LOCAL MOBILITY ANALYSIS

CHULA VISTA SHINOHARA

Chula Vista, California
July 19, 2022

LLG Ref. 3-21-3408

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EXECUTIVE SUMMARY

The Project proposes to construct one (1) industrial building totaling 178,156 SF, with 4,506 SF of office use and 4,724 SF of mezzanine on a 9.75 gross-acre site located at 517 Shinohara Lane in the City of Chula Vista. Site access is proposed via the western terminus of Shinohara Lane.

The site is General Plan designated IL – Limited Industrial and Zoned (ILP) Limited Industrial and is deemed consistent with the General Plan.

Vehicle Miles Traveled (VMT)

The Project is located in a VMT efficient area (at or below the base year average VMT/employee) based on the applicable location-based screening map produced by SANDAG. The baseline average regional VMT/employee is 18.9 per the SANDAG Series 14 (Year 2016) ABM2+ data. Using the SANDAG screening map for industrial projects under per employee measurements, the Project would be expected to generate 15.32 VMT/employee. Per the *City's Transportation Study Guidelines (June 2020, updated January 2022)*, the Project would not require a VMT analysis and the Project is presumed to have a less than significant VMT impact.

Project Trip Generation and Distribution

Two alternative land use developments were analyzed in this report: a warehousing building and a distribution facility. A warehousing building is calculated to generate 1,088 daily trips with 143 AM peak hour trips (104 inbound / 39 outbound) and 160 PM peak hour trips (60 inbound / 100 outbound). A distribution facility is calculated to generate 4,881 daily trips with 328 AM peak hour trips (125 inbound / 203 outbound) and 619 PM peak hour trips (434 inbound / 185 outbound).

The Project traffic was distributed along Main Street based on the site location, access to I-805, existing traffic patterns in the area, a review of trip distribution of similar land uses in the vicinity and anticipated traffic patterns to and from the site.

Traffic Level of Service (LOS) Analysis

The study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours under all scenarios with the exception of the Brandywine Avenue / Shinohara Lane and Main Street / Brandywine Avenue intersections. Based on the established criteria, the Project is calculated to have a substantial effect on the above mentioned intersections. Therefore, recommended improvements are discussed in *Section 12.0*.

The project shall be conditioned to either construct or contribute on a fair share basis toward the improvements necessary to address the Project's substantial traffic effects outlined in this traffic report. A condition shall also be added requiring the business owner to route all truck traffic to/from the south via Main Street to avoid adding truck traffic near the residential communities lying to the north of the Project site.

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LOCAL MOBILITY ANALYSIS

CHULA VISTA SHINOHARA

Chula Vista, California
July 19, 2022

1.0 INTRODUCTION

Linscott, Law and Greenspan, Engineers (LLG) has prepared this Local Mobility Analysis (LMA) to assess the operations of the street system as a result of the proposed Chula Vista Shinohara Project. The Project proposes to construct one (1) industrial building totaling 178,156 SF, with 4,506 SF of office use and 4,724 SF of mezzanine on the west side of Shinohara Lane in the City of Chula Vista.

The traffic analysis presented in this report includes the following:

- Project Description
- Existing Conditions
- CEQA Vehicle Miles Traveled (VMT) Assessment
- Analysis Approach and Methodology
- Substantial Effect Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Analysis of Existing + Project Scenario
- Access Assessment
- Active Transportation Discussion
- Recommended Improvements

2.0 PROJECT DESCRIPTION

The Project proposes to construct one (1) industrial building totaling 178,156 SF, with 4,506 SF of office use and 4,724 SF of mezzanine on a 9.75 gross-acre site located at 517 Shinohara Lane in the City of Chula Vista. Site access is proposed via the western terminus of Shinohara Lane.

The site is General Plan designated IL – Limited Industrial and Zoned (ILP) Limited Industrial and is deemed consistent with the General Plan. ***Appendix A*** contains supporting data on the Project's consistency with the General Plan

Figure 2–1 shows the Project vicinity and ***Figure 2–2*** illustrates, in more detail, the site location. ***Figure 2–3*** shows the Project site plan.

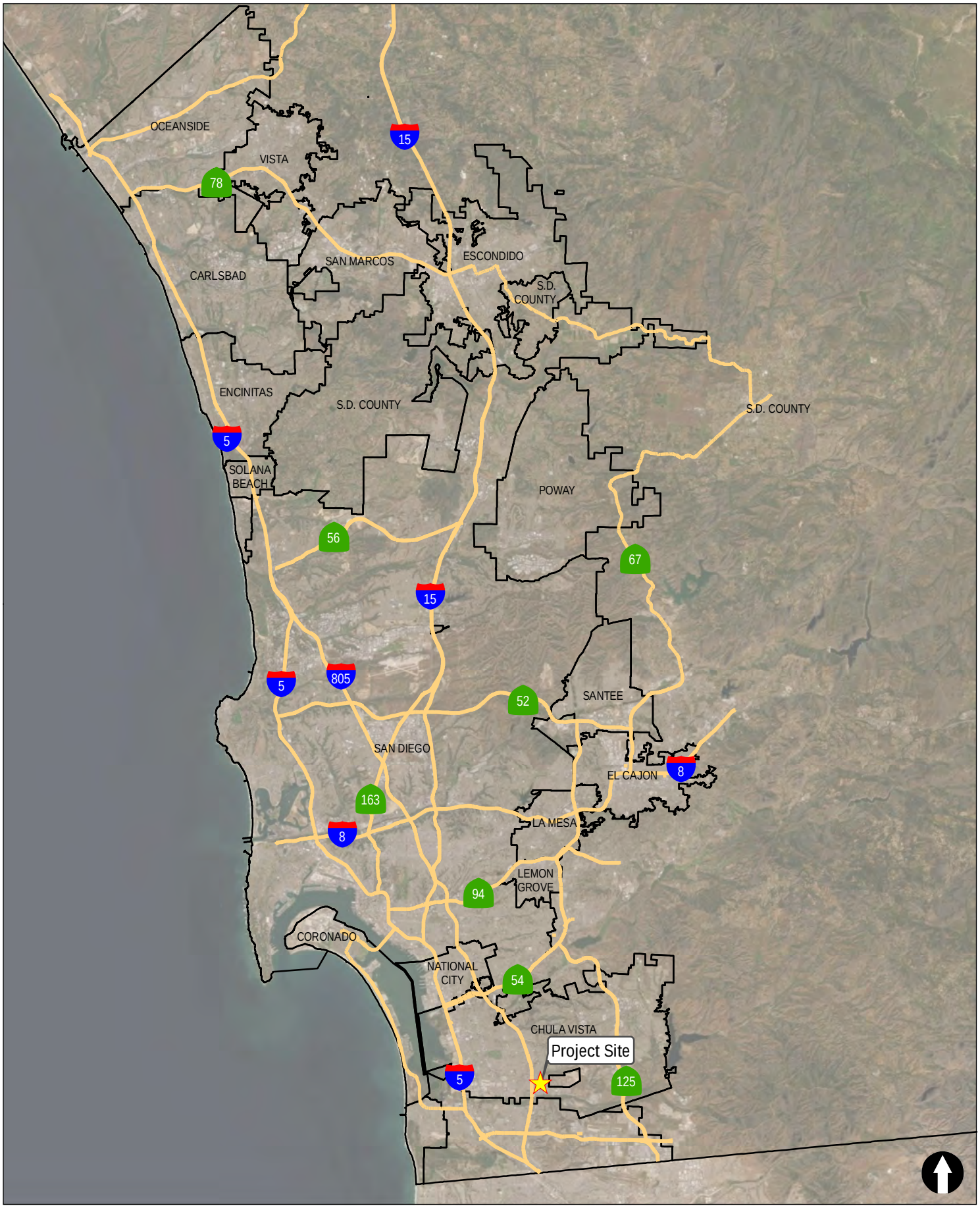

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Figure 2-1

Vicinity Map

CHULA VISTA SHINOHARA

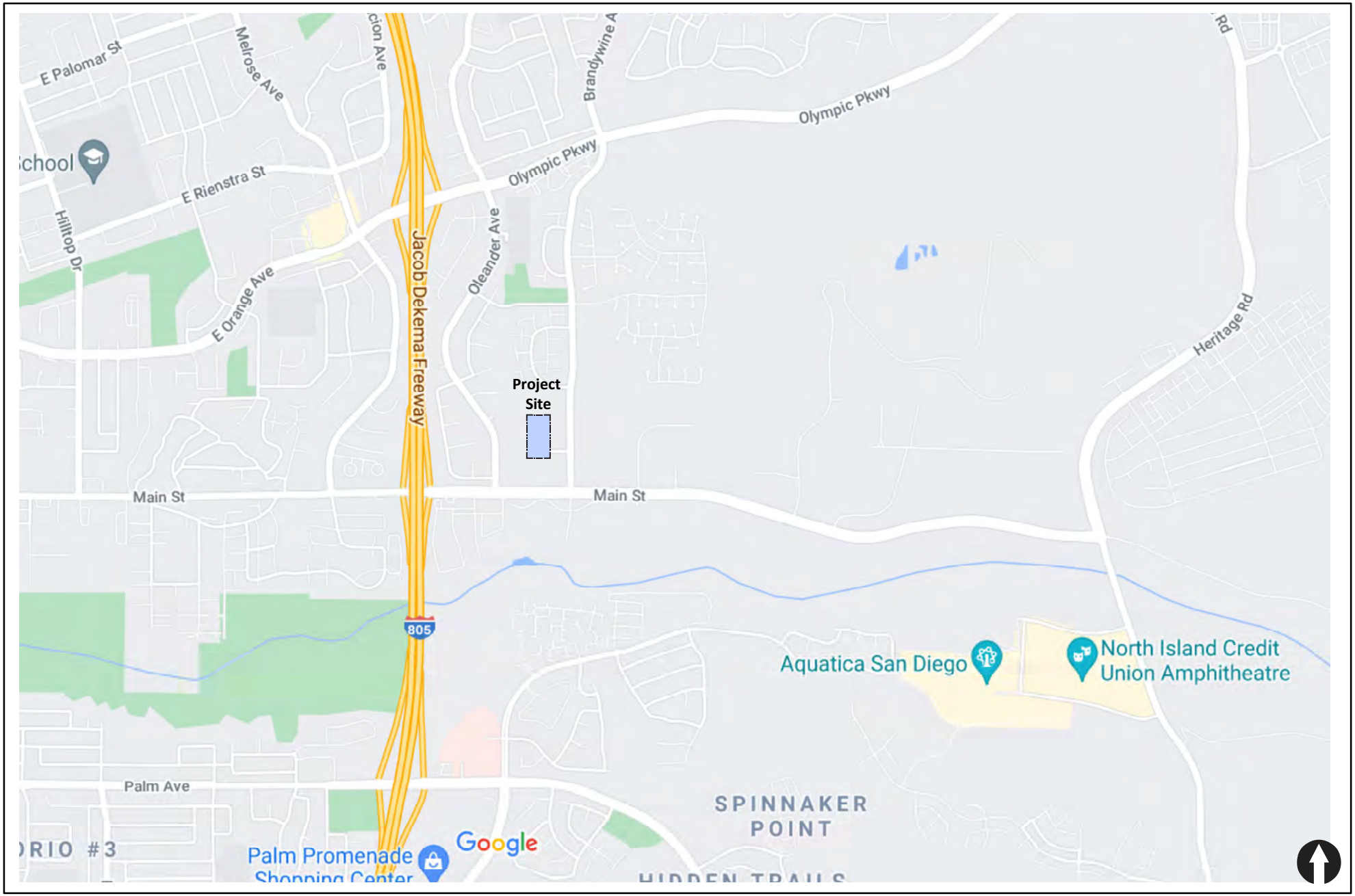

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Figure 2-2

Project Area Map

CHULA VISTA SHINOHARA

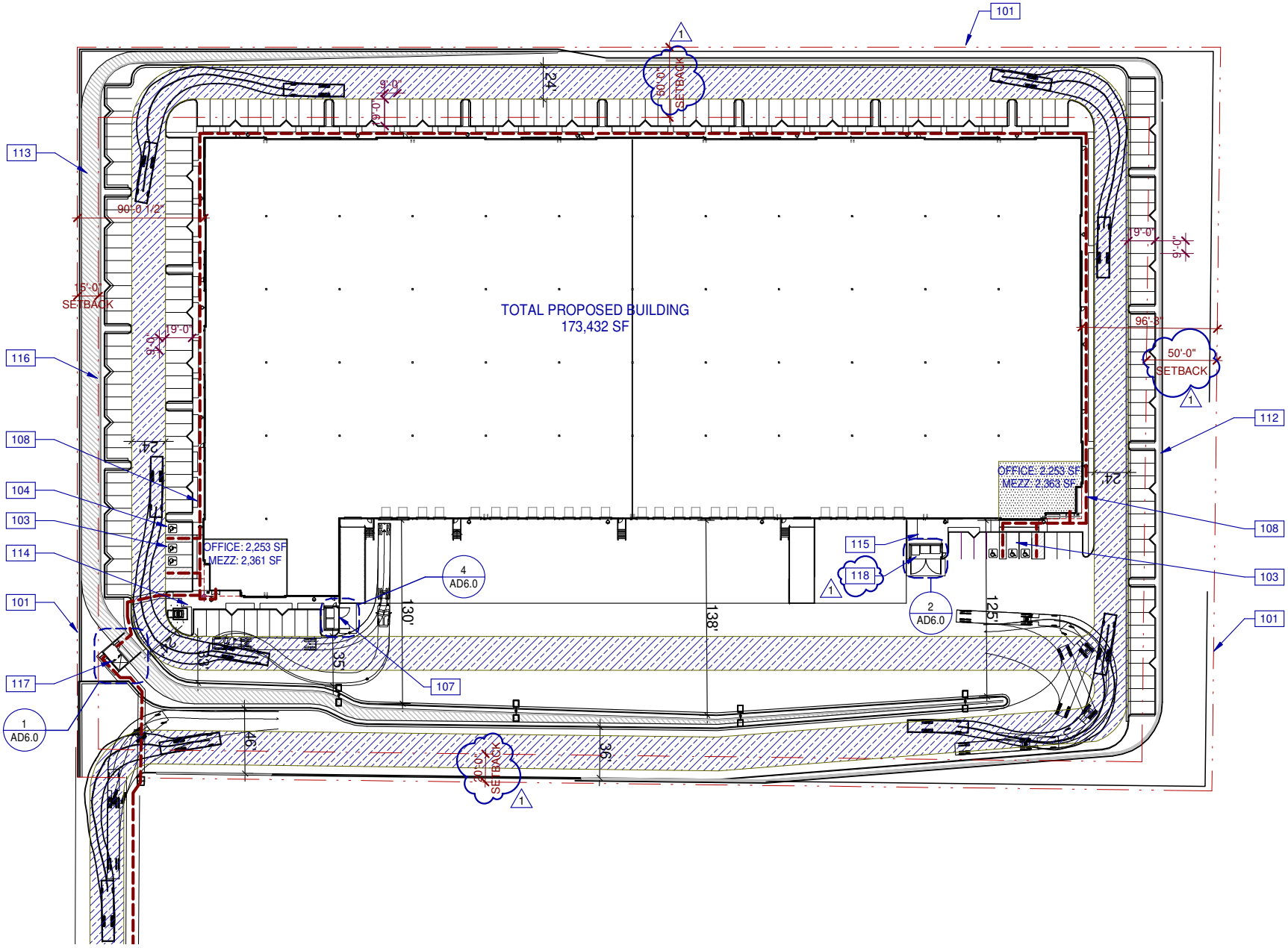

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Figure 2-3

Site Plan

Chula Vista Shinohara

3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed Project requires an understanding of the existing transportation system within the project area. ***Figure 3–1*** shows an existing conditions diagram, including unsignalized/signalized intersections and lane configurations.

