34 *
EBR	1.0	D	1,700	64	41	0.00	0.00
WBL	1.0		1,700	136	172	0.08 *	0.10 *
WBT	2.0		3,400	804	709	0.24	0.21
WBR	1.0	D	1,700	115	87	0.00	0.00
N/S Critical Movements						0.10	0.11
E/W Critical Movements						0.31	0.44
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.46	0.60
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 3
NORTH/SOUTH: Dimension Drive
EAST/WEST: Commercentre Drive/Enterprise Way

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
	Opening Year (2027) with Cumulative Projects with Project						
NBL	1.0		1,700	229	176	0.13 *	0.10 *
NBT	2.0		3,400	186	231	0.05	0.07
NBR	1.0	D	1,700	130	43	0.00	0.00
SBL	1.0		1,700	29	29	0.02	0.02
SBT	2.0		3,400	199	286	0.06 *	0.08 *
SBR	1.0	D	1,700	36	38	0.00	0.00
EBL	1.0		1,700	19	56	0.01	0.03 *
EBT	1.0		1,700	93	41	0.05 *	0.02
EBR	1.0	U	1,700	217	314	0.00	0.07 *
WBL	1.0		1,700	41	128	0.02 *	0.08
WBT	1.0		1,700	31	102	0.02	0.07 *
WBR	0.0		0	7	23	0.00	0.00
N/S Critical Movements						0.19	0.18
E/W Critical Movements						0.07	0.10
Right Turn Critical Movement						0.00	0.07
Clearance Interval						0.05	0.05
ICU						0.31	0.40
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: **4**
NORTH/SOUTH: **Lake Forest Drive**
EAST/WEST: **Dimension Drive**

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
	Opening Year (2027) with Cumulative Projects with Project						
NBL	1.0		1,700	192	137	0.11 *	0.08 *
NBT	2.0		3,400	655	792	0.19	0.23
NBR	1.0	D	1,700	12	16	0.00	0.00
SBL	1.0		1,700	13	32	0.01	0.02
SBT	2.0		3,400	508	673	0.15 *	0.20 *
SBR	1.0	D	1,700	327	217	0.04 *	0.00
EBL							
EBT	3		5,100	298	545	0.06 *	0.11 *
EBR							
WBL							
WBT	2		3,400	7	40	0.00 *	0.01 *
WBR							
N/S Critical Movements						0.26	0.28
E/W Critical Movements						0.06	0.12
Right Turn Critical Movement						0.04	0.00
Clearance Interval						0.05	0.05
ICU						0.41	0.45
Level of Service (LOS)						A	A

Notes: **EB/WB has the split phasing, so the volume has been combined.**
ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane

LSA

INTERSECTION CAPACITY UTILIZATION

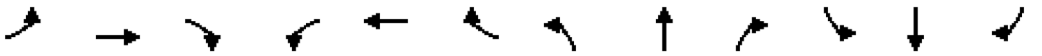
INTERSECTION NO.: 5
NORTH/SOUTH: Lake Forest Drive
EAST/WEST: Rancho Parkway

Move-ment	Lane		Capacity	Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
	Opening Year (2027) with Cumulative Projects with Project						
NBL	1.0		1,700	120	160	0.07 *	0.09
NBT	2.0		3,400	461	620	0.14	0.18 *
NBR	1.0	D	1,700	146	310	0.00	0.00
SBL	1.0		1,700	123	178	0.07	0.10 *
SBT	2.0		3,400	499	524	0.15 *	0.15
SBR	1.0	D	1,700	64	58	0.00	0.00
EBL	1.0		1,700	33	45	0.02	0.03
EBT	2.0		3,400	316	618	0.09 *	0.18 *
EBR	1.0	D	1,700	77	119	0.00	0.00
WBL	2.0		3,400	238	163	0.07 *	0.05 *
WBT	2.0		3,400	440	388	0.13	0.11
WBR	1.0	U	1,700	52	99	0.00	0.00
N/S Critical Movements						0.22	0.28
E/W Critical Movements						0.16	0.23
Right Turn Critical Movement						0.00	0.00
Clearance Interval						0.05	0.05
ICU						0.43	0.56
Level of Service (LOS)						A	A

Notes:

ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:

- P - Protected right turn movement
- U - Unprotected right turn movement
- D - Defacto right turn movement
- N - No right turn on red
- F - Free right turn lane



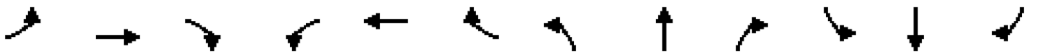
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	154	77	175	112	5	70	743	339	15	792	147
Future Volume (veh/h)	108	154	77	175	112	5	70	743	339	15	792	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	115	164	82	186	119	5	74	790	361	16	843	156
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	0	0	0
Cap, veh/h	140	237	113	240	149	6	94	2396	1069	30	2268	1012
Arrive On Green	0.08	0.10	0.10	0.07	0.08	0.08	0.05	0.66	0.66	0.02	0.63	0.63
Sat Flow, veh/h	1810	2370	1131	3510	1810	76	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	115	123	123	186	0	124	74	790	361	16	843	156
Grp Sat Flow(s),veh/h/ln	1810	1805	1696	1755	0	1886	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	8.8	9.2	9.8	7.3	0.0	9.0	5.7	13.2	13.6	1.2	15.9	3.1
Cycle Q Clear(g_c), s	8.8	9.2	9.8	7.3	0.0	9.0	5.7	13.2	13.6	1.2	15.9	3.1
Prop In Lane	1.00		0.67	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	140	180	169	240	0	156	94	2396	1069	30	2268	1012
V/C Ratio(X)	0.82	0.68	0.73	0.77	0.00	0.80	0.79	0.33	0.34	0.53	0.37	0.15
Avail Cap(c_a), veh/h	168	376	354	396	0	431	199	2396	1069	76	2268	1012
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	0.90	0.00	0.90	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	63.6	60.9	61.2	64.1	0.0	63.1	65.6	10.1	10.2	68.3	12.6	3.4
Incr Delay (d2), s/veh	23.3	4.5	5.8	4.8	0.0	8.1	13.3	0.4	0.9	13.2	0.4	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	4.9	4.4	4.4	3.4	0.0	4.6	2.9	4.7	4.7	0.7	5.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.0	65.4	67.0	68.9	0.0	71.2	78.8	10.5	11.1	81.5	13.1	3.7
LnGrp LOS	F	E	E	E		E	E	B	B	F	B	A
Approach Vol, veh/h		361			310			1225			1015	
Approach Delay, s/veh		72.8			69.8			14.8			12.7	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	99.1	14.2	19.8	11.9	94.1	16.6	17.3
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	5.8	* 5.8
Max Green Setting (Gmax), s	5.9	67.9	15.8	29.2	15.4	58.4	13.0	* 32
Max Q Clear Time (g_c+I1), s	3.2	15.6	9.3	11.8	7.7	17.9	10.8	11.0
Green Ext Time (p_c), s	0.0	7.0	0.3	1.1	0.1	6.4	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	27.1
HCM 7th LOS	C

Notes

* HCM 7th 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)	29	780	64	136	804	115	62	82	111	87	128	60
Future Volume (veh/h)	29	780	64	136	804	115	62	82	111	87	128	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	830	68	145	855	122	66	87	118	93	136	64
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	0	0	0
Cap, veh/h	45	2163	965	171	2413	1076	116	173	146	116	232	197
Arrive On Green	0.03	0.60	0.60	0.09	0.67	0.67	0.03	0.09	0.09	0.06	0.12	0.12
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	31	830	68	145	855	122	66	87	118	93	136	64
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	2.4	16.8	2.5	11.0	14.4	3.8	2.6	6.1	10.1	7.1	9.5	5.1
Cycle Q Clear(g_c), s	2.4	16.8	2.5	11.0	14.4	3.8	2.6	6.1	10.1	7.1	9.5	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	45	2163	965	171	2413	1076	116	173	146	116	232	197
V/C Ratio(X)	0.68	0.38	0.07	0.85	0.35	0.11	0.57	0.50	0.81	0.80	0.59	0.33
Avail Cap(c_a), veh/h	88	2163	965	277	2413	1076	150	410	347	238	589	499
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)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.7	14.6	11.7	62.4	10.1	8.3	66.7	60.6	62.4	64.6	58.1	56.2
Incr Delay (d2), s/veh	15.6	0.5	0.1	12.8	0.4	0.2	4.4	2.3	9.9	12.0	2.3	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	1.3	6.4	0.9	5.5	5.1	1.3	1.2	3.0	4.4	3.6	4.7	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	83.3	15.1	11.9	75.2	10.5	8.5	71.1	62.9	72.3	76.6	60.5	57.1
LnGrp LOS	F	B	B	E	B	A	E	E	E	E	E	E
Approach Vol, veh/h		929			1122			271			293	
Approach Delay, s/veh		17.1			18.6			69.0			64.9	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	90.1	9.2	22.9	8.1	99.8	13.6	18.5
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	21.4	48.8	6.0	* 43	6.8	63.4	18.4	30.2
Max Q Clear Time (g_c+I1), s	13.0	18.8	4.6	11.5	4.4	16.4	9.1	12.1
Green Ext Time (p_c), s	0.2	5.7	0.0	0.9	0.0	6.4	0.1	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	28.5
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

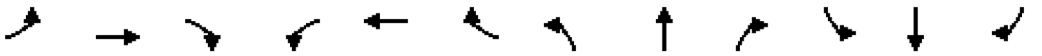
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	93	217	41	31	7	229	186	130	29	199	36
Future Volume (veh/h)	19	93	217	41	31	7	229	186	130	29	199	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	19	95	221	42	32	7	234	190	133	30	203	37
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	356	302	79	283	62	303	1244	555	61	679	303
Arrive On Green	0.04	0.19	0.19	0.04	0.19	0.19	0.17	0.34	0.34	0.03	0.19	0.19
Sat Flow, veh/h	1810	1900	1610	1810	1510	330	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	19	95	221	42	0	39	234	190	133	30	203	37
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1841	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	0.5	2.3	3.6	1.2	0.0	0.9	6.6	1.9	3.1	0.9	2.6	1.0
Cycle Q Clear(g_c), s	0.5	2.3	3.6	1.2	0.0	0.9	6.6	1.9	3.1	0.9	2.6	1.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	356	302	79	0	345	303	1244	555	61	679	303
V/C Ratio(X)	0.24	0.27	0.73	0.53	0.00	0.11	0.77	0.15	0.24	0.49	0.30	0.12
Avail Cap(c_a), veh/h	316	1079	914	252	0	1021	1171	3679	1641	252	1846	824
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	18.5	5.6	24.9	0.0	17.9	21.2	12.1	12.5	25.2	18.6	17.9
Incr Delay (d2), s/veh	1.6	0.4	3.4	5.5	0.0	0.1	4.2	0.1	0.2	6.0	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	0.2	0.9	2.5	0.6	0.0	0.4	2.7	0.6	1.0	0.4	0.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.2	18.9	9.1	30.4	0.0	18.1	25.3	12.1	12.7	31.3	18.8	18.1
LnGrp LOS	C	B	A	C		B	C	B	B	C	B	B
Approach Vol, veh/h		335			81			557			270	
Approach Delay, s/veh		12.8			24.5			17.8			20.1	
Approach LOS		B			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	24.1	6.9	15.8	14.7	15.8	8.1	14.6
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 4.6
Max Green Setting (Gmax), s	7.4	54.2	7.4	30.2	34.4	* 27	9.3	* 30
Max Q Clear Time (g_c+I1), s	2.9	5.1	3.2	5.6	8.6	4.6	2.5	2.9
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.6	1.2	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	17.4
HCM 7th LOS	B

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



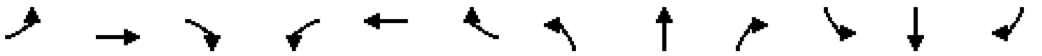
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	5	91	4	0	3	192	655	12	13	508	327
Future Volume (veh/h)	202	5	91	4	0	3	192	655	12	13	508	327
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	224	0	99	4	0	3	209	712	13	14	552	355
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	0	161	32	0	28	232	2369	1057	29	1965	876
Arrive On Green	0.10	0.00	0.10	0.02	0.00	0.02	0.13	0.66	0.66	0.02	0.54	0.54
Sat Flow, veh/h	3619	0	1610	1810	0	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	224	0	99	4	0	3	209	712	13	14	552	355
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	5.9	0.0	5.9	0.2	0.0	0.2	11.4	8.4	0.3	0.8	8.2	12.9
Cycle Q Clear(g_c), s	5.9	0.0	5.9	0.2	0.0	0.2	11.4	8.4	0.3	0.8	8.2	12.9
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	362	0	161	32	0	28	232	2369	1057	29	1965	876
V/C Ratio(X)	0.62	0.00	0.61	0.13	0.00	0.11	0.90	0.30	0.01	0.48	0.28	0.41
Avail Cap(c_a), veh/h	977	0	435	181	0	161	232	2369	1057	90	1965	876
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	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	43.2	0.0	43.2	48.4	0.0	48.3	43.0	7.4	6.0	48.8	12.3	13.3
Incr Delay (d2), s/veh	1.7	0.0	3.8	1.7	0.0	1.6	34.2	0.3	0.0	10.2	0.3	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	2.7	0.0	0.2	0.1	0.0	0.1	7.0	2.7	0.1	0.4	3.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.9	0.0	46.9	50.1	0.0	49.9	77.2	7.7	6.0	58.9	12.6	14.5
LnGrp LOS	D		D	D		D	E	A	A	E	B	B
Approach Vol, veh/h		323			7			934			921	
Approach Delay, s/veh		45.5			50.0			23.2			14.0	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	71.6		15.8	17.4	60.4		6.4				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	2.8	10.4		7.9	13.4	14.9		2.2				
Green Ext Time (p_c), s	0.0	4.6		1.0	0.0	3.9		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	22.7	
HCM 7th LOS	C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	316	77	238	440	52	120	461	146	123	499	64
Future Volume (veh/h)	33	316	77	238	440	52	120	461	146	123	499	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	326	79	245	454	54	124	475	151	127	514	66
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	55	458	204	260	615	274	153	1814	809	156	1821	812
Arrive On Green	0.03	0.13	0.13	0.07	0.17	0.17	0.08	0.50	0.50	0.09	0.50	0.50
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	34	326	79	245	454	54	124	475	151	127	514	66
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.9	8.7	4.5	6.9	11.9	2.9	6.7	7.5	5.1	6.9	8.2	2.1
Cycle Q Clear(g_c), s	1.9	8.7	4.5	6.9	11.9	2.9	6.7	7.5	5.1	6.9	8.2	2.1
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	55	458	204	260	615	274	153	1814	809	156	1821	812
V/C Ratio(X)	0.61	0.71	0.39	0.94	0.74	0.20	0.81	0.26	0.19	0.81	0.28	0.08
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1814	809	170	1821	812
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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.9	41.9	40.1	46.1	39.4	35.6	45.0	14.2	13.7	44.9	14.3	12.8
Incr Delay (d2), s/veh	10.6	2.1	1.2	40.5	1.8	0.3	21.9	0.3	0.5	23.4	0.4	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	1.0	3.8	1.8	4.4	5.2	1.1	3.8	2.8	1.8	4.0	3.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.5	43.9	41.3	86.6	41.1	36.0	66.8	14.6	14.1	68.3	14.7	13.0
LnGrp LOS	E	D	D	F	D	D	E	B	B	E	B	B
Approach Vol, veh/h		439			753			750			707	
Approach Delay, s/veh		44.6			55.5			23.1			24.2	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	56.3	12.0	18.5	13.1	56.4	7.7	22.8
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	8.9	9.5	8.9	10.7	8.7	10.2	3.9	13.9
Green Ext Time (p_c), s	0.0	3.2	0.0	2.0	0.0	3.1	0.0	2.7

Intersection Summary	
HCM 7th Control Delay, s/veh	36.2
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	173	55	0	52	21	0
Future Vol, veh/h	173	55	0	52	21	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	188	60	0	57	23	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	248	0	274	218
Stage 1	-	-	-	-	218	-
Stage 2	-	-	-	-	57	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1330	-	719	827
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1330	-	719	827
Mov Cap-2 Maneuver	-	-	-	-	719	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	971	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.17
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	719	-	-	1330	-
HCM Lane V/C Ratio	0.032	-	-	-	-
HCM Ctrl Dly (s/v)	10.2	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

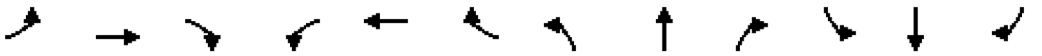
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	158	15	0	49	3	0
Future Vol, veh/h	158	15	0	49	3	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	172	16	0	53	3	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	188	0	233	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1398	-	759	868
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	974	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1398	-	759	868
Mov Cap-2 Maneuver	-	-	-	-	759	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	974	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	9.76
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	759	-	-	1398	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Ctrl Dly (s/v)	9.8	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-



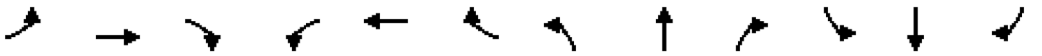
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	129	66	328	198	9	84	1136	191	9	741	146
Future Volume (veh/h)	151	129	66	328	198	9	84	1136	191	9	741	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	164	140	72	357	215	10	91	1235	208	10	805	159
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	190	314	153	423	252	12	113	2062	920	21	1878	837
Arrive On Green	0.11	0.13	0.13	0.12	0.14	0.14	0.06	0.57	0.57	0.01	0.52	0.52
Sat Flow, veh/h	1810	2351	1147	3510	1801	84	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	164	106	106	357	0	225	91	1235	208	10	805	159
Grp Sat Flow(s),veh/h/ln	1810	1805	1693	1755	0	1885	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.6	7.0	7.5	12.9	0.0	15.2	6.5	29.0	8.3	0.7	17.9	4.0
Cycle Q Clear(g_c), s	11.6	7.0	7.5	12.9	0.0	15.2	6.5	29.0	8.3	0.7	17.9	4.0
Prop In Lane	1.00		0.68	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	190	241	226	423	0	264	113	2062	920	21	1878	837
V/C Ratio(X)	0.86	0.44	0.47	0.84	0.00	0.85	0.80	0.60	0.23	0.47	0.43	0.19
Avail Cap(c_a), veh/h	212	403	378	605	0	525	131	2062	920	70	1878	837
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	0.92	0.00	0.92	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	57.2	51.8	52.1	56.0	0.0	54.6	60.1	18.2	13.7	63.8	19.3	5.8
Incr Delay (d2), s/veh	26.8	1.3	1.5	6.8	0.0	7.2	26.0	1.3	0.6	14.4	0.7	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	6.6	3.2	3.2	6.0	0.0	7.5	3.7	11.2	3.0	0.4	7.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	84.1	53.1	53.6	62.8	0.0	61.8	86.1	19.5	14.3	78.3	19.9	6.2
LnGrp LOS	F	D	D	E		E	F	B	B	E	B	A
Approach Vol, veh/h		376			582			1534			974	
Approach Delay, s/veh		66.8			62.4			22.7			18.3	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	80.5	20.3	23.1	12.8	73.8	19.5	24.0
Change Period (Y+Rc), s	4.6	6.2	4.6	5.8	4.6	6.2	5.8	* 5.8
Max Green Setting (Gmax), s	5.0	52.4	22.4	29.0	9.4	48.0	15.2	* 36
Max Q Clear Time (g_c+I1), s	2.7	31.0	14.9	9.5	8.5	19.9	13.6	17.2
Green Ext Time (p_c), s	0.0	9.0	0.7	1.0	0.0	5.7	0.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	32.9
HCM 7th LOS	C