The study area includes the following intersections:

1. Brandywine Avenue / Olympic Parkway
2. Brandywine Avenue / Sequoia Street
3. Shinohara Lane / Project Driveway
4. Brandywine Avenue / Shinohara Lane
5. Main Street / I-805 SB Ramps
6. Main Street / I-805 NB Ramps
7. Main Street / Main Court
8. Main Street / Oleander Avenue
9. Main Street / Brandywine Avenue
10. Main Street / Auto Park Place

3.1 Existing Transportation Conditions

The following is a description of the existing street network in the study area.

Olympic Parkway is classified as a 6 Lane Prime in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a six-lane divided roadway. Sidewalks are provided on both sides of the roadway. Class II bike lanes are provided on both sides of the roadway. Curbside parking is not permitted. The posted speed limit is 45 mph west of Brandywine Avenue and 50 mph east of Brandywine Avenue.

Shinohara Lane is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway with a curb-to-curb width of approximately 40 feet. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. There is no posted speed limit.

Main Street is classified as a 6 Lane Prime in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a six-lane divided roadway. Sidewalks are provided on both sides of the roadway. Class II bike lanes are provided on both sides of the roadway. Curbside parking is not permitted. The posted speed limit west of I-805 northbound ramps is 40 mph. Between I-805 northbound ramps and Brandywine Avenue, the speed limit is 45 mph and 50 mph east of Brandywine Avenue.

Main Court is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway. Sidewalks are not provided on either side of the roadway. Bike lanes are not provided. Curbside parking is not permitted. There is no posted speed limit.

Oleander Avenue is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided on either side of the roadway. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 25 mph.

Brandywine Avenue is classified as a Class I Collector in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway between Olympic Parkway and Sonora Drive. Between Sonora Drive and Mendocino Drive, Brandywine Avenue is built as a two-lane undivided roadway with two-way left-turn lane. It is constructed as a four-lane undivided roadway with a two-way left-turn lane between Mendocino Drive and Main Street. Sidewalks are provided on both sides of the roadway. Class II bike lanes are provided on both sides of the roadway. Curbside parking is permitted on both sides of the roadway between Olympic Boulevard and Mendocino Drive. The posted speed limit is 35 mph.

Auto Park Place is a non-classified roadway in the *City of Chula Vista General Plan Land Use and Transportation Element*. It is currently constructed as a two-lane undivided roadway with a two-way left-turn lane. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided on either side of the roadway. Curbside parking is permitted on both sides of the roadway. There is no posted speed limit.

3.2 Existing Traffic Volumes

Peak hour intersection turning movement volume counts were conducted at the following study area intersections, on Thursday, February 27, 2020. These counts were obtained from the City, and No adjustments were made as counts were conducted pre-Covid and while schools were in session.

- Main Street / Main Court
- Main Street / Oleander Avenue
- Main Street / Brandywine Avenue
- Main Street / Auto Park Place

Peak hour intersection turning movement volume counts were conducted at the following study area intersections, on Thursday, June 24, 2021. Based on a comparison between these counts and the City-provided year 2020 counts, the June 2021 were 20% less. Therefore, a growth rate of 20% was applied to account for Covid and summer counts.

- Brandywine Avenue / Olympic Parkway
- Brandywine Avenue / Sequoia Street
- Brandywine Avenue / Shinohara Lane

- Main Street / I-805 SB ramps
- Main Street / I-805 NB ramps

Figure 3–2 shows the Existing traffic volumes and *Appendix A* contains the Existing Count Sheets and growth rate calculations.

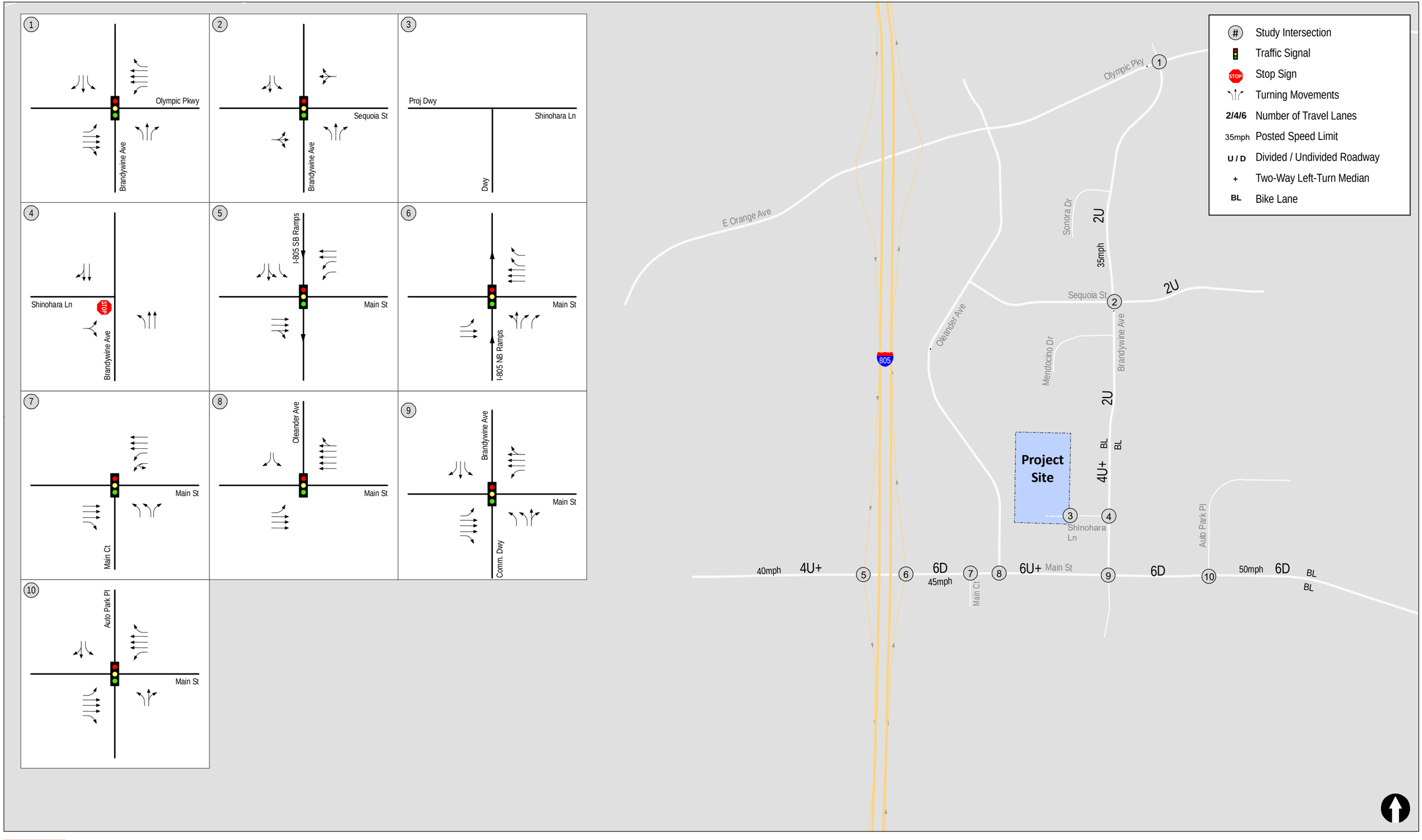

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Figure 3-1

Existing Conditions Diagram

Chula Vista Shinohara

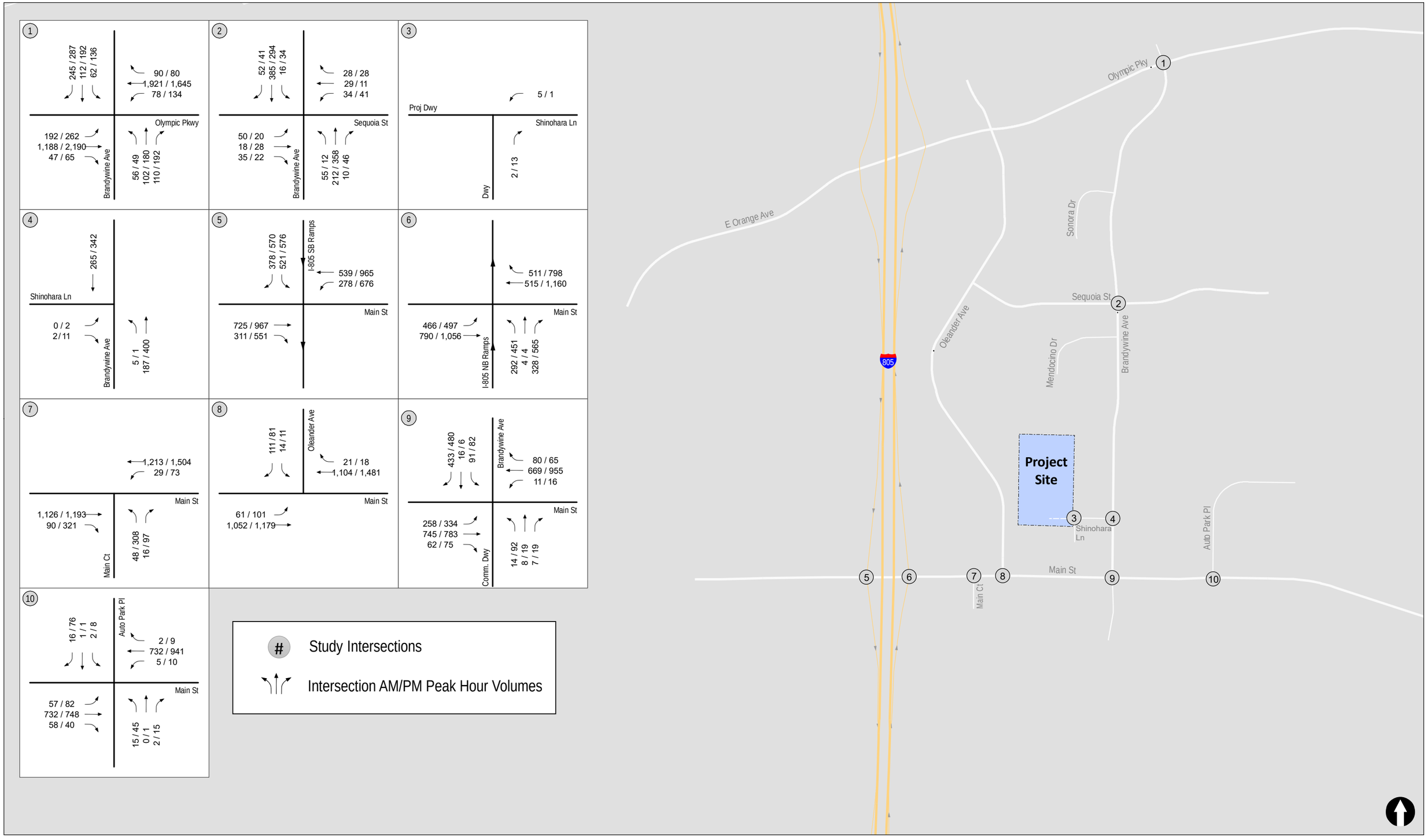

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Figure 3-2

Existing Traffic Volumes

Chula Vista Shinohara

4.0 VEHICLES MILES TRAVELED (VMT) ASSESSMENT

An assessment was conducted to determine the impacts on Vehicle Miles Traveled (VMT) for the Project. This assessment utilizes methodologies presented within the Governor's Office of Planning and Research (OPR) Technical Advisory developed to assist with implementation of Senate Bill 743 (SB 743), which resulted in a shift in the measure of effectiveness for determining transportation impacts from Level of Service (LOS) and vehicular delay to VMT. VMT analyses are required for use in all California Environmental Quality Act (CEQA) documents no later than July 1, 2020.

Per the *City of Chula Vista Transportation Study Guidelines*:

> "Industrial Employment projects located within a VMT-efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT-efficient area for industrial employment projects is any area with an average VMT/Employee at or below the baseline regional average for the census tract it is located within."

Significance Threshold

The Project is located in a VMT efficient area (at or below the base year average VMT/employee) based on the applicable location-based screening map produced by SANDAG. The baseline average regional VMT/employee is 18.9 per the SANDAG Series 14 (Year 2016) ABM2+ data.

Project VMT

Using the SANDAG screening map for industrial projects under per employee measurements, the Project would be expected to generate 15.32 VMT/employee. Per the *City's Transportation Study Guidelines (June 2020, updated January 2022)*, the Project would not require a VMT analysis and the Project is presumed to have a less than significant VMT impact. ***Table 4–1*** shows the VMT analysis results. ***Appendix B*** includes the result of the SANDAG map.

TABLE 4–1
PROJECT VEHICLE MILES TRAVELED ANALYSIS

VMT per Employee		
Geography	**VMT per Employee**	**Exceeds Threshold?**
San Diego Region	18.9	–
Significance Threshold (at Regional Average VMT)	18.9	–
Project Sites		
Chula Vista Shinohara	15.32	No

Source: SANDAG VMT Employee Screening Tool for the City of Chula Vista

5.0 LOCAL MOBILITY ANALYSIS APPROACH AND METHODOLOGY

5.1 Analysis Approach

Based on City guidelines, this traffic analysis assesses the study area intersections for the Existing and Existing + Project scenarios to determine the potential impacts to the road network, transit service, and active transportation facilities. The Project's expected Opening Year is Year 2022. Based on the City of Chula Vista Transportation Study Guidelines, "if the proposed project's opening year is within 2 years of the project's application, the Existing + Project scenario is considered to be the same as the project's Opening Year + Project scenario."

5.2 Analysis Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. As mentioned in *Section 4.0*, the implementation of SB 743 resulted in a shift in the measure of effectiveness for determining transportation impacts from Level of Service (LOS) and vehicular delay to VMT for all CEQA documents.

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 18 of the *Highway Capacity Manual (HCM) 6th Edition,* with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS). Signalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in ***Appendix C***.

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapters 19 and 20 of the *Highway Capacity Manual (HCM) 6th Edition,* with the assistance of the *Synchro* (version 10) computer software. Unsignalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in *Appendix C.*

City-provided signal timing plans and recommended parameters were inputted in the Synchro computer software and used as the basis of the analysis.

5.3 Pedestrian Mobility

The Project's pedestrian network connectivity was evaluated by reviewing the existing pedestrian network as discussed in *Section 11.0*.

5.4 Bicycle Mobility

The Project's bicycle network connectivity was evaluated by reviewing the existing bicycle network as discussed in *Section 11.0.*

5.5 Transit Mobility

The Transit Mobility review included the existing transit network, existing routes and headways of the MTS buses with stops in the Project study area as discussed in *Section 11.0.*

6.0 SUBSTANTIAL EFFECT CRITERIA

Project specific traffic effects are those effects for which the addition of project trips result in an identifiable degradation in LOS on intersections, triggering the need for specific project-related improvement strategies.

Table 6–1 shows the criteria for determining whether the Project results in project specific traffic effects on intersections in the City of Chula Vista.

TABLE 6–1
THRESHOLD FOR DETERMINING A PROJECT'S SUBSTANTIAL TRAFFIC EFFECT

Facility	Facility Type	Substantial Traffic Effect
Signal	Whole Intersection	• Proposed project contributes to an intersection that currently operates or is projected to operate at LOS E or below. • Proposed project causes an intersection's operations to degrade to LOS E or below.
	Turning Movement	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available storage length.
Freeway Interchange	Freeway Off-Ramp	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available off-ramp storage length and extending onto the freeway mainline.
All-way Stop Control	Whole Intersection	• Proposed project contributes to an intersection that currently operates, or is projected to operate, at LOS E or below. • Proposed project causes the intersection's operations to LOS E or below during one or more peak hours.
Side-Street Stop Control	Critical movement	• Proposed project contributes to a critical movement of an intersection that currently operates, or is projected to operate, at LOS E or below. • Proposed project causes the intersections critical movement to degrade to LOS E or below.
Pedestrian		All facilities within a project study area
Bicycle		All facilities within a project study area
Transit		All facilities within a project study area

General Notes:

1. Information obtained from *Table 3* of the City of Chula Vista Transportation Study Guidelines (updated January 2022).