Notes

* HCM 7th 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)	86	1159	41	172	709	87	99	124	165	75	88	34
Future Volume (veh/h)	86	1159	41	172	709	87	99	124	165	75	88	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	1207	43	179	739	91	103	129	172	78	92	35
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	1952	871	206	2179	972	152	242	205	100	264	224
Arrive On Green	0.05	0.54	0.54	0.11	0.60	0.60	0.04	0.13	0.13	0.06	0.14	0.14
Sat Flow, veh/h	1810	3610	1610	1810	3610	1610	3510	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	90	1207	43	179	739	91	103	129	172	78	92	35
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1805	1610	1755	1900	1610	1810	1900	1610
Q Serve(g_s), s	6.5	30.0	1.6	12.6	13.3	3.1	3.8	8.3	13.6	5.5	5.7	2.5
Cycle Q Clear(g_c), s	6.5	30.0	1.6	12.6	13.3	3.1	3.8	8.3	13.6	5.5	5.7	2.5
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	92	1952	871	206	2179	972	152	242	205	100	264	224
V/C Ratio(X)	0.98	0.62	0.05	0.87	0.34	0.09	0.68	0.53	0.84	0.78	0.35	0.16
Avail Cap(c_a), veh/h	92	1952	871	270	2179	972	157	440	373	228	607	514
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	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	20.6	14.1	56.6	12.8	10.8	61.3	53.1	55.4	60.6	50.6	49.2
Incr Delay (d2), s/veh	74.8	1.1	0.1	20.3	0.4	0.2	10.7	1.8	8.7	12.4	0.8	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	4.8	11.7	0.6	6.7	4.9	1.1	1.9	4.0	5.9	2.9	2.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	136.4	21.7	14.2	76.9	13.3	11.0	72.0	54.9	64.2	73.1	51.4	49.6
LnGrp LOS	F	C	B	E	B	B	E	D	E	E	D	D
Approach Vol, veh/h		1340			1009			404			205	
Approach Delay, s/veh		29.2			24.4			63.2			59.3	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.4	76.5	10.2	23.9	11.2	84.7	11.8	22.3
Change Period (Y+Rc), s	4.6	6.2	4.6	* 5.8	4.6	6.2	4.6	5.8
Max Green Setting (Gmax), s	19.4	42.9	5.8	* 42	6.6	55.7	16.4	30.1
Max Q Clear Time (g_c+I1), s	14.6	32.0	5.8	7.7	8.5	15.3	7.5	15.6
Green Ext Time (p_c), s	0.2	5.6	0.0	0.6	0.0	5.2	0.1	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	34.3
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

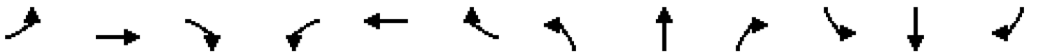
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	41	314	128	102	23	176	231	43	29	286	38
Future Volume (veh/h)	56	41	314	128	102	23	176	231	43	29	286	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	44	334	136	109	24	187	246	46	31	304	40
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	0	0	0
Cap, veh/h	181	346	293	181	274	60	245	1101	491	62	657	293
Arrive On Green	0.10	0.18	0.18	0.10	0.18	0.18	0.14	0.31	0.31	0.03	0.18	0.18
Sat Flow, veh/h	1810	1900	1610	1810	1508	332	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	60	44	334	136	0	133	187	246	46	31	304	40
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	0	1840	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	1.7	1.1	5.8	4.0	0.0	3.5	5.5	2.8	1.1	0.9	4.1	1.1
Cycle Q Clear(g_c), s	1.7	1.1	5.8	4.0	0.0	3.5	5.5	2.8	1.1	0.9	4.1	1.1
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	346	293	181	0	335	245	1101	491	62	657	293
V/C Ratio(X)	0.33	0.13	1.14	0.75	0.00	0.40	0.76	0.22	0.09	0.50	0.46	0.14
Avail Cap(c_a), veh/h	441	1044	885	639	0	1253	804	2838	1266	211	1656	739
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	18.8	7.5	24.1	0.0	19.8	22.9	14.2	13.7	26.1	20.1	18.8
Incr Delay (d2), s/veh	1.1	0.2	72.4	6.1	0.0	0.8	4.9	0.1	0.1	6.1	0.5	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	0.7	0.4	9.1	1.9	0.0	1.5	2.3	0.9	0.4	0.5	1.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.1	19.0	79.8	30.2	0.0	20.6	27.8	14.3	13.7	32.2	20.6	19.1
LnGrp LOS	C	B	F	C		C	C	B	B	C	C	B
Approach Vol, veh/h		438			269			479			375	
Approach Delay, s/veh		66.1			25.4			19.5			21.4	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	22.6	10.1	15.8	13.2	15.8	11.3	14.6
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	5.8	* 5.8	5.8	* 4.6
Max Green Setting (Gmax), s	6.4	43.2	19.4	30.2	24.4	* 25	13.4	* 37
Max Q Clear Time (g_c+I1), s	2.9	4.8	6.0	7.8	7.5	6.1	3.7	5.5
Green Ext Time (p_c), s	0.0	1.6	0.3	1.3	0.4	1.7	0.1	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	34.0
HCM 7th LOS	C

Notes

* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



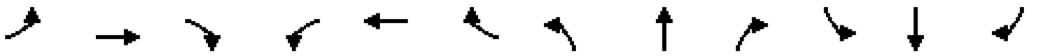
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	399	10	136	29	4	7	137	792	16	32	673	217
Future Volume (veh/h)	399	10	136	29	4	7	137	792	16	32	673	217
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	437	0	146	31	4	8	147	852	17	34	724	233
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	555	0	247	126	39	79	179	1936	864	55	1689	754
Arrive On Green	0.15	0.00	0.15	0.07	0.07	0.07	0.10	0.54	0.54	0.03	0.47	0.47
Sat Flow, veh/h	3619	0	1610	1810	565	1131	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	437	0	146	31	0	12	147	852	17	34	724	233
Grp Sat Flow(s),veh/h/ln	1810	0	1610	1810	0	1696	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	11.6	0.0	8.4	1.6	0.0	0.7	8.0	14.3	0.5	1.9	13.3	9.0
Cycle Q Clear(g_c), s	11.6	0.0	8.4	1.6	0.0	0.7	8.0	14.3	0.5	1.9	13.3	9.0
Prop In Lane	1.00		1.00	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	555	0	247	126	0	118	179	1936	864	55	1689	754
V/C Ratio(X)	0.79	0.00	0.59	0.25	0.00	0.10	0.82	0.44	0.02	0.61	0.43	0.31
Avail Cap(c_a), veh/h	977	0	435	181	0	170	232	1936	864	90	1689	754
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	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	40.8	0.0	39.4	44.0	0.0	43.6	44.2	14.1	10.9	47.9	17.7	16.5
Incr Delay (d2), s/veh	2.5	0.0	2.2	1.0	0.0	0.4	16.4	0.7	0.0	9.5	0.7	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	5.2	0.0	3.5	0.8	0.0	0.3	4.2	5.3	0.2	0.9	5.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.3	0.0	41.7	45.0	0.0	44.0	60.6	14.8	10.9	57.4	18.4	17.5
LnGrp LOS	D		D	D		D	E	B	B	E	B	B
Approach Vol, veh/h		583			43			1016			991	
Approach Delay, s/veh		42.9			44.7			21.4			19.5	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	59.6		21.1	14.5	52.8		11.6				
Change Period (Y+Rc), s	4.6	6.0		5.8	4.6	6.0		4.6				
Max Green Setting (Gmax), s	5.0	37.0		27.0	12.8	29.2		10.0				
Max Q Clear Time (g_c+I1), s	3.9	16.3		13.6	10.0	15.3		3.6				
Green Ext Time (p_c), s	0.0	5.3		1.7	0.1	4.4		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		25.8	
HCM 7th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	618	119	163	388	99	160	620	310	178	524	58
Future Volume (veh/h)	45	618	119	163	388	99	160	620	310	178	524	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	46	631	121	166	396	101	163	633	316	182	535	59
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	793	354	232	901	402	170	1481	661	170	1481	661
Arrive On Green	0.04	0.22	0.22	0.07	0.25	0.25	0.09	0.41	0.41	0.09	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	1810	3610	1610	1810	3610	1610
Grp Volume(v), veh/h	46	631	121	166	396	101	163	633	316	182	535	59
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1810	1805	1610	1810	1805	1610
Q Serve(g_s), s	2.5	16.5	6.3	4.6	9.2	5.0	9.0	12.5	14.4	9.4	10.3	2.2
Cycle Q Clear(g_c), s	2.5	16.5	6.3	4.6	9.2	5.0	9.0	12.5	14.4	9.4	10.3	2.2
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	65	793	354	232	901	402	170	1481	661	170	1481	661
V/C Ratio(X)	0.70	0.80	0.34	0.72	0.44	0.25	0.96	0.43	0.48	1.07	0.36	0.09
Avail Cap(c_a), veh/h	107	1119	499	260	1173	523	170	1481	661	170	1481	661
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	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	36.9	32.9	45.8	31.6	30.0	45.1	21.1	21.6	45.3	20.4	18.1
Incr Delay (d2), s/veh	13.0	2.7	0.6	8.0	0.3	0.3	52.2	0.8	2.2	88.8	0.7	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	1.3	7.2	2.4	2.2	3.9	1.9	6.3	5.0	5.4	8.2	4.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	39.6	33.5	53.8	32.0	30.4	97.4	21.9	23.8	134.1	21.1	18.3
LnGrp LOS	E	D	C	D	C	C	F	C	C	F	C	B
Approach Vol, veh/h		798			663			1112			776	
Approach Delay, s/veh		39.9			37.2			33.5			47.4	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	47.0	11.2	27.8	14.0	47.0	8.2	30.8
Change Period (Y+Rc), s	4.6	6.0	4.6	5.8	4.6	6.0	4.6	5.8
Max Green Setting (Gmax), s	9.4	31.2	7.4	31.0	9.4	31.2	5.9	32.5
Max Q Clear Time (g_c+I1), s	11.4	16.4	6.6	18.5	11.0	12.3	4.5	11.2
Green Ext Time (p_c), s	0.0	4.3	0.0	3.4	0.0	3.1	0.0	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	39.0
HCM 7th LOS	D

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	77	27	0	178	54	0
Future Vol, veh/h	77	27	0	178	54	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	84	29	0	193	59	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	113	0	292	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	193	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1489	-	703	963
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	844	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1489	-	703	963
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	844	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.59
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	703	-	-	1489	-
HCM Lane V/C Ratio	0.083	-	-	-	-
HCM Ctrl Dly (s/v)	10.6	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