7.0 ANALYSIS OF EXISTING CONDITIONS

Table 7–1 summarizes the existing peak hour intersection operations. As shown in *Table 7–1*, all the study area intersections are calculated to currently operate at LOS D or better during both the AM and PM peak hours.

Appendix D contains the Existing intersection analysis worksheets.

TABLE 7–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay[a]	LOS[b]
1. Brandywine Avenue / Olympic Parkway	Signal	AM	40.7	D
		PM	25.4	C
2. Brandywine Avenue / Sequoia Street	Signal	AM	14.2	B
		PM	25.7	C
3. Shinohara Lane / Project Driveway	AWSC[c]	AM	DNE	DNE
		PM	DNE	DNE
4. Brandywine Avenue / Shinohara Lane	MSSC[d]	AM	9.4	A
		PM	10.0	B
5. Main Street / I-805 SB Ramps	Signal	AM	27.3	C
		PM	39.6	D
6. Main Street / I-805 NB Ramps	Signal	AM	22.4	C
		PM	38.9	D
7. Main Street / Main Court	Signal	AM	2.2	A
		PM	7.1	A
8. Main Street / Oleander Avenue	Signal	AM	7.1	A
		PM	6.6	A
9. Main Street / Brandywine Avenue	Signal	AM	40.7	D
		PM	47.3	D
10. Main Street / Auto Park Place	Signal	AM	3.2	A
		PM	17.1	B

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. AWSC – All Way Stop Controlled intersection.
d. MSSC – Minor Street Stop Controlled intersection. Worst-case movement delay and LOS reported.

General Notes:
1. DNE – does not exist.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

8.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

8.1 Trip Generation

The Project proposed to construct one (1) building totaling 195,216 SF, with 187,748 SF of industrial use and 7,468 SF of office use. In order to account for the potential industrial land use alternatives, two alternative projects were analyzed in the report. The first would be warehousing only with no distribution occurring. The second would be a distribution facility. SANDAG has trip rates for warehousing and office, but does not have rates for industrial distribution facilities. LLG prepared traffic studies for proposed distribution facilities in El Cajon and Oceanside. A 25 / 1,000 SF trip rate was deemed appropriate. *Appendix B* contains information as to the source of this trip rate.

- ***Warehousing:*** SANDAG rates
  - 7,468 SF of Office – based on standard commercial office rate of 20/1,000 SF
  - 187,748 SF of Industrial – based on warehousing rate of 5/1,000 SF

- ***Distribution:*** Site-specific rates
  - 195,216 SF of Office + Industrial – based on site-specific rate of 25/1,000 SF

Table 8–1 summarizes the Project trip generation calculations. As shown in *Table 8–1*, a warehousing building is calculated to generate 1,088 daily trips with 143 AM peak hour trips (104 inbound / 39 outbound) and 160 PM peak hour trips (60 inbound / 100 outbound). A distribution facility is calculated to generate 4,881 daily trips with 328 AM peak hour trips (125 inbound / 203 outbound) and 619 PM peak hour trips (434 inbound / 185 outbound).

Subsequent to the completion of the traffic study, the Project size was reduced from 195,216 SF to 173,432 SF of industrial building. Therefore, the analysis in this report reflects the 195,216 SF building, which results in a slightly conservative analysis.

8.2 Trip Distribution/Assignment

The Project traffic was distributed along Main Street based on the site location, access to I-805, existing traffic patterns in the area, a review of trip distribution of similar land uses in the vicinity and anticipated traffic patterns to and from the site.

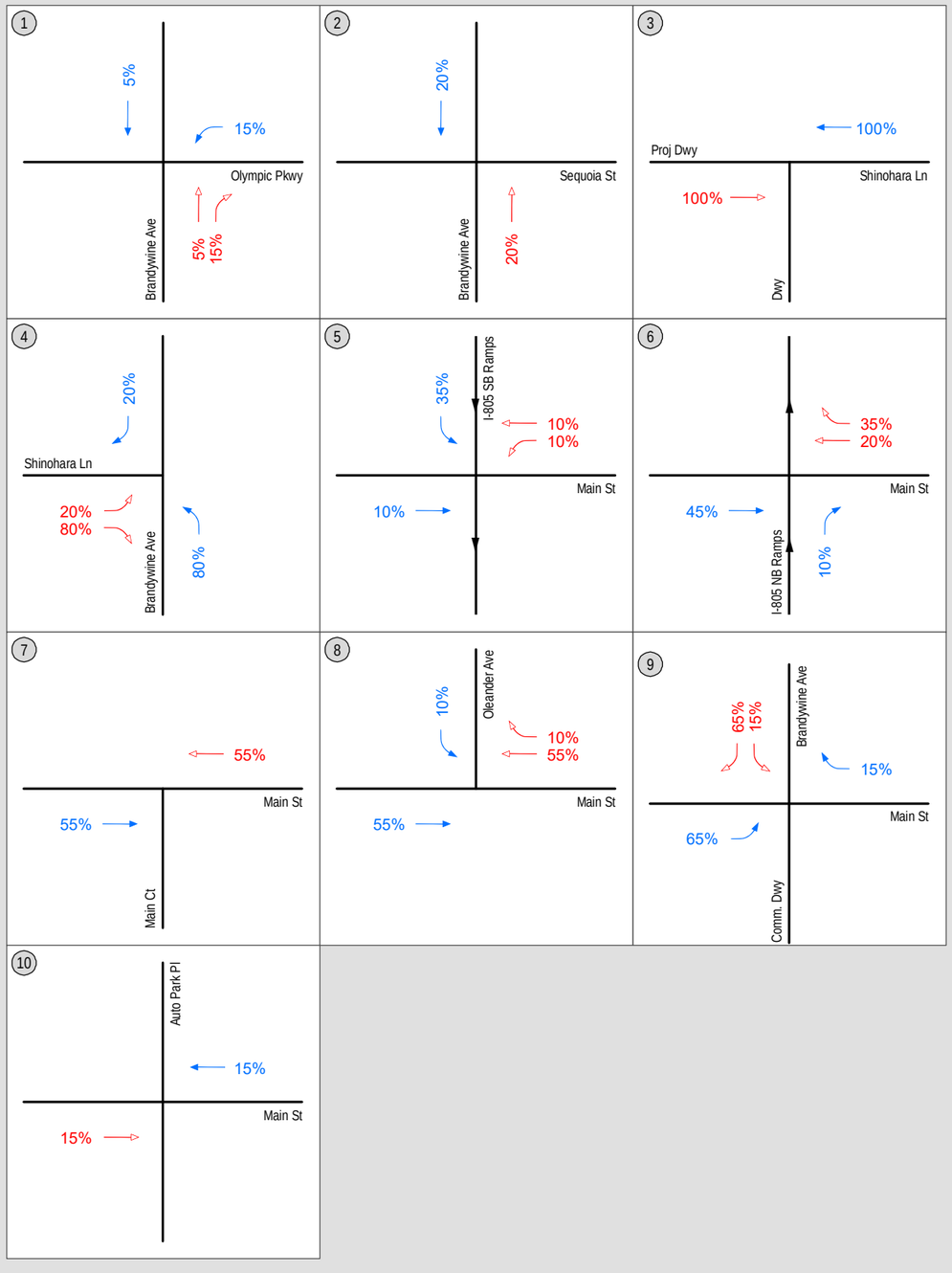
Figure 8–1 shows the Project traffic distribution. ***Figure 8–2*** shows the Project traffic volumes for the warehousing building. ***Figure 8–3*** shows the Project traffic volumes for the distribution facility.

TABLE 8–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate [a]	Volume	% of ADT [a]	In:Out Split	Volume			% of ADT [a]	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Warehousing Building													
Office	7,468 SF	20 /KSF[b]	149	14%	90 : 10	19	2	21	13%	20 : 80	4	15	19
Industrial Building	187,748 SF	5 /KSF[c]	939	13%	70 : 30	85	37	122	15%	40 : 60	56	85	141
Total			***1,088***			***104***	***39***	***143***			***60***	***100***	***160***
Distribution Facility													
Office	7,468 SF	25 /KSF[d]	187	6.71%	38 : 62	5	8	13	12.67%	70 : 30	17	7	24
Industrial Building	187,748 SF	25 /KSF[d]	4,694	6.71%	38 : 62	120	195	315	12.67%	70 : 30	417	178	595
Total			***4,881***			***125***	***203***	***328***			***434***	***185***	***619***

Footnotes:

a. Rates are based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region,* April 2002.
b. Rates are based on standard commercial office rate of 20/1,000 SF
c. Rates are based on warehousing rate of 5/1,000 SF.
d. Rates are based on site specific rate of 25/1,000 SF.



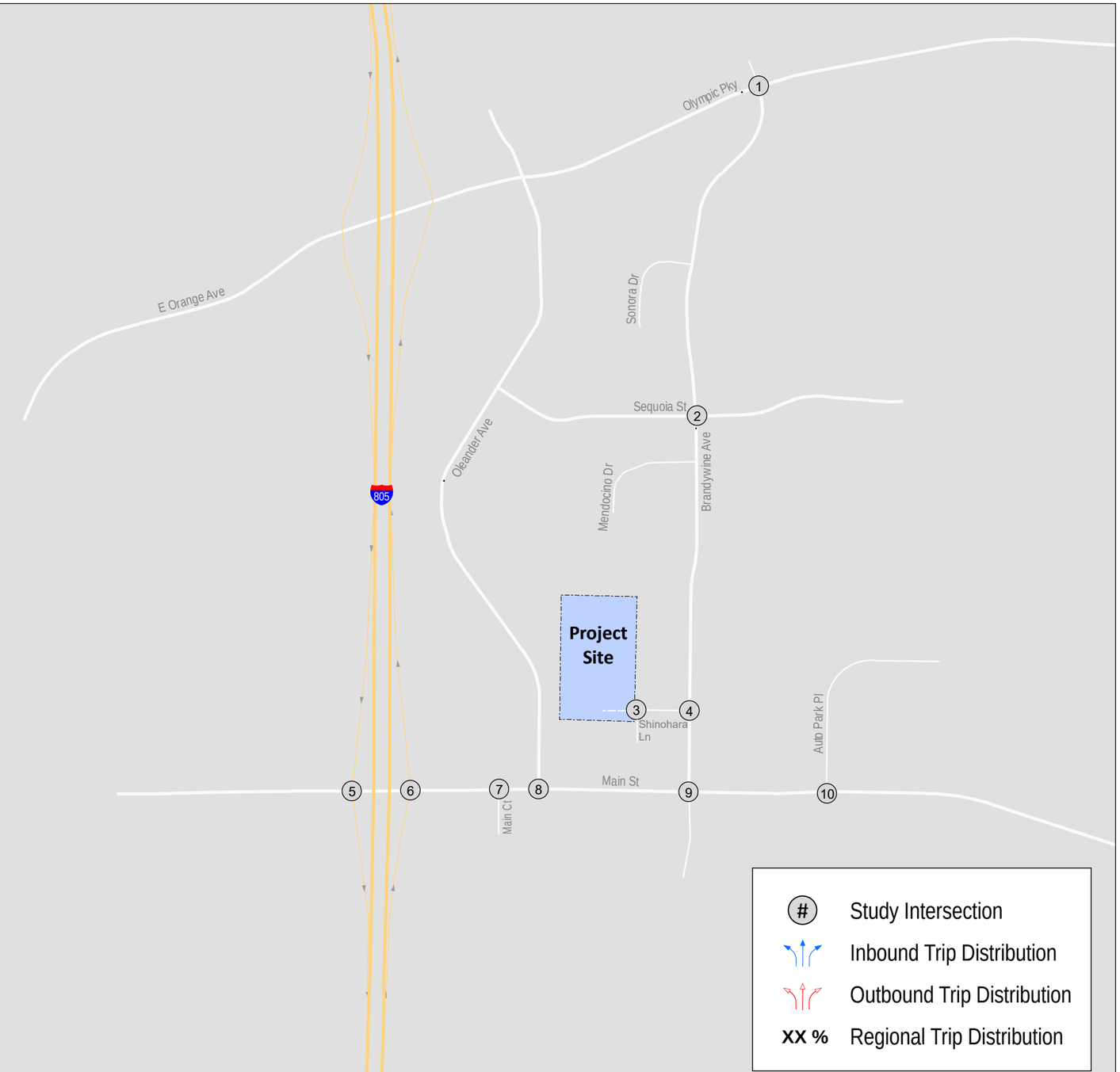


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Figure 8-1

Project Traffic Distribution

Chula Vista Shinohara

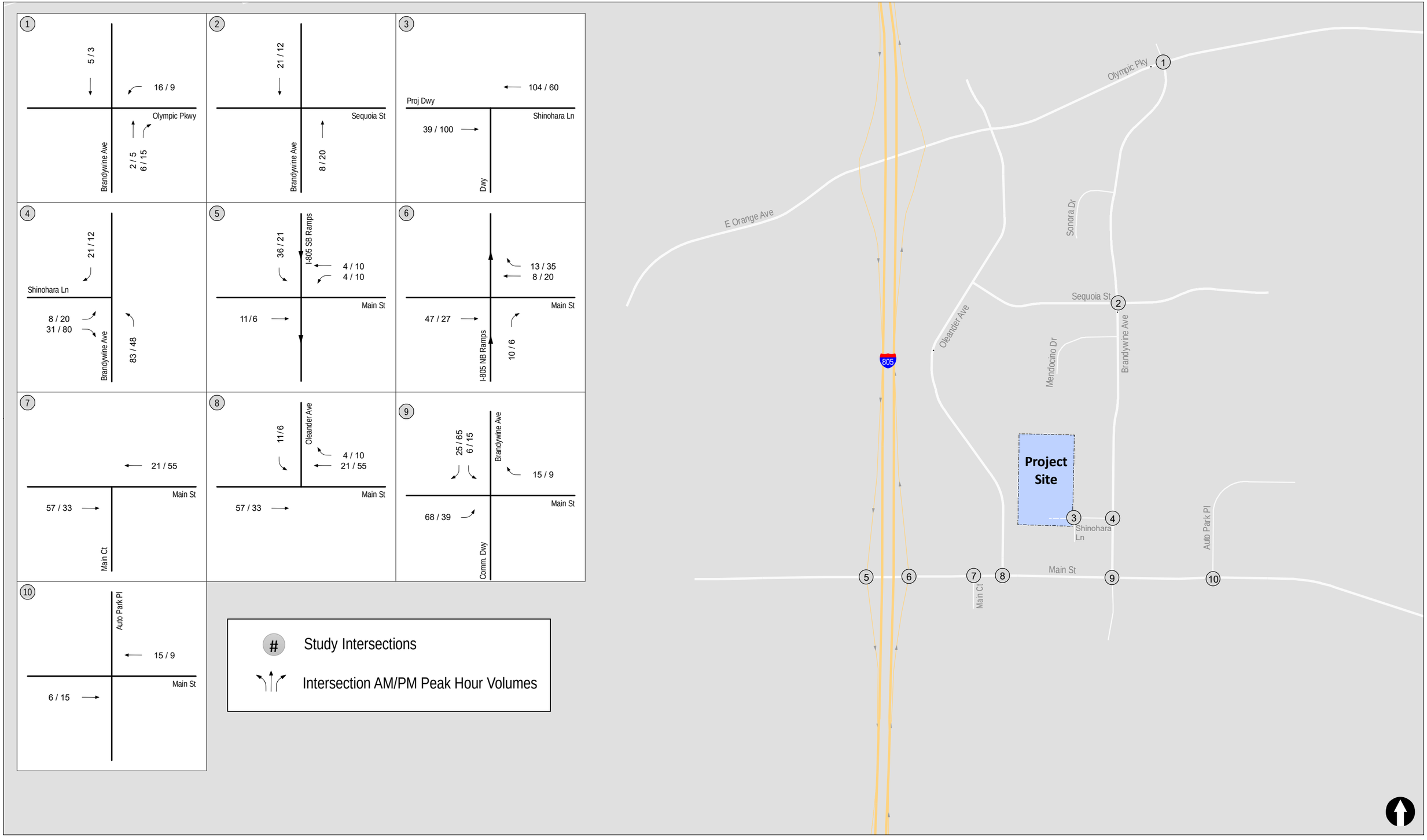

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Figure 8-2

Project Traffic Volumes

(Warehousing Building)

Chula Vista Shinohara

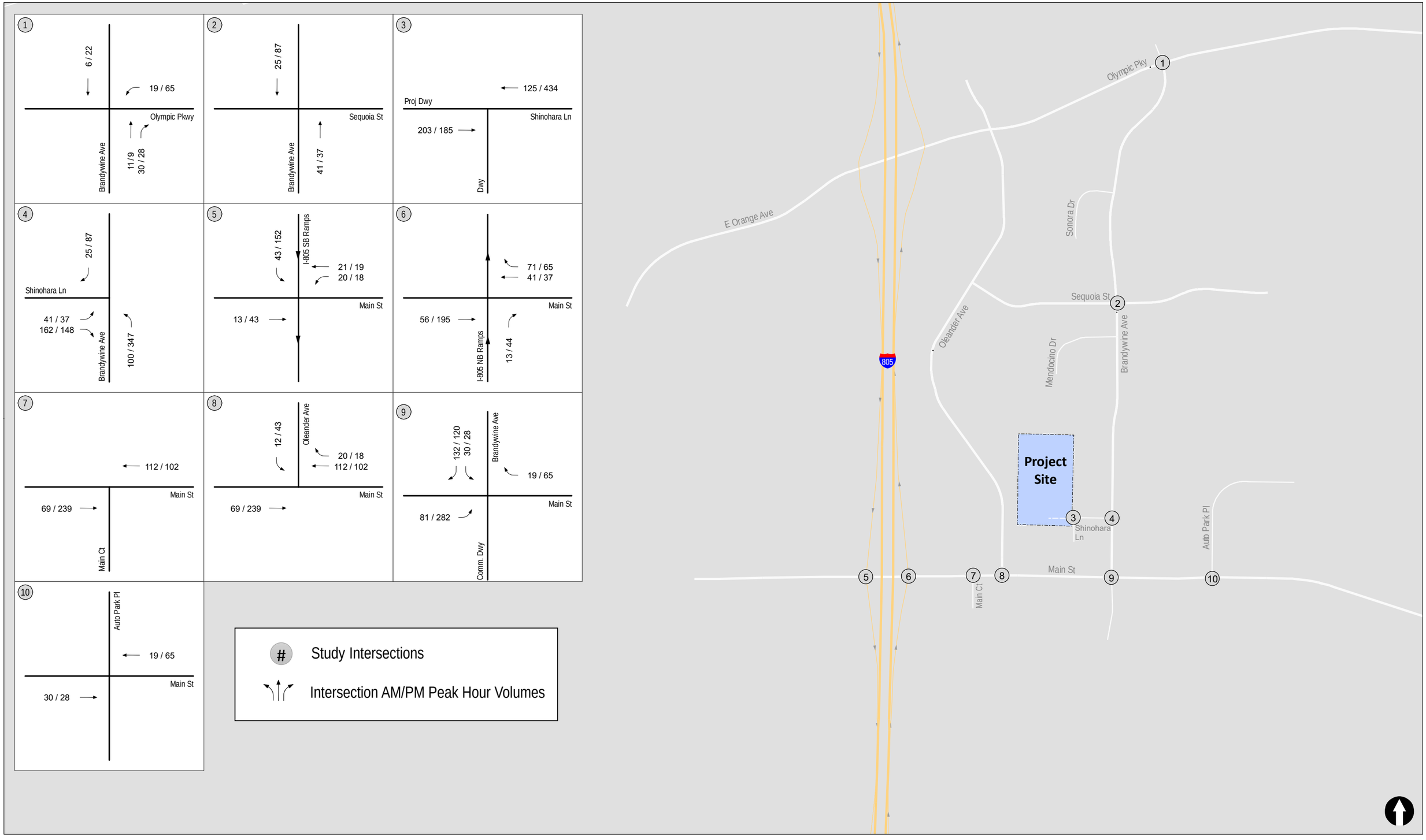

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Figure 8-3

Project Traffic Volumes

(Distribution Facility)

Chula Vista Shinohara

9.0 ANALYSIS OF EXISTING + PROJECT CONDITIONS

Intersection analysis under the Existing + Project scenario was conducted for the warehousing building and distribution facility. ***Table 9–1*** summarizes the peak hour intersection operations under Existing + Project conditions in the study area. As shown, the study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours with the exception for the following intersection:

Warehousing Building

- Brandywine Avenue / Shinohara Lane (LOS E during the PM peak hour)
- Main Street / Brandywine Avenue (LOS E during the AM and PM peak hours)

Distribution Facility

- Brandywine Avenue / Shinohara Lane (LOS F during the AM and PM peak hours)
- Main Street / Brandywine Avenue (LOS E during the AM peak hour and LOS F during the PM peak hour)

Figure 9–1 shows the Existing + Project (Warehousing Building) traffic volumes. ***Figure 9–2*** shows the Existing + Project (Distribution Facility) traffic volumes. ***Appendix E*** contains the Existing + Project intersection analysis worksheets.

TABLE 9–1
EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project (Warehousing Building)		Δ[c]	Project (Warehousing Building) Traffic Volumes Contribution (%)	Existing + Project (Distribution Facility)		Δ[c]	Project (Distribution Facility) Traffic Volumes Contribution (%)
			Delay[a]	LOS[b]	Delay	LOS			Delay	LOS		
1. Brandywine Avenue / Olympic Parkway	Signal	AM	40.7	D	42.7	D	2.0	1%	42.9	D	2.2	2%
		PM	25.4	C	27.1	C	1.7	1%	33.4	C	8.0	2%
2. Brandywine Avenue / Sequoia Street	Signal	AM	14.2	B	14.7	B	0.5	3%	14.6	B	0.4	7%
		PM	25.7	C	26.2	C	0.5	3%	28.2	C	2.5	12%
3. Shinohara Lane / Project Driveway	AWSC[d]	AM	DNE	DNE	7.6	A	–	95%	8.3	A	–	98%
		PM	DNE	DNE	7.5	A	–	92%	11.2	B	–	98%
4. Brandywine Avenue / Shinohara Lane	MSSC[e]	AM	9.4	A	16.4	C	7.0	24%	238.4	F	229.0	42%
		PM	10.0	B	44.8	E	34.8	17%	624.5	F	614.5	45%
5. Main Street / I-805 SB Ramps	Signal	AM	27.3	C	27.9	C	0.6	2%	28.1	C	0.8	3%
		PM	39.6	D	42.2	D	2.6	1%	42.6	D	3.0	5%
6. Main Street / I-805 NB Ramps	Signal	AM	22.4	C	24.7	C	2.3	3%	25.6	C	3.2	6%
		PM	38.9	D	47.6	D	8.7	2%	48.3	D	9.4	7%
7. Main Street / Main Court	Signal	AM	2.2	A	2.3	A	0.1	3%	2.4	A	0.2	7%
		PM	7.1	A	7.5	A	0.4	2%	7.7	A	0.6	9%
8. Main Street / Oleander Avenue	Signal	AM	7.1	A	7.1	A	0.0	4%	7.1	A	0.0	8%
		PM	6.6	A	6.8	A	0.2	3%	6.9	A	0.3	12%
9. Main Street / Brandywine Avenue	Signal	AM	40.7	D	60.0	E	19.3	5%	84.9	F	44.2	10%
		PM	47.3	D	69.4	E	22.1	4%	144.1	F	96.8	14%

TABLE 9–1
EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project (Warehousing Building)		Δ[c]	Project (Warehousing Building) Traffic Volumes Contribution (%)	Existing + Project (Distribution Facility)		Δ[c]	Project (Distribution Facility) Traffic Volumes Contribution (%)
			Delay[a]	LOS[b]	Delay	LOS			Delay	LOS		
10. Main Street / Auto Park Place	Signal	AM	3.2	A	3.2	A	0.0	1%	3.2	A	0.0	3%
		PM	17.1	B	17.3	B	0.2	1%	17.5	B	0.4	4%

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes an increase in delay due to project.
d. AWSC – All Way Stop Controlled intersection.
e. MSSC – Minor Street Stop Controlled intersection. Worst-case movement approach delay and LOS reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

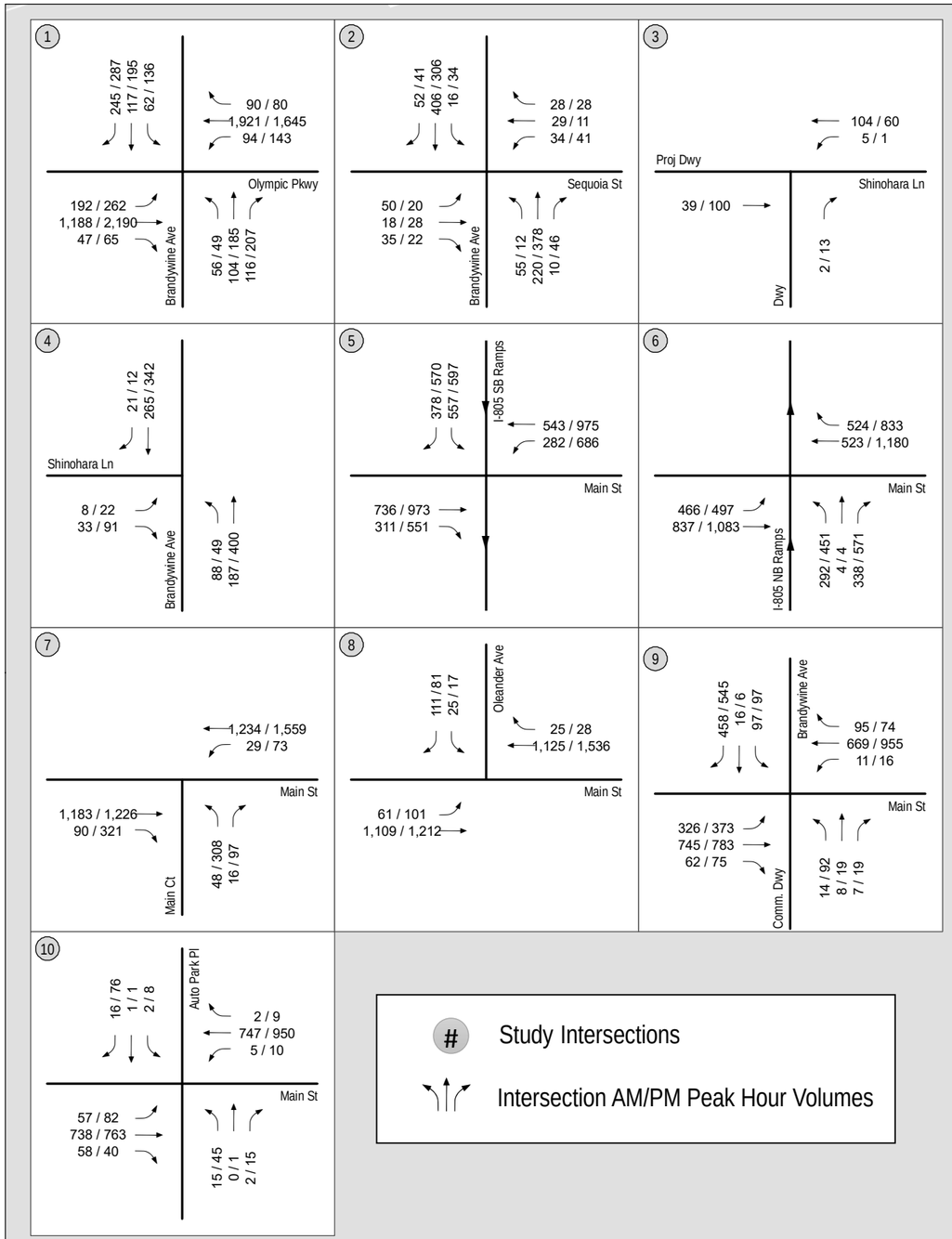

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Figure 9-1

Existing + Project Traffic Volumes

(Warehousing Building)

Chula Vista Shinohara

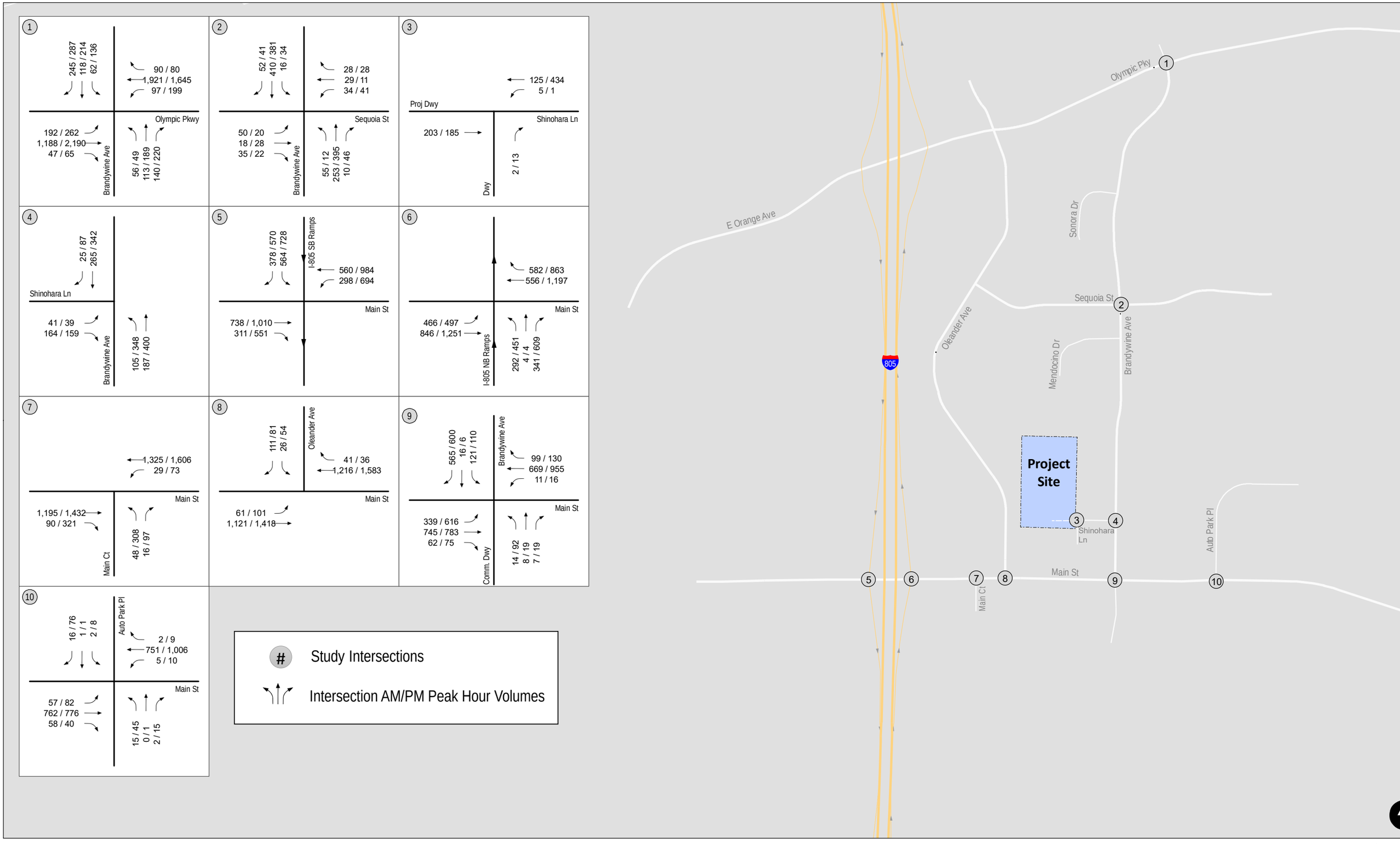

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Figure 9-2

Existing + Project Traffic Volumes

(Distribution Facility)

Chula Vista Shinohara

10.0 ACCESS ASSESSMENT

As described in *Section 2.0*, the Project's access would be via the western terminus of Shinohara Lane. The driveway will be approximately 39 feet wide and serve as full access. The driveway will be fronting a cul-de-sac on a two-lane undivided roadway that primarily serves business along Shinohara Lane. The Project driveway is calculated to operate at LOS B or better.