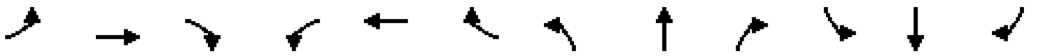
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	4	0	164	14	0
Future Vol, veh/h	73	4	0	164	14	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	79	4	0	178	15	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	84	0	260	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	178	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1526	-	733	984
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1526	-	733	984
Mov Cap-2 Maneuver	-	-	-	-	733	-
Stage 1	-	-	-	-	947	-
Stage 2	-	-	-	-	857	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	10.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	733	-	-	1526	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Ctrl Dly (s/v)	10	-	-	0	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	154	77	175	112	5	70	743	339	15	792	147
Future Volume (vph)	108	154	77	175	112	5	70	743	339	15	792	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	246	0	186	124	0	74	790	361	16	843	156
v/c Ratio	0.62	0.54		0.59	0.63		0.52	0.34	0.31	0.18	0.40	0.15
Control Delay (s/veh)	74.0	48.1		68.7	72.9		74.1	14.2	2.7	74.0	13.5	0.9
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	74.0	48.1		68.7	72.9		74.1	14.2	2.7	74.0	13.5	0.9
Queue Length 50th (ft)	102	86		85	109		66	146	4	15	131	0
Queue Length 95th (ft)	163	125		123	172		116	285	57	m41	157	8
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	197	760		395	432		198	2301	1155	89	2086	1007
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.32		0.47	0.29		0.37	0.34	0.31	0.18	0.40	0.15

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

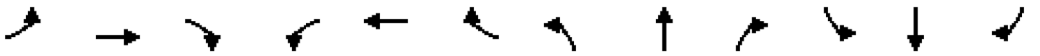
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	780	64	136	804	115	62	82	111	87	128	60
Future Volume (vph)	29	780	64	136	804	115	62	82	111	87	128	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	430		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	31	830	68	145	855	122	66	87	118	93	136	64
v/c Ratio	0.31	0.42	0.07	0.68	0.37	0.11	0.44	0.52	0.40	0.58	0.46	0.18
Control Delay (s/veh)	63.1	17.9	0.8	74.9	13.8	2.3	74.8	71.9	6.0	74.7	58.7	1.1
Queue Delay	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 Delay (s/veh)	63.1	17.9	0.8	74.9	13.8	2.3	74.8	71.9	6.0	74.7	58.7	1.1
Queue Length 50th (ft)	28	142	0	129	193	0	30	77	0	83	117	0
Queue Length 95th (ft)	m65	252	m3	195	295	27	57	132	17	138	173	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	430		175	165		165	165		165
Base Capacity (vph)	105	1997	967	278	2329	1088	150	409	480	237	589	591
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.42	0.07	0.52	0.37	0.11	0.44	0.21	0.25	0.39	0.23	0.11

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	93	217	41	31	7	229	186	130	29	199	36
Future Volume (vph)	19	93	217	41	31	7	229	186	130	29	199	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	95	221	42	39	0	234	190	133	30	203	37
v/c Ratio	0.09	0.27	0.46	0.20	0.08		0.56	0.12	0.17	0.15	0.30	0.09
Control Delay (s/veh)	27.0	26.0	8.0	29.3	17.8		26.6	13.8	3.6	28.8	24.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.0	26.0	8.0	29.3	17.8		26.6	13.8	3.6	28.8	24.4	0.4
Queue Length 50th (ft)	7	31	0	14	7		78	20	0	10	35	0
Queue Length 95th (ft)	25	77	55	45	38		150	52	28	36	71	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	307	1027	974	239	980		1111	3248	1468	239	1758	869
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.09	0.23	0.18	0.04		0.21	0.06	0.09	0.13	0.12	0.04

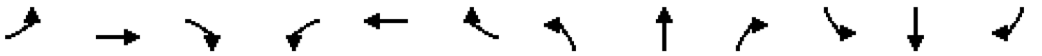
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	202	5	91	4	0	3	192	655	12	13	508	327
Future Volume (vph)	202	5	91	4	0	3	192	655	12	13	508	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	205		0	30		0	250		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			25			90			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	112	113	99	4	3	0	209	712	13	14	552	355
v/c Ratio	0.52	0.52	0.27	0.02	0.01		0.64	0.28	0.01	0.12	0.31	0.36
Control Delay (s/veh)	48.9	48.9	1.8	41.0	0.0		46.5	8.3	0.0	44.9	26.6	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.9	48.9	1.8	41.0	0.0		46.5	8.3	0.0	44.9	26.6	14.2
Queue Length 50th (ft)	71	72	0	2	0		124	57	0	9	130	74
Queue Length 95th (ft)	122	123	0	13	0		191	213	0	m24	m239	m180
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	205			30			250		165	105		175
Base Capacity (vph)	463	464	569	180	418		328	2532	1172	115	1798	982
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.24	0.17	0.02	0.01		0.64	0.28	0.01	0.12	0.31	0.36

Intersection Summary	
Area Type:	Other

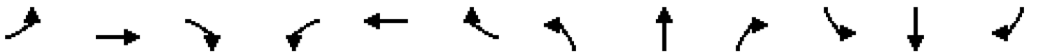
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	316	77	238	440	52	120	461	146	123	499	64
Future Volume (vph)	33	316	77	238	440	52	120	461	146	123	499	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	470		200	440		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	326	79	245	454	54	124	475	151	127	514	66
v/c Ratio	0.32	0.56	0.21	0.95	0.58	0.12	0.55	0.31	0.19	0.55	0.33	0.09
Control Delay (s/veh)	53.8	41.7	2.4	91.0	38.4	0.5	49.8	24.1	10.8	49.5	21.3	0.2
Queue Delay	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 Delay (s/veh)	53.8	41.7	2.4	91.0	38.4	0.5	49.8	24.1	10.8	49.5	21.3	0.2
Queue Length 50th (ft)	21	101	0	81	144	0	79	100	0	77	113	0
Queue Length 95th (ft)	53	136	9	#157	185	0	115	226	106	130	181	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	470		200	440		170
Base Capacity (vph)	106	1119	592	259	1173	614	230	1539	775	234	1548	767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.29	0.13	0.95	0.39	0.09	0.54	0.31	0.19	0.54	0.33	0.09

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



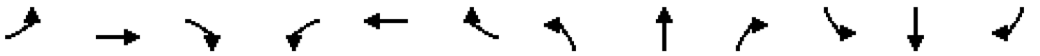
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	129	66	328	198	9	84	1136	191	9	741	146
Future Volume (vph)	151	129	66	328	198	9	84	1136	191	9	741	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	155		0	345		0	285		175	285		150
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			110			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			55			55	
Link Distance (ft)		589			3409			752			3450	
Travel Time (s)		8.9			51.7			9.3			42.8	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	164	212	0	357	225	0	91	1235	208	10	805	159
v/c Ratio	0.68	0.37		0.72	0.74		0.60	0.61	0.21	0.12	0.49	0.19
Control Delay (s/veh)	67.1	34.6		62.0	66.1		73.5	23.1	6.7	71.4	19.8	2.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	67.1	34.6		62.0	66.1		73.5	23.1	6.7	71.4	19.8	2.6
Queue Length 50th (ft)	133	58		150	181		74	336	21	9	144	0
Queue Length 95th (ft)	202	90		196	256		#150	588	85	m24	175	13
Internal Link Dist (ft)		509			3329			672			3370	
Turn Bay Length (ft)	155			345			285		175	285		150
Base Capacity (vph)	252	813		603	526		157	2028	972	83	1653	820
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.26		0.59	0.43		0.58	0.61	0.21	0.12	0.49	0.19

Intersection Summary

Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	1159	41	172	709	87	99	124	165	75	88	34
Future Volume (vph)	86	1159	41	172	709	87	99	124	165	75	88	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		200	430		175	165		165	165		165
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	90			90			55			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		55			55			45			35	
Link Distance (ft)		3450			855			1115			707	
Travel Time (s)		42.8			10.6			16.9			13.8	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	1207	43	179	739	91	103	129	172	78	92	35
v/c Ratio	0.47	0.66	0.05	0.72	0.38	0.10	0.66	0.54	0.48	0.51	0.32	0.09
Control Delay (s/veh)	49.2	34.8	0.7	68.9	19.5	0.9	81.2	62.4	10.6	68.1	49.5	0.5
Queue Delay	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 Delay (s/veh)	49.2	34.8	0.7	68.9	19.5	0.9	81.2	62.4	10.6	68.1	49.5	0.5
Queue Length 50th (ft)	76	255	0	146	184	0	44	106	0	64	70	0
Queue Length 95th (ft)	m133	645	m0	216	279	8	#84	166	58	114	113	0
Internal Link Dist (ft)		3370			775			1035			627	
Turn Bay Length (ft)	285		200	430		175	165		165	165		165
Base Capacity (vph)	192	1825	904	286	1940	932	156	439	513	227	606	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.66	0.05	0.63	0.38	0.10	0.66	0.29	0.34	0.34	0.15	0.06

Intersection Summary

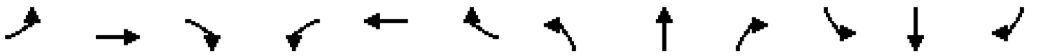
Area Type: Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	41	314	128	102	23	176	231	43	29	286	38
Future Volume (vph)	56	41	314	128	102	23	176	231	43	29	286	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	195		0	140		0	195		100	190		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	75			65			60			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			25			45			45	
Link Distance (ft)		3409			541			1677			1115	
Travel Time (s)		51.7			14.8			25.4			16.9	
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%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	44	334	136	133	0	187	246	46	31	304	40
v/c Ratio	0.22	0.14	0.62	0.47	0.27		0.55	0.18	0.07	0.19	0.48	0.10
Control Delay (s/veh)	29.2	29.2	9.5	33.7	26.2		33.1	16.8	0.2	36.6	29.7	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	29.2	29.2	9.5	33.7	26.2		33.1	16.8	0.2	36.6	29.7	0.4
Queue Length 50th (ft)	21	16	0	50	45		68	30	0	12	58	0
Queue Length 95th (ft)	63	51	73	124	117		157	80	0	45	122	0
Internal Link Dist (ft)		3329			461			1597			1035	
Turn Bay Length (ft)	195			140			195		100	190		100
Base Capacity (vph)	379	858	912	523	1039		658	2333	1097	172	1361	709
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.05	0.37	0.26	0.13		0.28	0.11	0.04	0.18	0.22	0.06

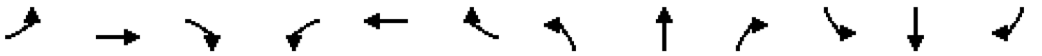
Intersection Summary	
Area Type:	Other



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	399	10	136	29	4	7	137	792	16	32	673	217
Future Volume (vph)	399	10	136	29	4	7	137	792	16	32	673	217
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	205		0	30		0	250		165	105		175
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			25			90			65		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			30			50			50	
Link Distance (ft)		1158			210			493			3365	
Travel Time (s)		17.5			4.8			6.7			45.9	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)	49%											
Lane Group Flow (vph)	219	221	146	31	12	0	147	852	17	34	724	233
v/c Ratio	0.68	0.69	0.32	0.17	0.07		0.65	0.44	0.02	0.28	0.46	0.28
Control Delay (s/veh)	48.2	48.3	4.1	43.8	28.1		55.2	19.0	0.1	39.3	35.3	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.2	48.3	4.1	43.8	28.1		55.2	19.0	0.1	39.3	35.3	17.3
Queue Length 50th (ft)	137	138	0	18	2		90	208	0	22	246	50
Queue Length 95th (ft)	202	203	27	47	20		154	298	0	m43	316	130
Internal Link Dist (ft)		1078			130			413			3285	
Turn Bay Length (ft)	205			30			250		165	105		175
Base Capacity (vph)	463	465	569	180	178		247	1938	928	120	1574	835
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.48	0.26	0.17	0.07		0.60	0.44	0.02	0.28	0.46	0.28

Intersection Summary	
Area Type:	Other

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	618	119	163	388	99	160	620	310	178	524	58
Future Volume (vph)	45	618	119	163	388	99	160	620	310	178	524	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		170	250		100	470		200	440		170
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (ft)	95			100			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			50			50	
Link Distance (ft)		544			635			3365			492	
Travel Time (s)		8.2			9.6			45.9			6.7	
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
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	46	631	121	166	396	101	163	633	316	182	535	59
v/c Ratio	0.44	0.73	0.25	0.64	0.37	0.18	0.66	0.54	0.48	0.66	0.44	0.09
Control Delay (s/veh)	59.0	39.9	5.4	57.0	29.1	2.8	46.3	38.6	24.2	54.2	27.8	0.3
Queue Delay	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 Delay (s/veh)	59.0	39.9	5.4	57.0	29.1	2.8	46.3	38.6	24.2	54.2	27.8	0.3
Queue Length 50th (ft)	29	194	0	54	111	0	78	231	132	110	144	0
Queue Length 95th (ft)	66	236	34	#90	143	21	#219	290	222	#254	194	0
Internal Link Dist (ft)		464			555			3285			412	
Turn Bay Length (ft)	250		170	250		100	470		200	440		170
Base Capacity (vph)	106	1119	592	259	1180	617	248	1166	659	276	1223	633
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.56	0.20	0.64	0.34	0.16	0.66	0.54	0.48	0.66	0.44	0.09

Intersection Summary	
Area Type:	Other

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

APPENDIX E

CUMULATIVE PROJECTS

Lake Forest Cumulative Projects (last updated 6/20/24)

#	Project	Description	Location	Status	Distance	LSA Review Notes
1.	Site Development Permit 06-21-5437 (IPT Enterprise Business Center LLC Project)	Demolition of existing 144,906 square foot building and construction of new 165,803 square foot industrial building on a 8.83 ac site	26200 Enterprise Way	Submitted- Not Approved	0	This is the proposed project.
2.	General Plan Amendment 03-18-5145/Zone Change 03-18-5144/UP 03-18-5146/TPM 2023-169/Development Agreement	Rehabilitate existing single-family residence to be used as an office for the Great Scott Tree Service (GSTS) administrative functions, remove the second residence and the structures related to animal keeping, create parking areas for the tree service vehicles and equipment, and create a concrete pad for drying wood chips associated with GSTS tree cutting operations. Add a new 2,475 square-foot shade structure.	20751 Linear Lane	Scheduled for City Council Second Reading on 11/5/2024	0.25 mi	Based on LSA's review, it would not generate new trips.
3.	Pre-Application 03-24-5686	Proposed demolition of existing building and construction of a new +- 1,000 square foot drive-through only restaurant with no interior seating or on-site food preparation.	22401 El Toro Road	Not Submitted (Based on pre-application)	1.9 mi	Based on LSA's review, it would generate nominal new trips and no new trips are expected to approach/ depart the study intersections identified for the proposed project.
4.	Site Development Permit 08-23-5653	Demolition of 3 existing office buildings and reconstruction of two new industrial buildings with a total of 156,800 square feet (54,000 square feet and 102,800 square feet). The 2 buildings will have a total of 59,800 square feet of warehouse, 79,000 square feet of manufacturing, and 18,000 square feet of office.	26110 Enterprise, 26140 Enterprise, 26160 Enterprise Way	Submitted- Not Approved	300 feet	
5.	Site Development Permit 09-32-5658	Demolition of a 76,978 square foot two-story office building and construction of a 77,000 square foot single-story + mezzanine building. The building will have 69,000 square feet of warehouse and 8,000 square feet of office.	26250 Enterprise Way	Submitted-Not Approved	40 feet	

Lake Forest Cumulative Projects (last updated 6/20/24)

6.	Tentative Parcel Map 07-20-5369 / Site Development Permit 07-20-5368	Subdivide an 18.28-acre parcel into 3 parcels, and build a new 4,200 square-foot building to be used as an electrical testing facility on Parcel 1.	19121 El Toro Road	Submitted-Not Approved	3.1 mi	Based on LSA's review, it would generate nominal new trips and no new trips are expected to approach/ depart the study intersections identified for the proposed project.
7.	Use Permit 01-23-5589	Construction of a new 3-story, 36-foot tall, 90,621 square foot self-storage building at the existing Extra Space Storage facility accessed off Baffin Bay Drive.	25650 Baffin Bay Drive	Approved by PC on 12/9/23. Under Plan check review-no permits issued	0.53 mi	
8.	Vesting Tentative Tract Map 19299 and Site Development Permit 10-23-5661	Subdivision and development of 57 detached single-family homes in Neighborhood 6 (Sequoias) of the Meadows Residential Community	Southeast corner of the intersection of Rancho Parkway and Bake Parkway	Approved by PC on 3/7/24. Under plan check review-no permits issued.	0.35 mi	
9.	Site Development Permit 08-18-5212 TTM 17300 (Amendment)	Construction of 223 single-family residences in the Oaks Residential Community	Northeast corner of Glenn Ranch Road and Saddleback Ranch Road.	Under Construction-Building permits issued for 102 homes. 93 homes have completed construction	2.1 mi	
10.	Site Development Permit 06-21-5428, 05-21-5426, 02-21-5400, 05-21-5425, 05-21-5424	Construction of 541 detached single-family homes in the Meadows Residential Community.	Southeast corner of the intersection of Rancho Parkway and Bake Parkway	Under Construction-Building permits issued for all homes.475 home have completed construction	Immediately adjacent	
11.	Site Development Permit 06-21-5435	Construction of the Meadows Sr. Housing Affordable Apartments. 65 units Construction of a new two-story 64,064 square foot senior affordable apartment complex consisting of a 65-units	101 Lopala	Under construction	350 feet	

Lake Forest Cumulative Projects (last updated 6/20/24)

12.	Changed Plan 06-22-5542	Expansion of the Ascension Cemetery to include new burial areas and new 5,428 sf maintenance building	24754 Trabuco Road	Under construction	1.46 mi	Based on LSA's review, it would not generate new trips.
13.	Site Development Permit 05-21-5422	New 12,500 sf industrial building	25101 Arctic Ocean	Approved by PC on	1.07 mi	
14.	Site Development Permit 04-24-5698	Construction of a new one-story 36,000 square foot manufacturing building and a 20,000 two-story office building on a vacant site	19722 Pauling	Submitted-Not Approved	1.30 mi	