10.1 Queueing Analysis

A queue analysis was conducted for the key left-turn movements at the two intersections with the most Project traffic using simulation provided by the SimTraffic analysis software for both a warehousing building option and a distribution facility option. The following shows the queue results for the two intersections: Main Street / Brandywine Avenue and Brandywine Avenue / Shinohara Lane.

Per the *City of Chula Vista Transportation Study Guidelines*, if actual heavy vehicle percentage data is not available, the minimum recommended value is 3%. To be conservative, a 5% heavy vehicle percentage was applied to all study area intersections. The synchro files consider that 5% of traffic traversing in the study area is comprised of heavy vehicles in both the operations and queue length calculations. The queue length results are reported in units of feet and includes an assumption that a portion of the vehicles are trucks. Given that an average car length is 25 feet, the queue length value can also be presented in number of vehicles.

A. Warehousing Building

Main Street / Brandywine Avenue: The 95th percentile eastbound left-turn queue is calculated to be 300' or less (approximately 12 vehicles) during the AM and PM peak hours. The 95th percentile southbound left-turn queue is calculated to be 130' or less (approximately 6 vehicles) during the AM and PM peak hours. The 95th-percentile queue is defined to be the queue length that has only a 5-percent probability of being exceeded during the analysis time period.

Brandywine Avenue / Shinohara Lane: The 95th percentile northbound left-turn queue is calculated to be 65' or less (approximately 3 vehicles, assuming an average car length of 25') during the AM and PM peak hours.

B. Distribution Facility

Main Street / Brandywine Avenue: The 95th percentile eastbound left-turn queue is calculated to be 288' or less (approximately 12 vehicles) during the AM and PM peak hours. The 95th percentile southbound left-turn queue is calculated to be 136' or less (approximately 6 vehicles) during the AM and PM peak hours.

Brandywine Avenue / Shinohara Lane: The 95th percentile northbound left-turn queue is calculated to be 83' or less (approximately 4 vehicles, assuming an average car length of 25') during the AM and PM peak hours.

Table 10–1 shows the queue summary results under Existing and Existing + Project conditions. As shown in *Table 10–1*, the existing eastbound left-turn storage of 300’ and southbound left-turn storage of 160’ at the Main Street / Brandywine Avenue intersection and the existing northbound left-turn storage of 240’ (two-way left-turn lane) at the Brandywine Avenue / Shinohara Lane intersection is expected to be able to accommodate the Project-induced increase in queue.

Appendix F contains the Existing and Existing + Project queue calculation worksheets.

TABLE 10–1
QUEUE SUMMARY

Intersection	Movement	Peak Hour	Existing		Existing + Project (Warehousing Building)		Existing + Project (Distribution Facility)	
			Storage	Queue Length	Storage	Queue Length	Storage	Queue Length
4. Brandywine Avenue / Shinohara Lane	NBL	AM	240’	14’	240’	62’	240’	67’
		PM		5’		58’		85’
9. Main Street / Brandywine Avenue	EBL	AM	300’	265’	300’	289’	300’	289’
		PM		292’		297’		277’
	SBL	AM	160’	132’	160’	137’	160’	143’
		PM		115’		138’		125’

General Notes:

1. 95th percentile queues reported.
2. Simulation was conducted for 5 runs of 1-hour recording.

10.2 Sight Distance

LLG performed a field survey (not an engineering survey) to determine whether or not the minimum required intersection sight distances can be achieved for drivers turning left from Shinohara Lane. Per the *AASHTO Geometric Design of Highways and Street Manual*, the point of observation for our review is offset 14.5 feet from the edge of the traveled way. The driver’s eyes are measured at 3.5 feet from the ground surface, and the object to be observed is also 3.5 feet from the ground. The location of the object to be observed is located in the middle of the travel lane.

Based on the proposed traffic control at the Project driveway, the appropriate sight distance formula would reflect the left-turn from the minor road with stop control and represent the appropriate constraint on drivers leaving the Project site. The formula below has variables which are dependent on the design speed of the major road (V_{major}) and expected maneuver time (t_g) pertaining to each specific turning movement.

Per the above guidelines, the intersection distance for both left and right approaches of the minor leg need to be determined for vehicles turning left out of Shinohara Lane. As shown in Table *10–2*, looking left from the driveway, the minimum required intersection sight distance is 540 feet, and looking right from the driveway towards the westbound approach the sight distance is 592 feet. Based on our field observations, sight distance requirements are met for both southbound (540 feet) and northbound (592 feet) approaches.

Appendix F contains excerpts from AASHTO and a figure showing the results.

TABLE 10–2
SIGHT DISTANCE CALCULATIONS

Equation	V_{major}[a]	Viewing Direction	t_g[b]	ISD[c]
$ISD = 1.47\ V_{major}\ t_g$	35 mph	Traffic approaching minor road from the left	10.5 seconds	540 feet
		Traffic approaching minor road from the right	11.5 seconds	592 feet

Footnotes:

a. V_{major} = design speed of major road (mph)

b. t_g = time gap for minor road vehicle to enter the major road (s)

c. ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)

General Notes:

1. Equation per *AASHTO's* Case B – Intersections with stop control on the minor road (Section 9.5.3.2). Excerpt included in *Appendix F*.

11.0 ACTIVE TRANSPORTATION

11.1 Pedestrian Mobility

Shinohara Lane – Within the study area, Shinohara Lane currently provides contiguous sidewalks on the north side only.

Brandywine Avenue – Within the study area, Brandywine Avenue currently provides contiguous sidewalks on both sides.

The nearest signalized intersection is less than ½ mile south of the Project site, at the Main Street / Brandywine Avenue intersection, and provides a controlled crossing location with pedestrian push buttons and crosswalks.

Main Street – Within the study area, Main Street currently provides contiguous sidewalks on the north side and non-contiguous sidewalks on the south side. Signalized intersections are less than ½ mile apart along Main Street, and provides a controlled crossing location with pedestrian push buttons and crosswalks.

Based on the *City of Chula Vista Active Transportation Plan,* no sidewalk improvements are planned within ½ mile of the Project site. The Project will generate very little walking trips since the Project is industrial in nature and there are no retail or restaurant opportunities within half a mile of the Project site that would encourage pedestrian activity.

Curb ramps are provided at all study area intersections where pedestrian crossings are permitted. In addition, detectable warning strips are provided at the following intersections:

- Brandywine Avenue / Olympic Parkway – southwest and southeast corners
- Brandywine Avenue / Sequoia Street – all corners
- Brandywine Avenue / Shinohara Lane – northwest and southwest corners
- Main Street / Main Court – southwest and southeast corners
- Main Street / Brandywine Avenue – all corners
- Main Street / Auto Park Place – all corners

11.2 Bicycle Mobility

A bicycle network inventory was conducted for the study area. Based on a review of the *City of Chula Vista General Plan*, a Class II bike lane is provided along Main Street and Brandywine Avenue within the study area. There are currently no bike lanes or bike routes provided on Shinohara Lane within the study area.

Based on the *City of Chula Vista Active Transportation Plan,* a Class IV Cycle Track is planned to be constructed on Brandywine Avenue between Palomar Street and Main Street, and on Olympic Parkway east of Brandywine Avenue.

11.3 Transit Mobility

The nearest bus stop is located approximately 1/5 mile (approximately 5 minutes of walk time) from the Project site, at the Main Street / Brandywine Avenue intersection. There are multiple bus stops along Main Street and Brandywine Avenue. These stops are served by MTS bus route 704 which runs from the E Street Transit Center to the Palomar Street Transit Center. MTS bus route 704 runs along 3rd Avenue, Naples Street, Brandywine Avenue, Main Street and Orange Avenue. Weekday service begins at 5:22 AM with 30-minute headways and ends at 9:53 PM. Saturday service begins at 5:51 AM with 1-hour headways and ends at 9:19 PM. Sunday service begins at 7:22 AM with 1-hour headways and ends at 6:54 PM. Bus bench and trash receptacles are provided at each bus stop located within ¼ mile of the Project site. ***Appendix G*** contains the bus route schedule and map.

12.0 RECOMMENDED IMPROVEMENTS

A transportation assessment was conducted to determine any project-induced deficiencies within the study area. Based on a preliminary analysis, the following improvements are anticipated to be needed to accommodate Project traffic.

Two land use scenarios were analyzed, a warehousing building option and a distribution facility option.

A. Warehousing Building

Main Street / Brandywine Avenue: The Project is calculated to add traffic volumes that would degrade the intersection operations to a level of deficient. Restriping the southbound approach to replace the exclusive southbound thru with a shared thru-right lane would improve the operation. *Figure 8–2* shows the Project traffic volumes at this intersection.

Brandywine Avenue / Shinohara Lane: The Project is calculated to add a large amount of traffic volumes to the eastbound movement that would cause operational effects for outbound Project traffic entering Brandywine Avenue. Therefore, the eastbound approach would need to be restriped to provide dedicated left and right-turn lanes. Approximately 40 feet of curb-to-curb width is available on the west leg of Shinohara Lane, and therefore, it is possible to restripe the eastbound approach to provide dedicated left and right-turn lanes with the removal of on-street parking on the south side. With the implementation of these improvements, the 95th percentile eastbound right-turn movement queue is calculated to be 61' or less (approximately 3 vehicles) during the AM and PM peak hours. Therefore, a right-turn lane of approximately 100' in length is recommended which would result in an on-street parking removal of 4 vehicles on Shinohara Lane. *Figure 8–2* shows the Project traffic volumes at this intersection.

B. Distribution Facility

Main Street / Brandywine Avenue: The Project is calculated to add traffic volumes that would degrade the intersection operations to a level of deficient. Restriping the southbound approach to replace the exclusive southbound thru with a shared thru-right lane and adding a second exclusive eastbound left-turn lane on Main Street is recommended. Approximately 115 feet of curb-to-curb width is available on the west leg of Main Street, and therefore, it is possible to provide this additional lane through restriping Main Street. *Figure 8–3* shows the Project traffic volumes at this intersection.

Brandywine Avenue / Shinohara Lane: The Project is calculated to add heavy traffic volumes on the eastbound movement that would cause poor operations for the outbound Project traffic entering Brandywine Avenue. Signalizing the intersection is required to provide adequate operations. The eastbound approach would need to be restriped with dedicated left and right-turn lanes with an overlap phase as it would allow for a safer maneuver for outbound traffic entering Brandywine Avenue. Approximately 40 feet of curb-to-curb width is available on the west leg of Shinohara Lane, and therefore, it is possible to restripe the eastbound approach to provide dedicated left and right-

turn lanes with the removal of on-street parking on the south side. With the implementation of these improvements, the 95th percentile eastbound right-turn movement queue is calculated to be 79’ or less (approximately 4 vehicles) during the AM and PM peak hours. Therefore, a right-turn lane of approximately 100’ in length is recommended which would result in an on-street parking removal of 4 vehicles on Shinohara Lane. *Figure 4* shows the Project traffic volumes at this intersection.

Table 12–1 summarizes the post improvement peak hour intersection operations. ***Appendix H*** contains the Existing + Project with recommendations intersection analysis and queuing worksheets. ***Appendix I*** contains the Main Street and Shinohara Lane proposed roadway cross sections.

Sidewalks are continuous between the Project driveway and the nearest signalized intersection of Main Street / Brandywine Avenue which is about ¼ mile south of the Project site. Class II bike lanes are provided along Brandywine Avenue and Main Street. Also, bus stops are located approximately 1/5 mile from the Project site, at the Main Street / Brandywine Avenue intersection. Given these current conditions, no improvements are recommended to accommodate the Project’s active transportation needs.

TABLE 12–1
EXISTING + PROJECT INTERSECTION OPERATIONS WITH IMPROVEMENTS

Intersection	Control Type	Peak Hour	Existing Without Project		Existing With Project		Improvement	Existing With Project	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]		Delay[a]	LOS[b]
Warehousing Building									
4. Brandywine Avenue / Shinohara Lane	MSSC[c]	AM	9.4	A	16.4	C	Restripe the eastbound approach to replace the shared left-right lane with an exclusive left-turn and exclusive right-turn lane.	12.8	B
		PM	10.0	B	44.8	E		13.3	B
9. Main Street / Brandywine Avenue	Signal	AM	40.7	D	60.0	E	Restripe the southbound approach to replace the exclusive southbound thru with a shared thru-right lane.	45.7	D
		PM	47.3	D	69.4	E		43.4	D

TABLE 12–1
EXISTING + PROJECT INTERSECTION OPERATIONS WITH IMPROVEMENTS

Intersection	Control Type	Peak Hour	Existing Without Project		Existing With Project		Improvement	Existing With Project	
			Delay[a]	LOS[b]	Delay[a]	LOS[b]		Delay[a]	LOS[b]
Distribution Facility									
4. Brandywine Avenue / Shinohara Lane	MSSC[c]	AM	9.4	A	238.4	F	Restripe the eastbound approach to replace the shared left-right lane with an exclusive left-turn and exclusive right-turn lane. Signalize the intersection and provide an eastbound right-turn overlap phase.	10.0	A
		PM	10.0	B	624.5	F		12.3	B
9. Main Street / Brandywine Avenue	Signal	AM	40.7	D	84.9	F	Restripe the southbound approach to replace the exclusive southbound thru with a shared thru-right lane and add a second exclusive eastbound left-turn lane on Main Street.	33.8	C
		PM	47.3	D	144.1	F		41.1	D

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. MSSC – Minor Street Stop Controlled intersection. Worst-case movement approach delay and LOS reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

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LAW &
GREENSPAN
engineers

TECHNICAL APPENDICES
CHULA VISTA SHINOHARA

Chula Vista, California
July 19, 2022

LLG Ref. 3-21-3408

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APPENDICES

APPENDIX

A. Supporting Data on Project's Consistency with General Plan, Intersection Manual Count Sheets and Growth Rate Calculations; Signal Timing Plans

B. SANDAG Screening Map and Site-Specific Distribution Facility Trip Rate Comparison

C. Intersection Methodology

D. Existing Peak Hour Intersection Analysis Worksheets

E. Existing + Project Peak Hour Intersection Analysis Worksheets

F. Queue Calculation Sheets and excerpts from the *AASHTO Geometric Design of Highways and Street Manual* on sight distance calculations

G. Bus Route Map and Schedule

H. Existing + Project with Recommendations Peak Hour Intersection Analysis and Queuing Worksheets

I. Main Street and Shinohara Lane Proposed Roadway Cross Sections

APPENDIX A

SUPPORTING DATA ON PROJECT'S CONSISTENCY WITH GENERAL PLAN, INTERSECTION MANUAL COUNT SHEETS AND GROWTH RATE CALCULATIONS; SIGNAL TIMING PLANS

The site is designated General Plan designated IL – Limited Industrial – (0.25 – 0.5 FAR)

As stated in the City's General Plan, "The Limited Industrial designation is intended for light manufacturing; warehousing; certain public utilities; auto repair; auto salvage yards; and flexible-use projects that combine these uses with associated office space."

The project site is in an urbanized area currently Zoned and General Plan designated for industrial uses. The project will take its access from a driveway off Shinohara Lane in the Brandywine/Main Distribution Center and is an appropriate and permitted use at this location. The following uses bound the site.