LSA

Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
4 .	**Site Development Permit 08-23-5653**								
	26110 Enterprise, 26140 Enterprise, 26160 Enterprise Way								
	Warehousing	59.800 TSF							
	Trips/Unit (Cars)		0.102	0.015	0.117	0.021	0.103	0.124	1.180
	Trips/Unit (2-Axle Trucks)		0.006	0.006	0.012	0.006	0.006	0.012	0.116
	Trips/Unit (3-Axle Trucks)		0.005	0.004	0.009	0.005	0.005	0.010	0.094
	Trips/Unit (4+ Axle Trucks)		0.017	0.015	0.032	0.018	0.016	0.034	0.320
	Trips/Unit (Total)[1,2]		0.13	0.040	0.170	0.050	0.130	0.180	1.710
	Trip Generation (Cars)		6	1	7	1	6	7	71
	Trip Generation (2-Axle Trucks)		0	1	1	0	1	1	7
	Trip Generation (3-Axle Trucks)		0	1	1	0	1	1	6
	Trip Generation (4+ Axle Trucks)		1	1	2	1	1	2	19
	Truck Trip Generation		1	3	4	1	3	4	32
	Trip Generation (Total)		7	4	11	2	9	11	103
	Trip Generation (Cars)		6	1	7	1	6	7	71
	PCE Trip Generation (2-Axle Trucks)		1	1	2	1	1	2	10
	PCE Trip Generation (3-Axle Trucks)		1	0	1	1	1	2	11
	PCE Trip Generation (4+ Axle Trucks)		3	3	6	3	3	6	57
	Total Truck Trip Generation		1	3	4	1	3	4	32
	Auto Trips		6	1	7	1	6	7	71
	Truck PCE Trips[3]		5	4	9	5	5	10	78
	Total PCE Trip Generation		11	5	16	6	11	17	149
	Manufacturing	79.000 TSF							
	Trips/Unit (Cars)		0.438	0.096	0.534	0.166	0.416	0.582	3.734
	Trips/Unit (2-Axle Trucks)		0.027	0.021	0.048	0.021	0.031	0.052	0.380
	Trips/Unit (3-Axle Trucks)		0.015	0.011	0.026	0.011	0.017	0.028	0.185
	Trips/Unit (4+ Axle Trucks)		0.040	0.032	0.072	0.032	0.046	0.078	0.451
	Trips/Unit (Total)[1,4]		0.52	0.160	0.680	0.230	0.510	0.740	4.750
	Trip Generation (Cars)		35	8	43	13	33	46	295
	Trip Generation (2-Axle Trucks)		2	2	4	2	2	4	30
	Trip Generation (3-Axle Trucks)		1	1	2	1	1	2	15
	Trip Generation (4+ Axle Trucks)		3	3	6	3	3	6	36
	Truck Trip Generation		6	6	12	6	6	12	81
	Trip Generation (Total)		41	14	55	19	39	58	376
	Trip Generation (Cars)		35	8	43	13	33	46	295
	PCE Trip Generation (2-Axle Trucks)		3	2	5	2	4	6	45
	PCE Trip Generation (3-Axle Trucks)		2	2	4	2	3	5	29
	PCE Trip Generation (4+ Axle Trucks)		9	8	17	8	11	19	107
	Total Truck Trip Generation		6	6	12	6	6	12	81
	Auto Trips		35	8	43	13	33	46	295
	Truck PCE Trips[3]		14	12	26	12	18	30	181
	Total PCE Trip Generation		49	20	69	25	51	76	476
	General Office Building	18.000 TSF							
	Trips/Unit[1]		1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation		24	3	27	4	22	26	195
		Subtotal Trip Generation in PCEs	**84**	**28**	**112**	**35**	**84**	**119**	**820**

LSA

Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
5.	**Site Development Permit 09-32-5658**								
	26250 Enterprise Way								
	Warehousing	69.000 TSF							
	Trips/Unit (Cars)		0.102	0.015	0.117	0.021	0.103	0.124	1.180
	Trips/Unit (2-Axle Trucks)		0.006	0.006	0.012	0.006	0.006	0.012	0.116
	Trips/Unit (3-Axle Trucks)		0.005	0.004	0.009	0.005	0.005	0.010	0.094
	Trips/Unit (4+ Axle Trucks)		0.017	0.015	0.032	0.018	0.016	0.034	0.320
	Trips/Unit (Total)[1,2]		0.13	0.040	0.170	0.050	0.130	0.180	1.710
	Trip Generation (Cars)		7	1	8	1	7	8	81
	Trip Generation (2-Axle Trucks)		0	1	1	0	1	1	8
	Trip Generation (3-Axle Trucks)		0	1	1	0	1	1	6
	Trip Generation (4+ Axle Trucks)		1	1	2	1	1	2	22
	Truck Trip Generation		1	3	4	1	3	4	36
	Trip Generation (Total)		8	4	12	2	10	12	117
	Trip Generation (Cars)		7	1	8	1	7	8	81
	PCE Trip Generation (2-Axle Trucks)		1	1	2	1	1	2	12
	PCE Trip Generation (3-Axle Trucks)		1	1	2	1	1	2	13
	PCE Trip Generation (4+ Axle Trucks)		4	3	7	4	3	7	66
	Total Truck Trip Generation		1	3	4	1	3	4	36
	Auto Trips		7	1	8	1	7	8	81
	Truck PCE Trips[3]		6	5	11	6	5	11	91
	Total PCE Trip Generation		13	6	19	7	12	19	172
	General Office Building	8.000 TSF							
	Trips/Unit[1]		1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation		11	1	12	2	10	12	87
	Subtotal Trip Generation in PCEs		**24**	**7**	**31**	**9**	**22**	**31**	**259**
7.	**Use Permit 01-23-5589**								
	25650 Baffin Bay Drive								
	New Self-Storage Facility	90.621 TSF							
	Net Trip Generation[5]		**4**	**1**	**5**	**4**	**6**	**10**	**87**
8.	**Site Development Permit 10-23-5661**								
	Southeast corner of the intersection of Rancho Parkway and Bake Parkway								
	Single-Family Detached Housing	57 DU							
	Trips/Unit[1]		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		**10**	**30**	**40**	**34**	**20**	**54**	**538**
9.	**Site Development Permit 08-18-5212**								
	Northeast corner of Glenn Ranch Road and Saddleback Ranch Road								
	Single-Family Detached Housing	223 DU							
	Trips/Unit[1]		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		**40**	**116**	**156**	**132**	**78**	**210**	**2,103**
10.	**Site Development Permit 06-21-5428, 05-21-5426, 02-21-5400, 05-21-5425, 05-21-5424**								
	Southeast corner of the intersection of Rancho Parkway and Bake Parkway								
	Single-Family Detached Housing	98 DU							
	Trips/Unit[1]		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		**18**	**51**	**69**	**58**	**34**	**92**	**924**

LSA

Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	P.M. Peak Hour In	P.M. Peak Hour Out	P.M. Peak Hour Total	Daily
11 .	**Site Development Permit 06-21-5435**								
	101 Lopala								
	Senior Adult Housing (Multi-Family)	65 DU							
	Trips/Unit[1]		0.07	0.13	0.20	0.14	0.11	0.25	3.24
	Trip Generation		**5**	**8**	**13**	**9**	**7**	**16**	**211**
13 .	**Site Development Permit 05-21-5422**								
	25101 Arctic Ocean								
	Office/warehousing uses	11.640 TSF							
	Trip Generation[6]		**4**	**1**	**5**	**2**	**4**	**6**	**50**
14 .	**Site Development Permit 04-24-5698**								
	19722 Pauling								
	Office/manufacturing/warehousing uses	64.600 TSF							
	Trip Generation[7]		**50**	**10**	**60**	**14**	**46**	**60**	**429**
	Total Net Trip Generation		**239**	**252**	**491**	**297**	**301**	**598**	**5,421**

Notes:

DU = Dwelling Units; TSF = Thousand Square Feet; DTL = Drive-Through Lane; PCE = passenger car equivalent

[1] Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition (2021).
Land Use 150 - "Warehousing" , Setting/Location - 'General Urban/Suburban'.
Land Use 140 - "Manufacturing" , Setting/Location - 'General Urban/Suburban'.
Land Use 710 - "General Office Building" , Setting/Location - 'General Urban/Suburban'.
Land Use 210 - "Single-Family Detached Housing" , Setting/Location - 'General Urban/Suburban'.
Land Use 252 - "Senior Adult Housing (Multi-Family)" , Setting/Location - 'General Urban/Suburban'.

[2] Trips were converted to passenger vehicles and trucks based on the South Coast Air Quality Management District (SCAQMD) requirements for warehouse projects. Based on the *Warehouse Truck Trip Study Data Results and Usage* (SCAQMD, July 2014), 31% of the trips are trucks (6.8% 2-axle trucks, 5.5% 3-axle trucks, and 18.7% 4 or more axle trucks).

[3] Trips were converted to PCEs using the following factors: 1.0 for cars, 1.5 PCE factor for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4 or more axle trucks.

[4] The resulting trips were converted to passenger vehicles and trucks based on the City of Fontana Truck Trip Generation Study, dated August 2003. As such, 21.4 percent of the traffic will be trucks.

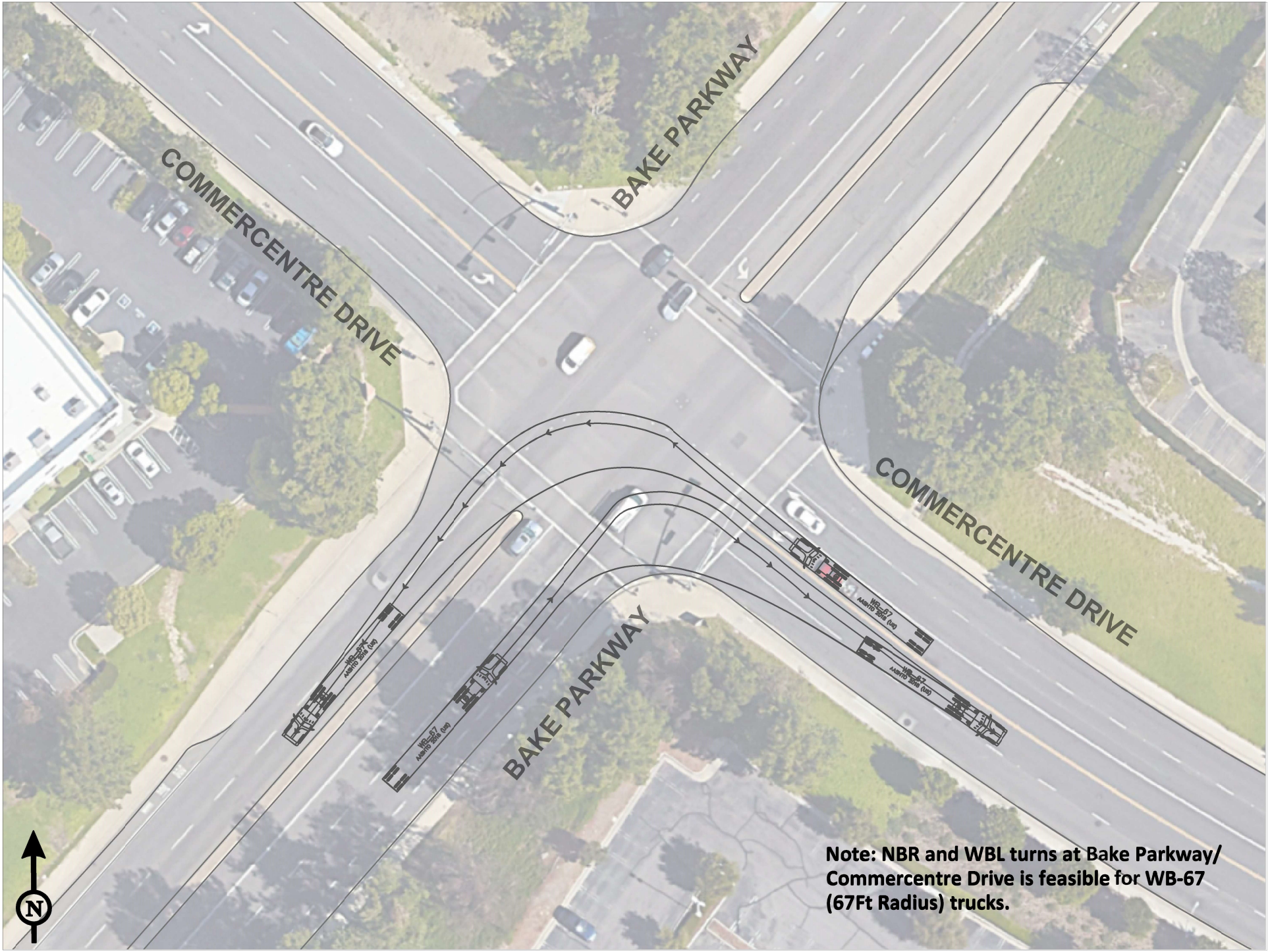
[5] Trip generation taken from "25650 Baffin Bay Drive Extra Space Self-Storage Project" Trip Generation/VMT Analysis by LSA (LSA Project No. EXT2203), December 2022.

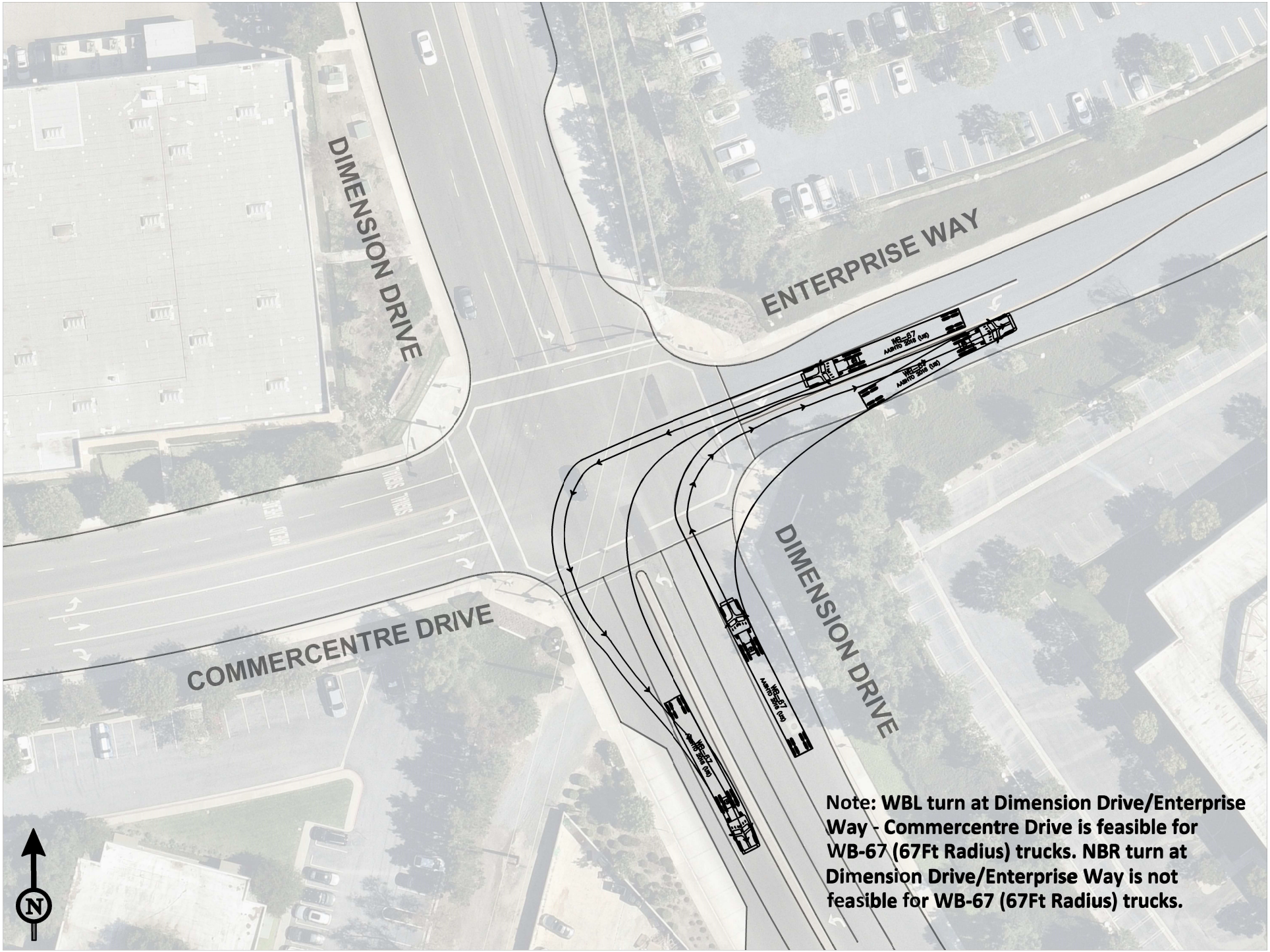
[6] Trip generation taken from "25101 Arctic Ocean Drive Project" Trip Generation Analysis and VMT Screening by TJW Engineering, Inc. (October 2021)

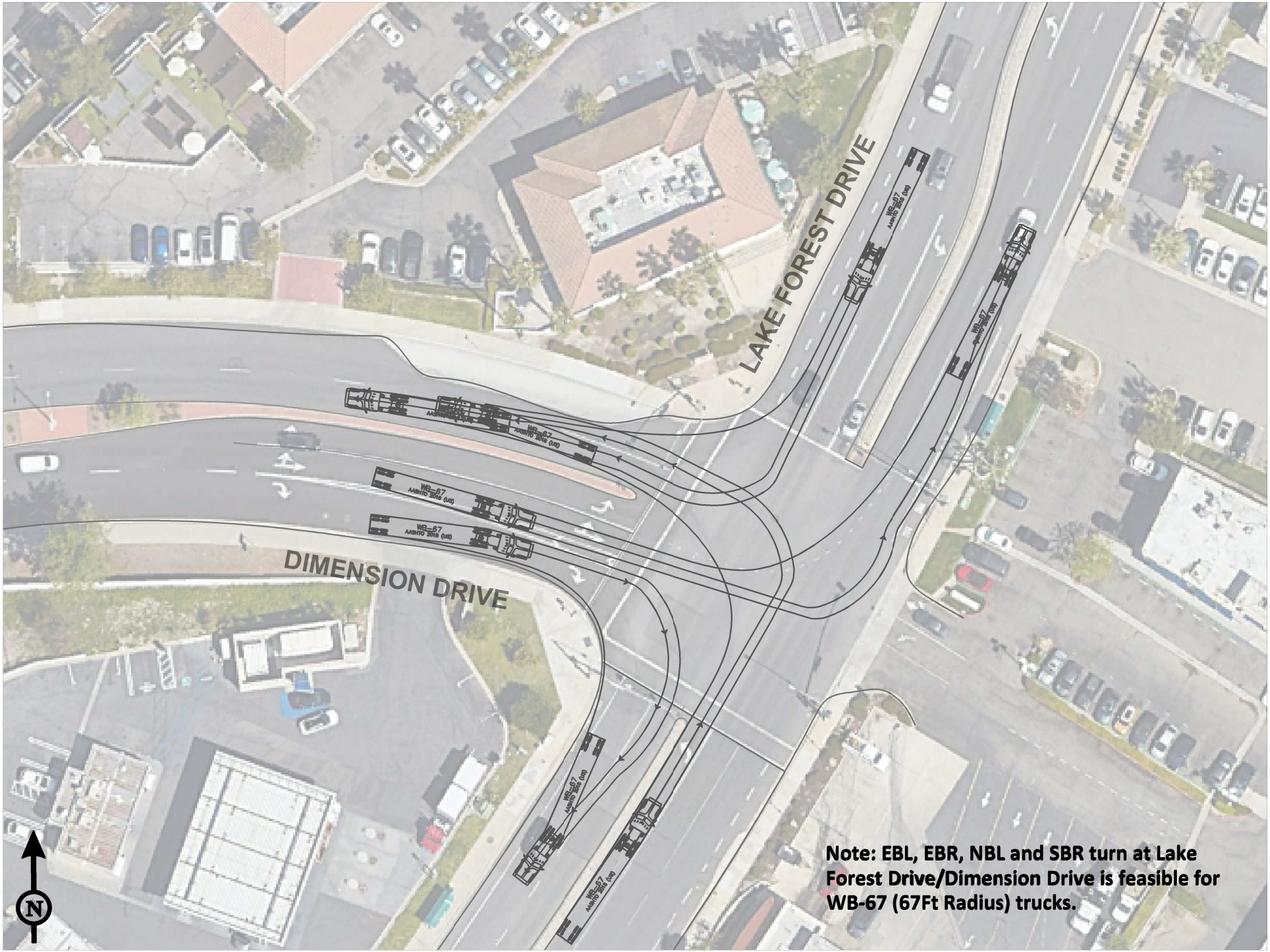
[7] Trip generation taken from "19722 Pauling IMI Critical Engineering Project" Traffic Analysis by LSA (LSA Project No. 20241500), April 2024.