- Jabil Packaging Solutions (Plastic Injection Molding) and Crash Champions Collison Repair on the south
- TransAmerican Manufacturing Group (Autoparts), Transpere (Information Technology Asset Solutions), Curbell Plastics, Inc, (Plastic Wholesaler), and Técnico Corporation Marine & Industrial Contractors (Shipbuilding and Repair Company) on the east
- Multi-family residential – Mendocino Condominiums to the north
- Single-family residential to the west

The proposed use as a warehouse is consistent with the IL General Plan designation and with policies and regulations established in the General Plan and Zoning Code. In particular, the following Land Use Objectives and Policies:

LUT-1: Provide a balance of residential and non-residential development throughout the City that achieves a vibrant development pattern, enhances the character of the City, and meets the present and future needs of all residents and businesses.

Policies: LUT 1.1, 1.4, 1.5, and 1.12

LUT-6: Ensure adjacent land uses are compatible with one another.

Policies: 6.1, 6.2, and 6.8

LUT-10: Create attractive street environments that complement private and public properties, create attractive public rights-of-way, and provide visual interest for residents and visitors.

Policies: 10.1, 10.4, and 10.5

LUT-11: Ensure that buildings and related site improvements for public and private development are well-designed and compatible with surrounding properties and districts.

Policies: 11.1, 11.2, 11.3, 11.4, and 11.5

Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-21-035-01
Intersection:	Brandywine Avenue & Olympic Parkway	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound			Olympic Parkway Westbound			Brandywine Avenue Northbound			Olympic Parkway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	11	14	43	6	392	16	12	18	9	18	180	4	723
7:15	9	23	63	12	410	16	5	11	11	16	178	6	760
7:30	14	28	67	11	428	14	14	16	18	33	243	9	895
7:45	17	25	52	14	391	22	13	29	33	39	284	8	927
8:00	12	20	47	16	397	21	9	14	17	41	234	11	839
8:15	9	20	38	24	385	18	11	26	24	47	229	11	842
8:30	14	16	47	19	367	11	14	20	16	26	228	9	787
8:45	11	20	46	19	282	11	15	24	16	35	253	12	744
Total	97	166	403	121	3052	129	93	158	144	255	1829	70	6517
Approach%	14.6	24.9	60.5	3.7	92.4	3.9	23.5	40.0	36.5	11.8	84.9	3.2	
Total%	1.5	2.5	6.2	1.9	46.8	2.0	1.4	2.4	2.2	3.9	28.1	1.1	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	52	93	204	65	1,601	75	47	85	92	160	990	39	3,503
Approach%	14.9	26.6	58.5	3.7	92.0	4.3	21.0	37.9	41.1	13.5	83.3	3.3	
Total%	1.5	2.7	5.8	1.9	45.7	2.1	1.3	2.4	2.6	4.6	28.3	1.1	
PHF			0.80			0.96			0.75			0.90	0.94

PM	Brandywine Avenue Southbound			Olympic Parkway Westbound			Brandywine Avenue Northbound			Olympic Parkway Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	30	51	50	19	324	17	5	29	40	48	460	16	1089
16:15	25	27	51	22	352	23	11	38	30	50	463	18	1110
16:30	32	29	48	25	361	21	16	27	46	45	502	17	1169
16:45	23	36	57	31	280	14	11	35	38	60	432	10	1027
17:00	25	38	67	26	364	22	6	37	41	46	450	15	1137
17:15	31	43	66	39	327	14	9	46	48	60	437	14	1134
17:30	22	39	53	33	384	17	12	27	36	77	484	10	1194
17:45	35	40	53	14	296	14	14	40	35	35	454	15	1045
Total	223	303	445	209	2688	142	84	279	314	421	3682	115	8905
Approach%	23.0	31.2	45.8	6.9	88.5	4.7	12.4	41.2	46.4	10.0	87.3	2.7	
Total%	2.5	3.4	5.0	2.3	30.2	1.6	0.9	3.1	3.5	4.7	41.3	1.3	

PM Intersection Peak Hour: **17:00 to 18:00**

Volume	113	160	239	112	1,371	67	41	150	160	218	1,825	54	4,510
Approach%	22.1	31.3	46.7	7.2	88.5	4.3	11.7	42.7	45.6	10.4	87.0	2.6	
Total%	2.5	3.5	5.3	2.5	30.4	1.5	0.9	3.3	3.5	4.8	40.5	1.2	
PHF			0.91			0.89			0.85			0.92	0.94

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

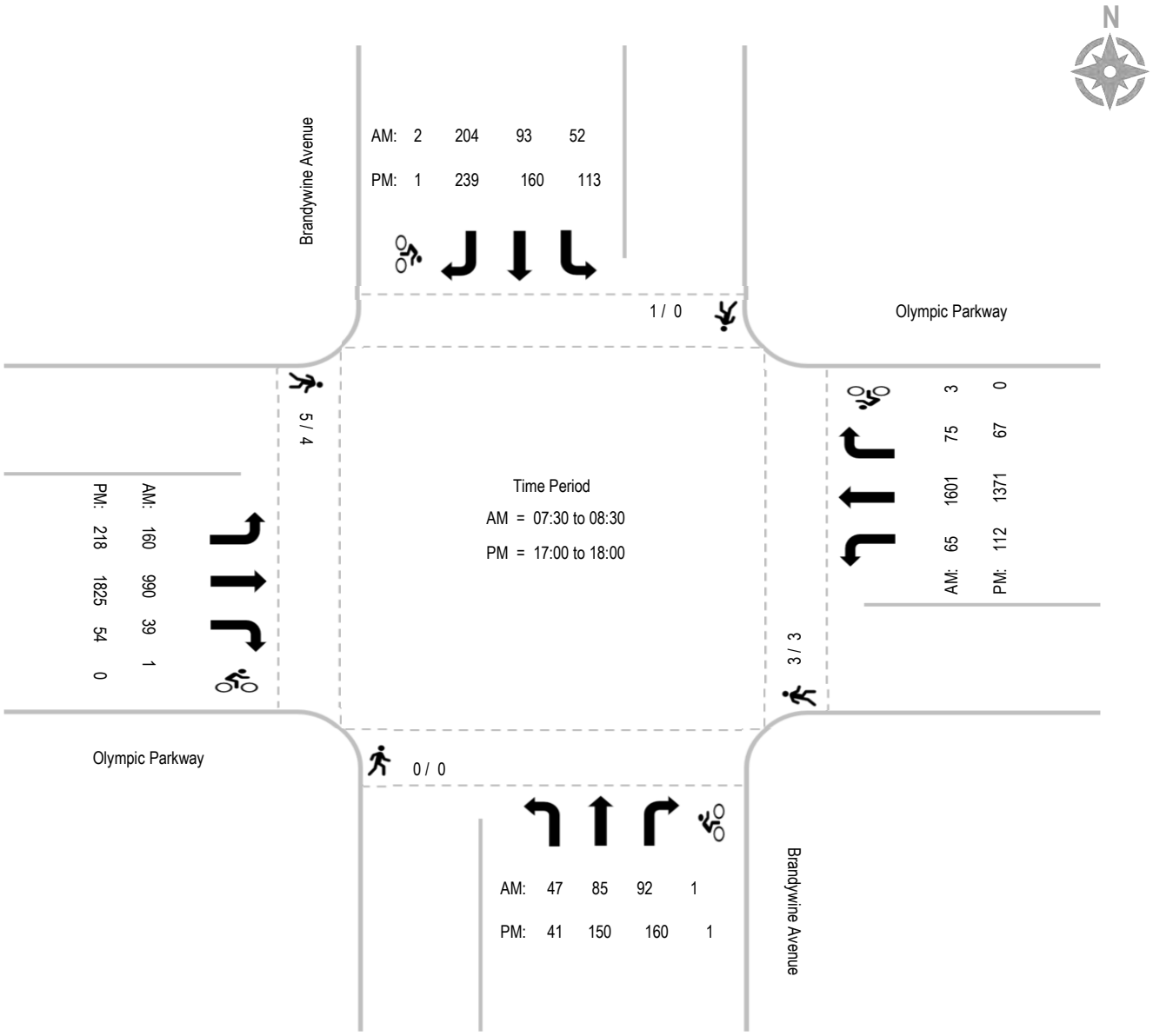
Location:	#01	File Name:	ITM-21-035-01
Intersection:	Brandywine Avenue & Olympic Parkway	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound				Olympic Parkway Westbound				Brandywine Avenue Northbound				Olympic Parkway Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	2	1
7:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	0	2	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	5
8:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	0	3	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Ped Total	1				3				0				5				9	
Bike Total		2	0	0		0	0	3		0	0	1		0	1	0		7

PM	Brandywine Avenue Southbound				Olympic Parkway Westbound				Brandywine Avenue Northbound				Olympic Parkway Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	2	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:45	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0
Ped Total	0				3				0				4				7	
Bike Total		0	0	1		0	0	0		0	1	0		0	0	0		2

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#01	File Name: ITM-21-035-01
	Intersection:	Brandywine Avenue & Olympic Parkway	Project: LLG Ref. 3-21-3408
	Date of Count:	Thursday, June 24, 2021	Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-21-047-01
Intersection:	Brandywine Avenue & Sequoia Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Tuesday, August 17, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound			Sequoia Street Westbound			Brandywine Avenue Northbound			Sequoia Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	3	48	5	4	1	6	2	43	2	9	0	0	123
7:15	2	51	11	12	3	8	1	38	2	8	2	3	141
7:30	7	84	7	11	1	3	12	42	2	7	2	2	180
7:45	1	112	20	3	17	6	25	42	3	16	3	14	262
8:00	3	74	5	2	3	6	8	55	1	11	8	10	186
8:15	8	45	3	6	1	8	2	46	4	6	1	1	131
8:30	12	54	1	8	3	4	5	40	5	3	3	4	142
8:45	3	58	3	4	2	6	1	32	4	4	2	4	123
Total	39	526	55	50	31	47	56	338	23	64	21	38	1288
Approach%	6.3	84.8	8.9	39.1	24.2	36.7	13.4	81.1	5.5	52.0	17.1	30.9	
Total%	3.0	40.8	4.3	3.9	2.4	3.6	4.3	26.2	1.8	5.0	1.6	3.0	

AM Intersection Peak Hour: **07:15 to 08:15**

Volume	13	321	43	28	24	23	46	177	8	42	15	29	769
Approach%	3.4	85.1	11.4	37.3	32.0	30.7	19.9	76.6	3.5	48.8	17.4	33.7	
Total%	1.7	41.7	5.6	3.6	3.1	3.0	6.0	23.0	1.0	5.5	2.0	3.8	
PHF			0.71			0.72			0.83			0.65	0.73

PM	Brandywine Avenue Southbound			Sequoia Street Westbound			Brandywine Avenue Northbound			Sequoia Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	10	79	8	7	0	5	5	73	8	3	7	7	212
16:15	4	61	9	11	0	3	1	85	9	4	5	6	198
16:30	9	65	8	7	4	9	2	66	9	5	5	1	190
16:45	5	40	9	9	5	6	2	74	12	5	6	4	177
17:00	7	54	5	7	1	5	2	72	10	1	5	3	172
17:15	9	63	6	7	1	11	4	74	4	4	6	7	196
17:30	7	61	8	6	1	11	1	67	12	6	6	2	188
17:45	6	46	5	2	5	6	1	61	19	7	3	7	168
Total	57	469	58	56	17	56	18	572	83	35	43	37	1501
Approach%	9.8	80.3	9.9	43.4	13.2	43.4	2.7	85.0	12.3	30.4	37.4	32.2	
Total%	3.8	31.2	3.9	3.7	1.1	3.7	1.2	38.1	5.5	2.3	2.9	2.5	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	28	245	34	34	9	23	10	298	38	17	23	18	777
Approach%	9.1	79.8	11.1	51.5	13.6	34.8	2.9	86.1	11.0	29.3	39.7	31.0	
Total%	3.6	31.5	4.4	4.4	1.2	3.0	1.3	38.4	4.9	2.2	3.0	2.3	
PHF			0.79			0.83			0.91			0.85	0.92

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

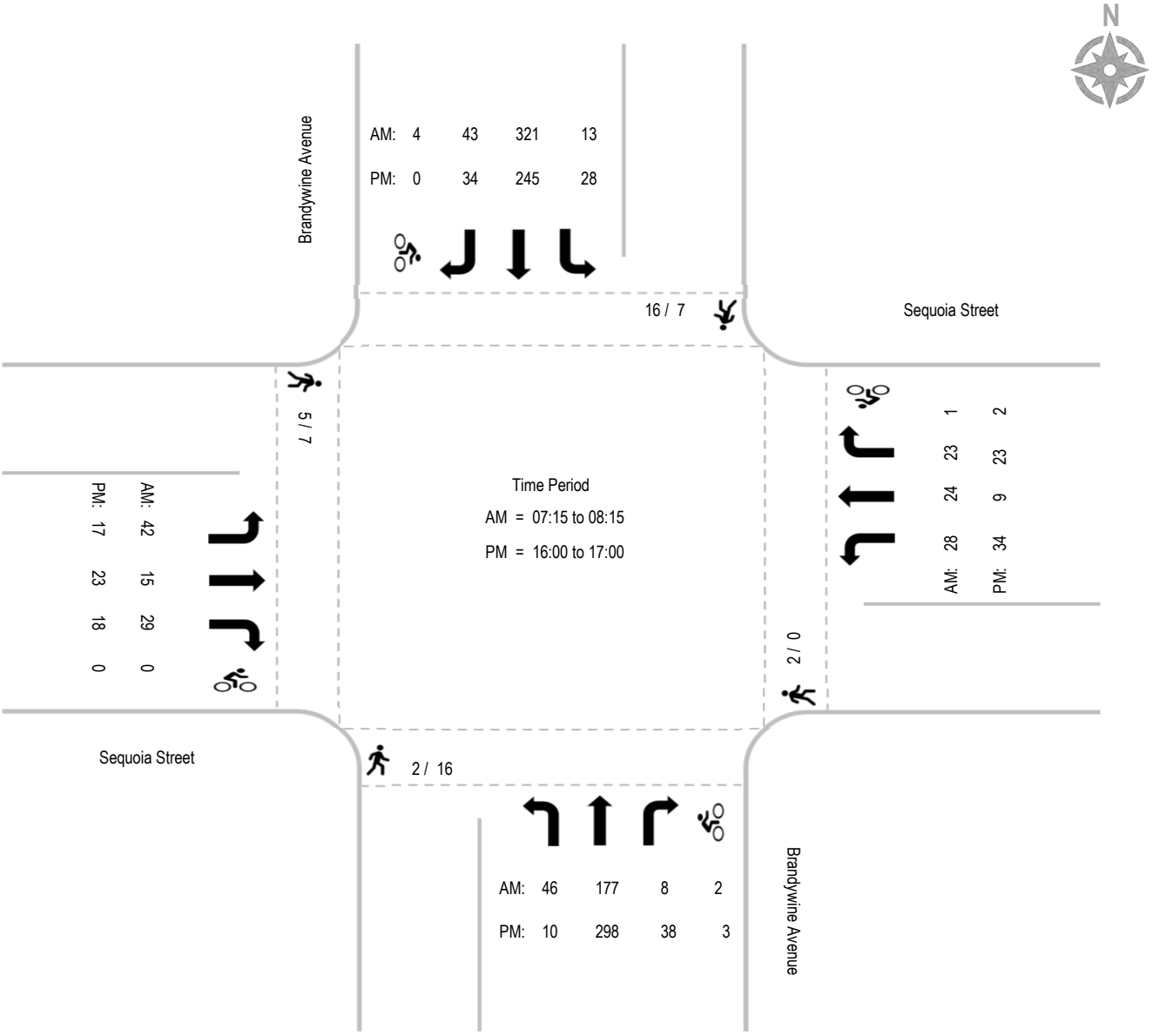
Location:	#01	File Name:	ITM-21-047-01
Intersection:	Brandywine Avenue & Sequoia Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Tuesday, August 17, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound				Sequoia Street Westbound				Brandywine Avenue Northbound				Sequoia Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
7:15	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7	0
7:30	2	0	1	0	0	0	0	0	0	0	1	0	3	0	0	0	5	2
7:45	5	0	2	0	1	0	0	0	0	0	1	0	0	0	0	0	6	3
8:00	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	4	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Ped Total	16				2				2				5				25	
Bike Total		0	4	0		0	1	0		0	2	0		0	0	0		7

PM	Brandywine Avenue Southbound				Sequoia Street Westbound				Brandywine Avenue Northbound				Sequoia Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	2	1
16:15	1	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0
16:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
17:00	0	0	0	0	0	0	0	0	2	0	1	0	1	0	0	0	3	1
17:15	1	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	7	0
17:30	0	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	2	2
17:45	5	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0
Ped Total	7				0				16				7				30	
Bike Total		0	0	0		1	1	0		0	3	0		0	0	0		5

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#01	File Name: ITM-21-047-01
	Intersection:	Brandywine Avenue & Sequoia Street	Project: LLG Ref. 3-21-3408
	Date of Count:	Tuesday, August 17, 2021	Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-21-035-02
Intersection:	Brandywine Avenue & Shinohara Lane	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound			Business Driveway Westbound			Brandywine Avenue Northbound			Shinohara Lane Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	38	1	6	0	1	3	15	4	0	0	0	68
7:15	0	55	1	2	0	0	4	33	8	0	0	0	103
7:30	1	53	0	2	0	1	2	35	3	0	0	0	97
7:45	2	61	0	2	0	3	2	42	3	0	0	1	116
8:00	0	51	0	1	0	1	0	35	1	0	0	0	89
8:15	1	56	0	4	0	1	0	44	5	0	0	1	112
8:30	1	46	0	2	0	0	0	31	1	0	0	0	81
8:45	0	56	0	2	0	2	1	40	2	0	0	0	103
Total	5	416	2	21	0	9	12	275	27	0	0	2	769
Approach%	1.2	98.3	0.5	70.0	-	30.0	3.8	87.6	8.6	-	-	100.0	
Total%	0.7	54.1	0.3	2.7	-	1.2	1.6	35.8	3.5	-	-	0.3	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	4	221	-	9	-	6	4	156	12	-	-	2	414
Approach%	1.8	98.2	-	60.0	-	40.0	2.3	90.7	7.0	-	-	100.0	
Total%	1.0	53.4	-	2.2	-	1.4	1.0	37.7	2.9	-	-	0.5	
PHF			0.89			0.75			0.88			0.50	0.89

PM	Brandywine Avenue Southbound			Business Driveway Westbound			Brandywine Avenue Northbound			Shinohara Lane Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	1	70	0	7	0	0	3	82	4	0	0	1	168
16:15	0	56	0	4	0	1	0	68	4	0	0	2	135
16:30	0	58	1	1	0	0	1	71	0	1	0	2	135
16:45	1	72	0	3	0	2	1	83	1	2	0	1	166
17:00	0	69	0	4	0	0	0	90	2	0	0	2	167
17:15	0	70	0	1	0	1	0	85	2	0	0	3	162
17:30	0	74	0	1	0	0	0	75	1	0	0	3	154
17:45	0	61	0	1	0	0	0	67	5	0	0	1	135
Total	2	530	1	22	0	4	5	621	19	3	0	15	1222
Approach%	0.4	99.4	0.2	84.6	-	15.4	0.8	96.3	2.9	16.7	-	83.3	
Total%	0.2	43.4	0.1	1.8	-	0.3	0.4	50.8	1.6	0.2	-	1.2	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	1	285	-	9	-	3	1	333	6	2	-	9	649
Approach%	0.3	99.7	-	75.0	-	25.0	0.3	97.9	1.8	18.2	-	81.8	
Total%	0.2	43.9	-	1.4	-	0.5	0.2	51.3	0.9	0.3	-	1.4	
PHF			0.97			0.60			0.92			0.92	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

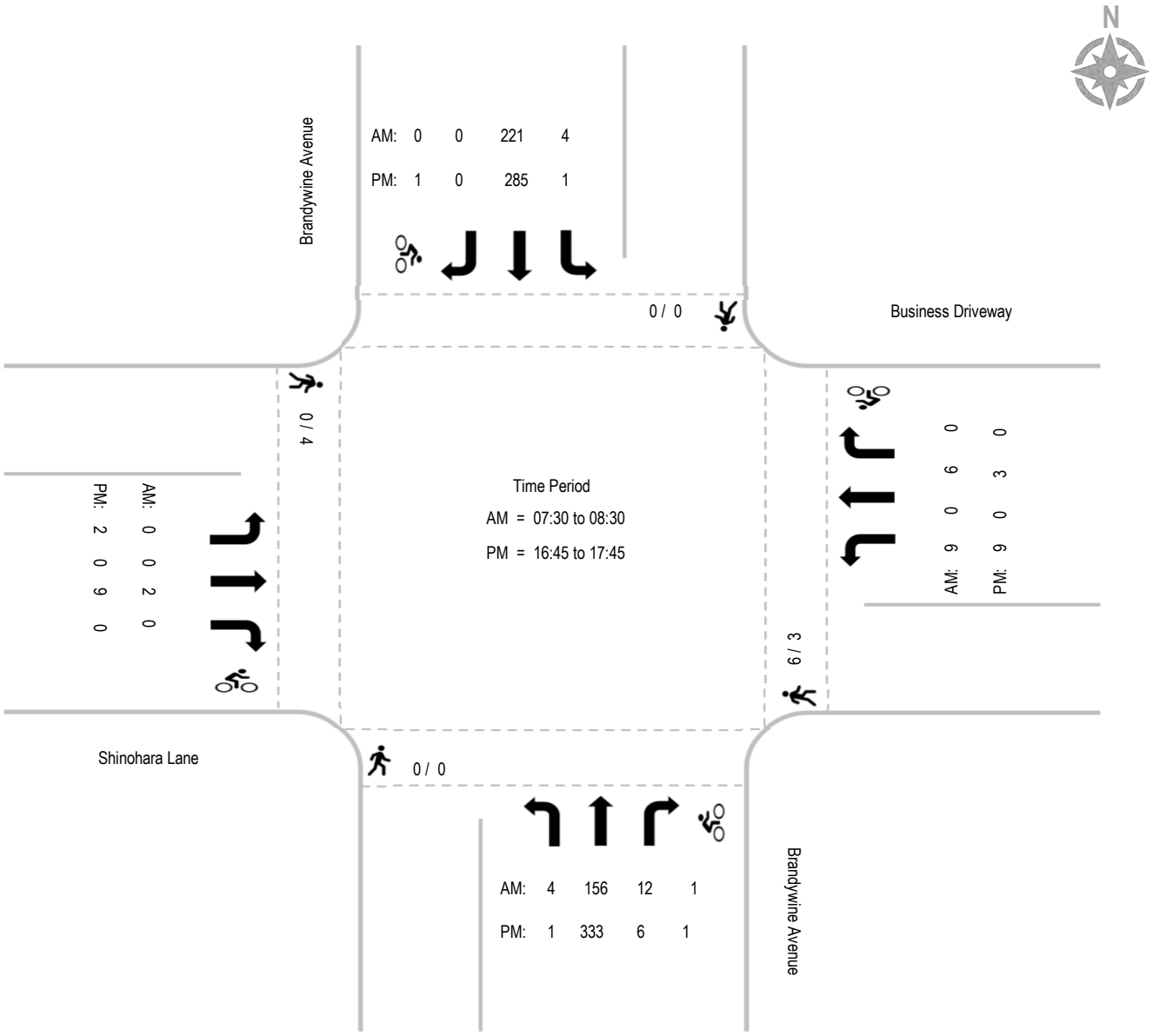
Location:	#02	File Name:	ITM-21-035-02
Intersection:	Brandywine Avenue & Shinohara Lane	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound				Business Driveway Westbound				Brandywine Avenue Northbound				Shinohara Lane Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
8:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				6				0				0				6	
Bike Total		0	0	0		0	0	0		0	1	0		0	0	0		1

PM	Brandywine Avenue Southbound				Business Driveway Westbound				Brandywine Avenue Northbound				Shinohara Lane Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	5	0
Ped Total	0				3				0				4				7	
Bike Total		0	0	1		0	0	0		0	1	0		0	0	0		2

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#02	File Name: ITM-21-035-02
	Intersection:	Brandywine Avenue & Shinohara Lane	Project: LLG Ref. 3-21-3408
	Date of Count:	Thursday, June 24, 2021	Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#03	File Name:	ITM-21-035-03
Intersection:	I-805 SB Ramps & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	I-805 SB Off Ramp Southbound			Main Street Westbound			I-805 SB On Ramp Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	71	0	62	30	87	0	0	0	0	0	112	51	413
7:15	88	0	76	41	87	0	0	0	0	0	145	67	504
7:30	82	0	81	58	84	0	0	0	0	0	154	64	523
7:45	119	0	102	63	114	0	0	0	0	0	153	85	636
8:00	99	0	69	55	104	0	0	0	0	0	138	52	517
8:15	90	0	62	53	108	0	0	0	0	0	152	54	519
8:30	126	0	82	61	123	0	0	0	0	0	161	68	621
8:45	96	0	65	38	99	0	0	0	0	0	126	51	475
Total	771	0	599	399	806	0	0	0	0	0	1141	492	4208
Approach%	56.3	-	43.7	33.1	66.9	-	-	-	-	-	69.9	30.1	
Total%	18.3	-	14.2	9.5	19.2	-	-	-	-	-	27.1	11.7	
AM Intersection Peak Hour:	**07:45 to 08:45**												
Volume	434	-	315	232	449	-	-	-	-	-	604	259	2,293
Approach%	57.9	-	42.1	34.1	65.9	-	-	-	-	-	70.0	30.0	
Total%	18.9	-	13.7	10.1	19.6	-	-	-	-	-	26.3	11.3	
PHF			0.85			0.93			#DIV/0!			0.91	0.90

PM	I-805 SB Off Ramp Southbound			Main Street Westbound			I-805 SB On Ramp Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	132	0	116	147	192	0	0	0	0	0	195	108	890
16:15	129	0	104	116	159	0	0	0	0	0	182	97	787
16:30	140	0	121	110	175	0	0	0	0	0	201	103	850
16:45	129	0	106	130	195	0	0	0	0	0	185	109	854
17:00	116	0	131	160	197	0	0	0	0	0	200	121	925
17:15	143	0	107	127	208	0	0	0	0	0	229	108	922
17:30	92	0	131	146	204	0	0	0	0	0	192	121	886
17:45	129	0	110	131	180	0	0	0	0	0	162	103	815
Total	1010	0	926	1067	1510	0	0	0	0	0	1546	870	6929
Approach%	52.2	-	47.8	41.4	58.6	-	-	-	-	-	64.0	36.0	
Total%	14.6	-	13.4	15.4	21.8	-	-	-	-	-	22.3	12.6	
PM Intersection Peak Hour:	**16:45 to 17:45**												
Volume	480	-	475	563	804	-	-	-	-	-	806	459	3,587
Approach%	50.3	-	49.7	41.2	58.8	-	-	-	-	-	63.7	36.3	
Total%	13.4	-	13.2	15.7	22.4	-	-	-	-	-	22.5	12.8	
PHF			0.96			0.96			#DIV/0!			0.94	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

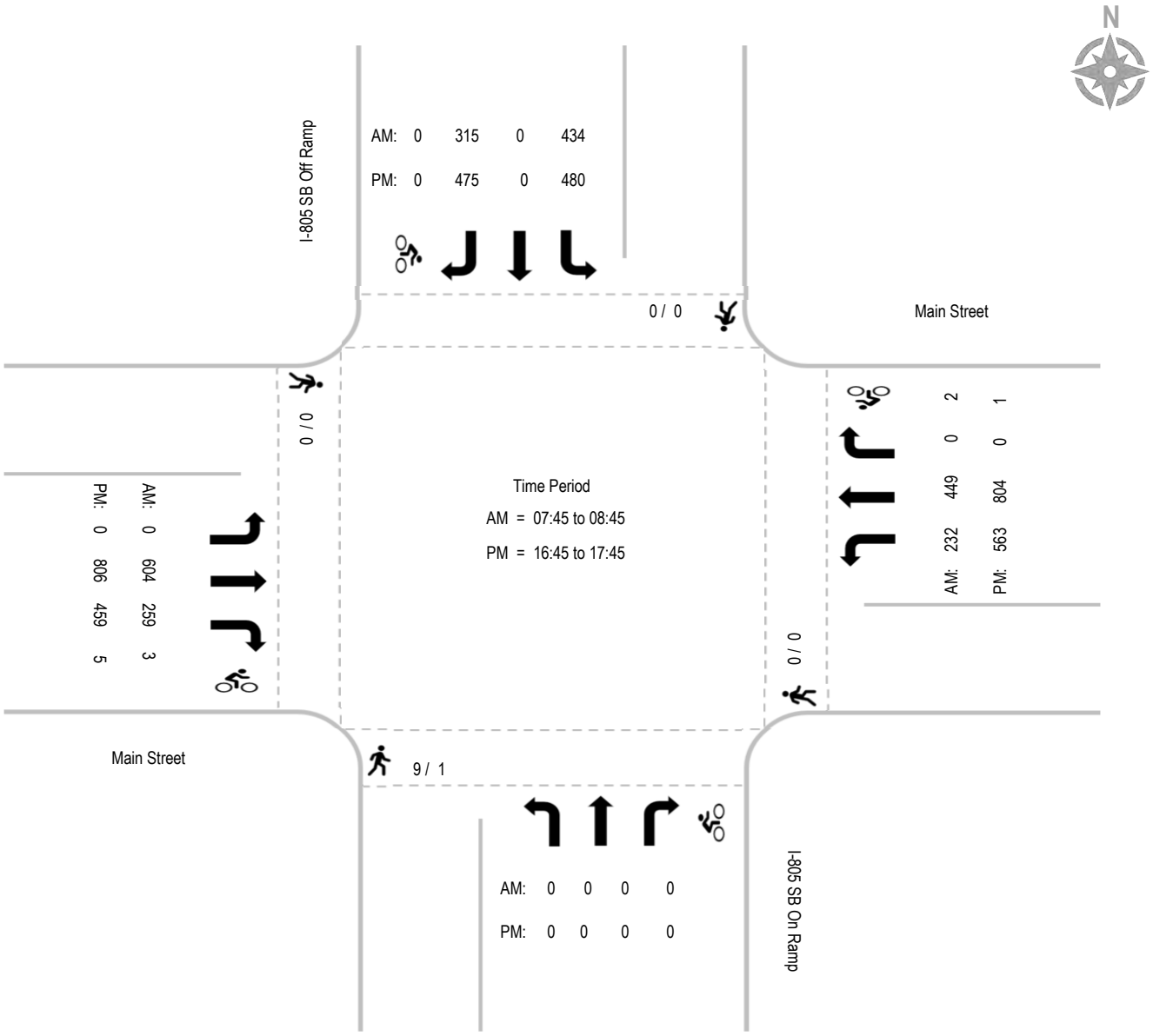
Location:	#03	File Name:	ITM-21-035-03
Intersection:	I-805 SB Ramps & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	I-805 SB Off Ramp Southbound				Main Street Westbound				I-805 SB On Ramp Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	2	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1
8:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	1	0	5	0	0	0	0	0	0	0	5	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Ped Total	0				0				9				0				9	
Bike Total		0	0	0		0	2	0		0	0	0		0	2	1		5

PM	I-805 SB Off Ramp Southbound				Main Street Westbound				I-805 SB On Ramp Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4
Ped Total	0				0				1				0				1	
Bike Total		0	0	0		0	1	0		0	0	0		0	2	3		6