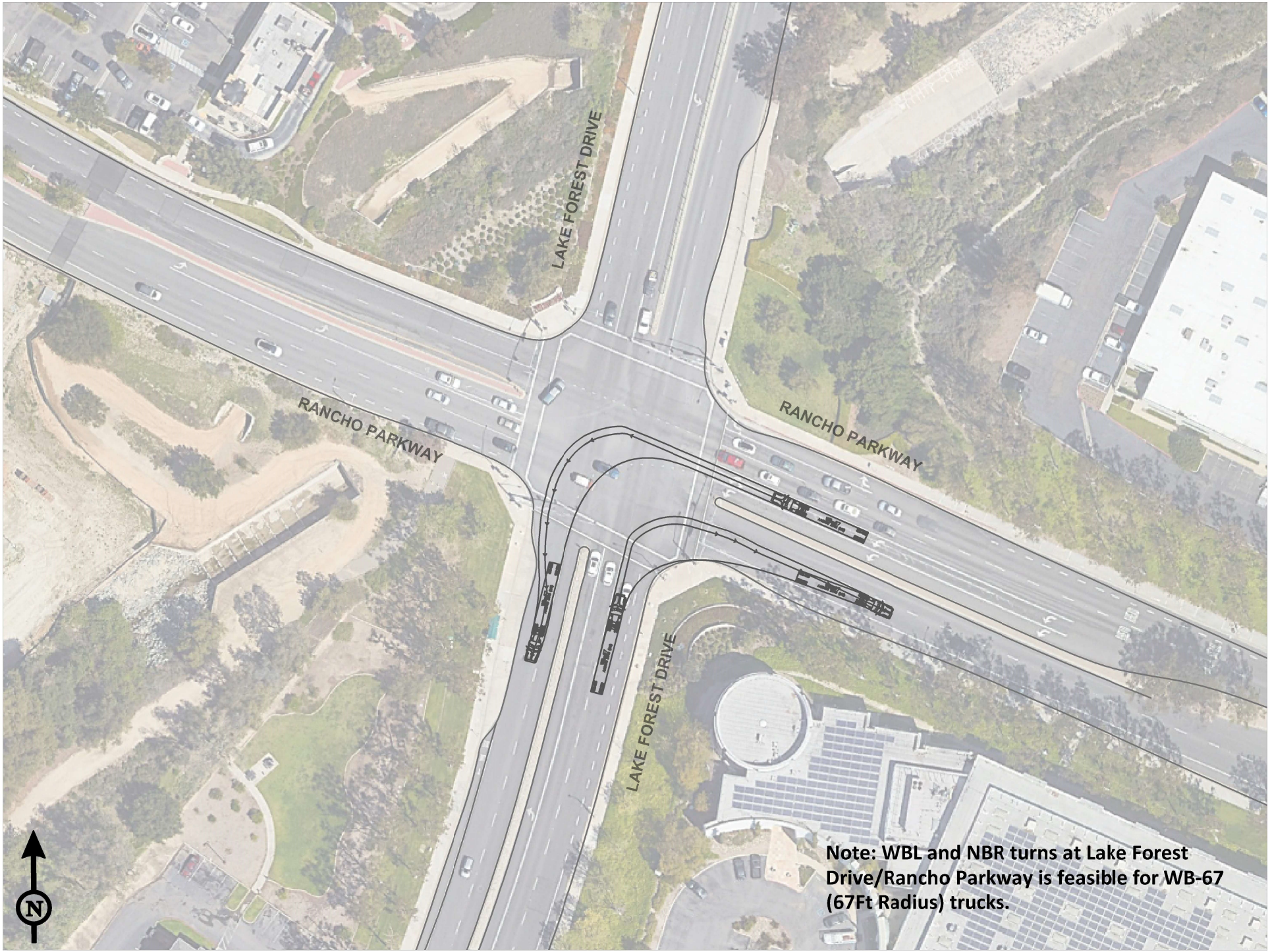
APPENDIX F

TRUCK TURNING TEMPLATES


COMMERCENTRE DRIVE
BAKE PARKWAY
BAKE PARKWAY
COMMERCENTRE DRIVE
N
Note: NBR and WBL turns at Bake Parkway/ Commercentre Drive is feasible for WB-67 (67Ft Radius) trucks.


DIMENSION DRIVE
ENTERPRISE WAY
COMMERCENTRE DRIVE
DIMENSION DRIVE
N
Note: WBL turn at Dimension Drive/Enterprise Way - Commercentre Drive is feasible for WB-67 (67Ft Radius) trucks. NBR turn at Dimension Drive/Enterprise Way is not feasible for WB-67 (67Ft Radius) trucks.


LAKE FOREST DRIVE
DIMENSION DRIVE
N
Note: EBL, EBR, NBL and SBR turn at Lake Forest Drive/Dimension Drive is feasible for WB-67 (67Ft Radius) trucks.


LAKE FOREST DRIVE
RANCHO PARKWAY
RANCHO PARKWAY
LAKE FOREST DRIVE
N
Note: WBL and NBR turns at Lake Forest Drive/Rancho Parkway is feasible for WB-67 (67Ft Radius) trucks.

APPENDIX G

CITY OF LAKE FOREST VMT LOOK-UP TABLE AND OCTAM CALCULATION WORKSHEET

SB 743 VMT LOOKUP TABLE

Purpose: The purpose of the SB 743 VMT Lookup Table is to look up Home-Based VMT per resident and Home-Based Work VMT per employee by Lake Forest Traffic Analysis Zone.

Instructions:

1. Fill out project name, location, and project type
2. Refer to LFTAM TAZ map and identify the TAZ that the project is located in
3. Select the LFTAM TAZ from the drop down cell
4. Copy results for use in final documentation

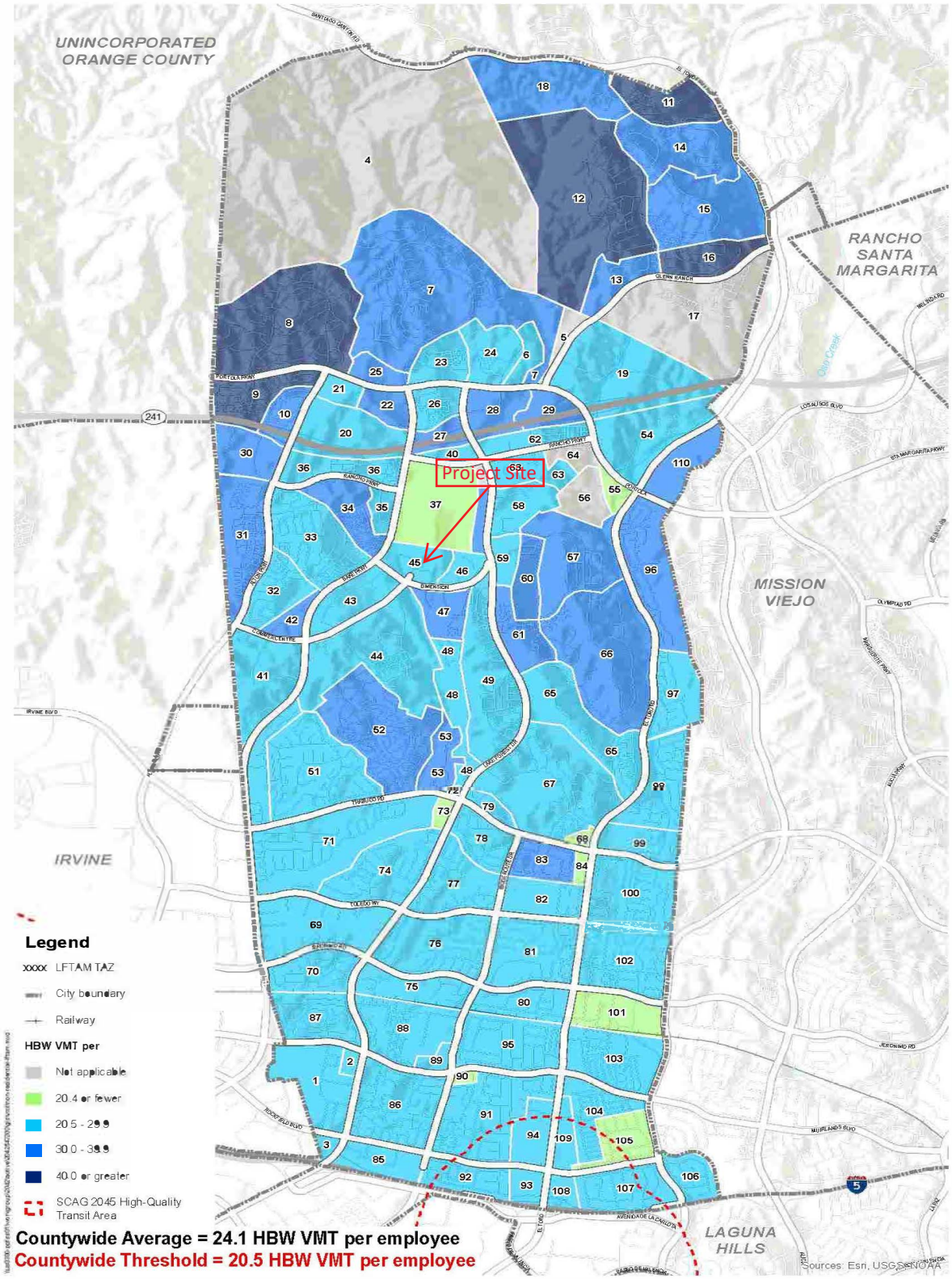
Project Name:	IPT Enterprise Business Center LLC Project	
Location:	26200 Enterprise Way , Lake Forest, California (TAZ 45)	
Type of Project:	**Employment**	<--- click on cell for drop-down
	If Project is employment use Home-Based Work per employee threshold	

Residential

click on cell for drop-down -->	**LFTAM TAZ**	**HB VMT PER CAPITA**
	Select from drop down	--
	Citywide VMT Threshold	17.5
	Above or Below Citywide VMT Threshold	--
	Significant Impact?	--
	Required Reduction for Mitigation	--

Employment

click on cell for drop-down -->	**LFTAM TAZ**	**HBW VMT PER EMPLOYEE**
	45	24.6
	Countywide VMT Threshold	20.5
	Above or Below Countywide VMT Threshold	ABOVE
	Significant Impact?	YES
	Required Reduction for Mitigation	4.1



ATTACHMENT A-2
Map-Based (Low VMT) Screening - Non-Residential Project

Source: LFTAM & OCTAM

IPT Lake Forest Warehouse Project OCTAM VMT Calculation

OCTAM Version 5.1

Orange County Home-Based Work VMT (PA):	31,115,291
Orange County Employee Number:	1,805,476
Orange County Home-Based Work VMT/Employee:	17.2

Project Home-Based Work VMT (PA):	2,942
Project Employee Number:	187
Project Home-Based Work VMT/Employee:	15.7