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#03	File Name: ITM-21-035-03
	Intersection:	I-805 SB Ramps & Main Street	Project: LLG Ref. 3-21-3408
	Date of Count:	Thursday, June 24, 2021	Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#04	File Name:	ITM-21-035-04
Intersection:	I-805 NB Ramps & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	I-805 NB On Ramp Southbound			Main Street Westbound			I-805 NB Off Ramp Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	0	0	0	76	107	47	0	43	85	110	0	468
7:15	0	0	0	0	90	104	44	0	60	96	140	0	534
7:30	0	0	0	0	104	103	40	3	100	116	108	0	574
7:45	0	0	0	0	124	117	65	2	91	97	197	0	693
8:00	0	0	0	0	97	90	60	1	58	87	153	0	546
8:15	0	0	0	0	119	111	56	0	63	110	143	0	602
8:30	0	0	0	0	89	108	62	0	61	94	165	0	579
8:45	0	0	0	0	118	89	55	2	76	96	170	0	606
Total	0	0	0	0	817	829	429	8	552	781	1186	0	4602
Approach%	-	-	-	-	49.6	50.4	43.4	0.8	55.8	39.7	60.3	-	
Total%	-	-	-	-	17.8	18.0	9.3	0.2	12.0	17.0	25.8	-	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	-	-	-	-	429	426	243	3	273	388	658	-	2,420
Approach%	-	-	-	-	50.2	49.8	46.8	0.6	52.6	37.1	62.9	-	
Total%	-	-	-	-	17.7	17.6	10.0	0.1	11.3	16.0	27.2	-	
PHF			#DIV/0!			0.89			0.82			0.89	0.87

PM	I-805 NB On Ramp Southbound			Main Street Westbound			I-805 NB Off Ramp Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	0	0	0	248	163	103	0	140	95	206	0	955
16:15	0	0	0	0	187	137	85	1	111	124	228	0	873
16:30	0	0	0	0	198	157	92	0	114	111	239	0	911
16:45	0	0	0	0	235	156	107	0	125	86	238	0	947
17:00	0	0	0	0	258	180	92	2	123	111	204	0	970
17:15	0	0	0	0	213	154	113	0	115	111	229	0	935
17:30	0	0	0	0	261	175	64	1	108	106	209	0	924
17:45	0	0	0	0	215	123	86	3	79	75	192	0	773
Total	0	0	0	0	1815	1245	742	7	915	819	1745	0	7288
Approach%	-	-	-	-	59.3	40.7	44.6	0.4	55.0	31.9	68.1	-	
Total%	-	-	-	-	24.9	17.1	10.2	0.1	12.6	11.2	23.9	-	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	-	-	-	-	967	665	376	3	471	414	880	-	3,776
Approach%	-	-	-	-	59.3	40.7	44.2	0.4	55.4	32.0	68.0	-	
Total%	-	-	-	-	25.6	17.6	10.0	0.1	12.5	11.0	23.3	-	
PHF			#DIV/0!			0.93			0.92			0.95	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

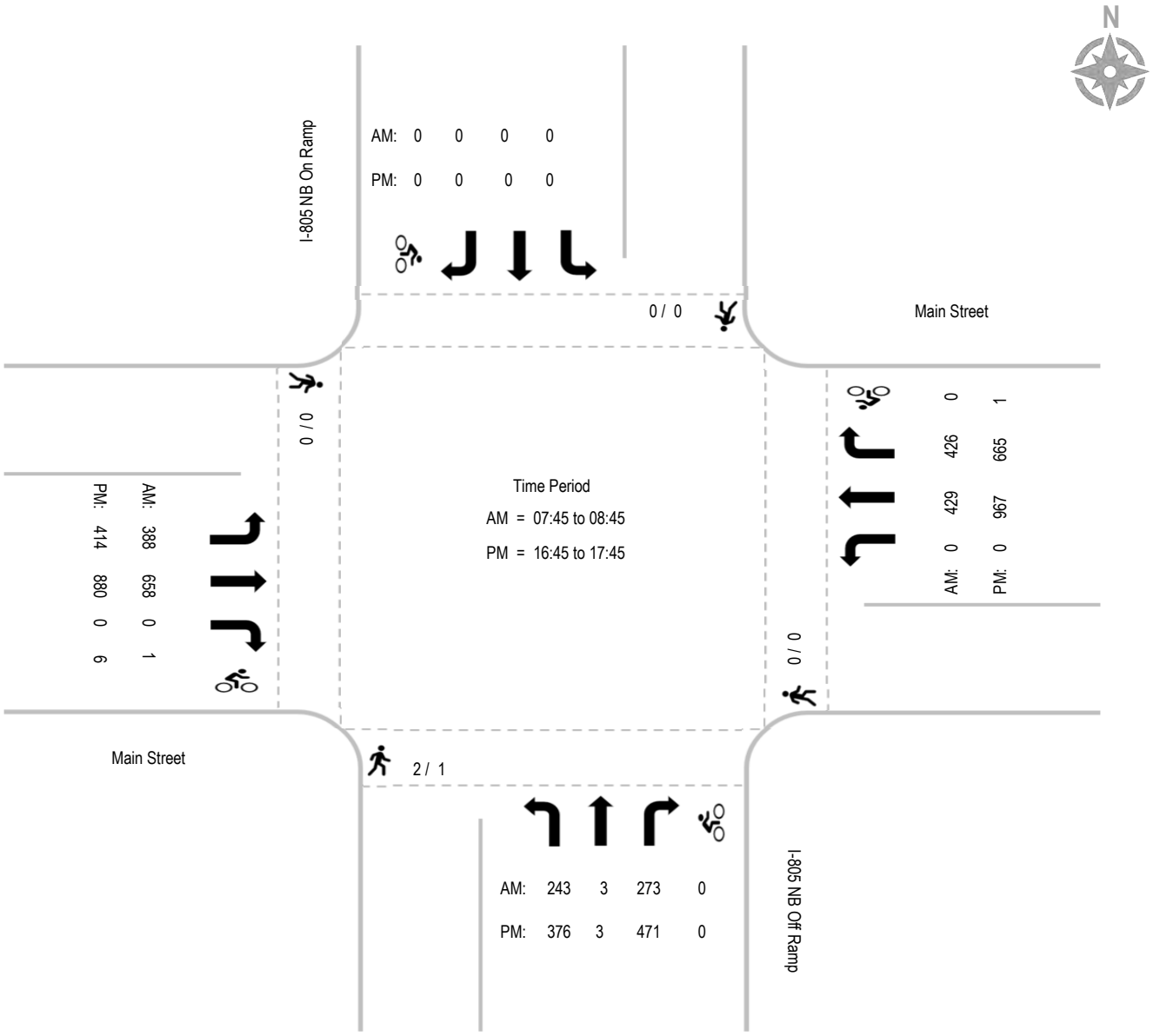
Location:	#04	File Name:	ITM-21-035-04
Intersection:	I-805 NB Ramps & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	I-805 NB On Ramp Southbound				Main Street Westbound				I-805 NB Off Ramp Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				2				0				2	
Bike Total		0	0	0		0	0	0		0	0	0		0	1	0		1

PM	I-805 NB On Ramp Southbound				Main Street Westbound				I-805 NB Off Ramp Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	6
Ped Total	0				0				1				0				1	
Bike Total		0	0	0		0	1	0		0	0	0		0	6	0		7

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#04	File Name: ITM-21-035-04
	Intersection:	I-805 NB Ramps & Main Street	Project: LLG Ref. 3-21-3408
	Date of Count:	Thursday, June 24, 2021	Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#05	File Name:	ITM-21-035-05
Intersection:	Oleander Avenue & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Oleander Avenue Southbound			Main Street Westbound			- Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	1	0	9	0	173	1	0	0	0	3	142	0	329
7:15	2	0	4	0	173	0	0	0	0	3	200	0	382
7:30	2	0	18	0	196	1	0	0	0	6	207	0	430
7:45	2	0	19	0	214	2	0	0	0	5	278	0	520
8:00	1	0	7	0	170	3	0	0	0	5	197	0	383
8:15	0	0	12	0	179	1	0	0	0	7	194	0	393
8:30	1	0	9	0	165	0	0	0	0	5	209	0	389
8:45	1	0	9	0	179	4	0	0	0	3	232	0	428
Total	10	0	87	0	1449	12	0	0	0	37	1659	0	3254
Approach%	10.3	-	89.7	-	99.2	0.8	-	-	-	2.2	97.8	-	
Total%	0.3	-	2.7	-	44.5	0.4	-	-	-	1.1	51.0	-	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	5	-	56	-	759	7	-	-	-	23	876	-	1,726
Approach%	8.2	-	91.8	-	99.1	0.9	-	-	-	2.6	97.4	-	
Total%	0.3	-	3.2	-	44.0	0.4	-	-	-	1.3	50.8	-	
PHF			0.73			0.89			#DIV/0!			0.79	0.83

PM	Oleander Avenue Southbound			Main Street Westbound			- Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	0	12	0	366	4	0	0	0	18	268	0	670
16:15	2	0	15	0	257	0	0	0	0	17	272	0	563
16:30	1	0	20	0	285	3	0	0	0	22	265	0	596
16:45	4	0	12	0	304	2	0	0	0	22	287	0	631
17:00	0	0	24	0	378	7	0	0	0	26	257	0	692
17:15	3	0	18	0	299	3	0	0	0	21	261	0	605
17:30	2	0	15	0	330	3	0	0	0	17	234	0	601
17:45	0	0	15	0	271	2	0	0	0	14	201	0	503
Total	14	0	131	0	2490	24	0	0	0	157	2045	0	4861
Approach%	9.7	-	90.3	-	99.0	1.0	-	-	-	7.1	92.9	-	
Total%	0.3	-	2.7	-	51.2	0.5	-	-	-	3.2	42.1	-	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	9	-	69	-	1,311	15	-	-	-	86	1,039	-	2,529
Approach%	11.5	-	88.5	-	98.9	1.1	-	-	-	7.6	92.4	-	
Total%	0.4	-	2.7	-	51.8	0.6	-	-	-	3.4	41.1	-	
PHF			0.81			0.86			#DIV/0!			0.91	0.91

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

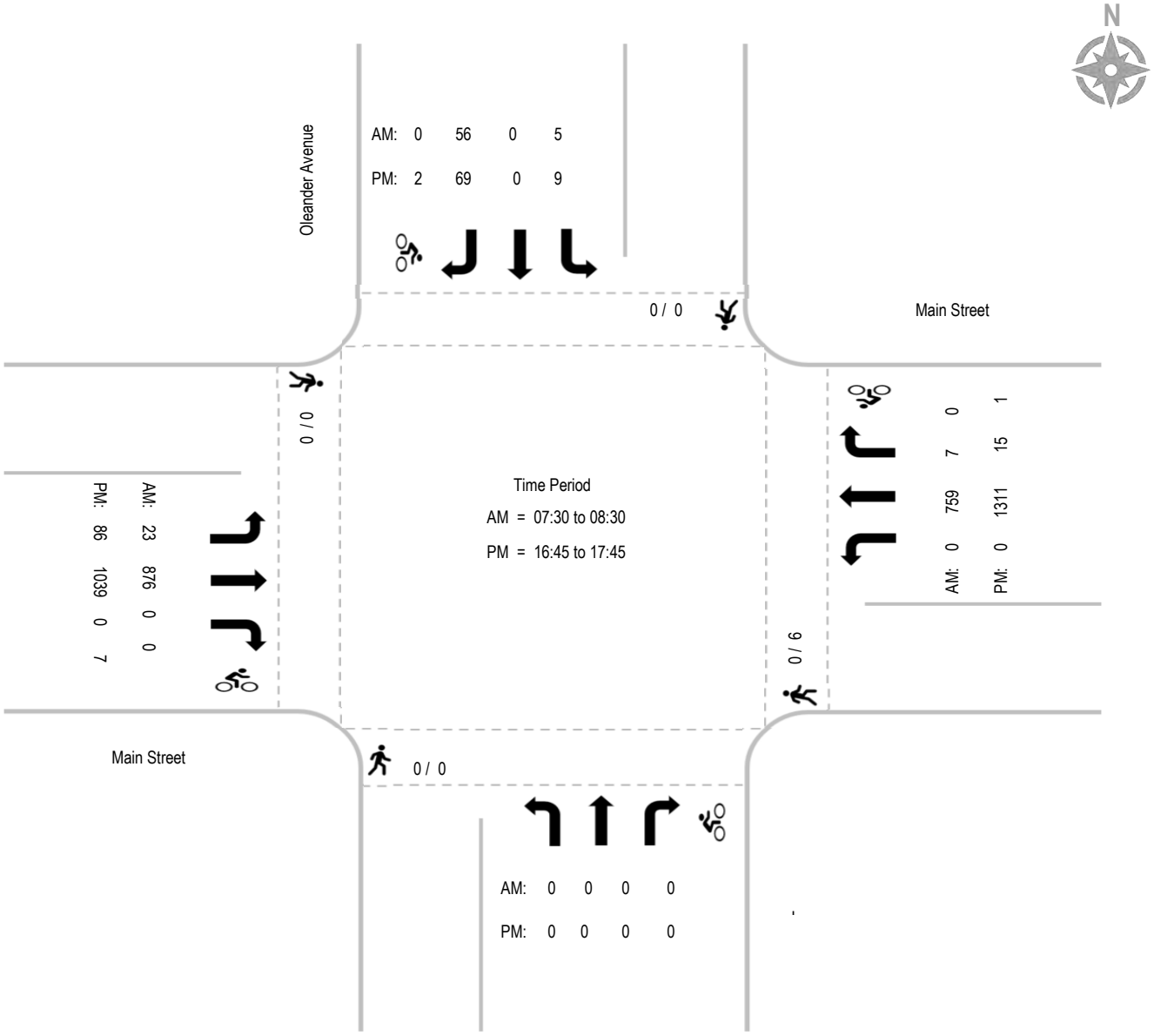
Location:	#05	File Name:	ITM-21-035-05
Intersection:	Oleander Avenue & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Oleander Avenue Southbound				Main Street Westbound				- Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	Oleander Avenue Southbound				Main Street Westbound				- Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	3
16:30	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1
16:45	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2
17:00	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	1	4
Ped Total	0				6				0				0				6	
Bike Total		0	0	2		0	1	0		0	0	0		2	5	0		10

Intersection Turning Movement - Peak Hour Summary

Location:	#05	File Name:	ITM-21-035-05
Intersection:	Oleander Avenue & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#06	File Name:	ITM-21-035-06
Intersection:	Brandywine Avenue & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound			Main Street Westbound			Brandywine Avenue Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	4	2	43	0	128	2	2	1	0	29	82	19	312
7:15	8	1	50	1	124	4	2	1	2	40	113	18	364
7:30	9	3	43	3	143	6	6	1	0	38	140	13	405
7:45	11	2	45	2	160	10	3	0	3	54	175	7	472
8:00	15	4	41	4	109	5	9	2	2	31	136	19	377
8:15	12	4	44	2	141	5	9	1	4	45	128	14	409
8:30	12	2	35	4	131	9	5	0	2	25	152	17	394
8:45	15	2	45	3	122	14	11	0	3	26	179	10	430
Total	86	20	346	19	1058	55	47	6	16	288	1105	117	3163
Approach%	19.0	4.4	76.5	1.7	93.5	4.9	68.1	8.7	23.2	19.1	73.2	7.7	
Total%	2.7	0.6	10.9	0.6	33.4	1.7	1.5	0.2	0.5	9.1	34.9	3.7	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	47	13	173	11	553	26	27	4	9	168	579	53	1,663
Approach%	20.2	5.6	74.2	1.9	93.7	4.4	67.5	10.0	22.5	21.0	72.4	6.6	
Total%	2.8	0.8	10.4	0.7	33.3	1.6	1.6	0.2	0.5	10.1	34.8	3.2	
PHF			0.97			0.86			0.71			0.85	0.88

PM	Brandywine Avenue Southbound			Main Street Westbound			Brandywine Avenue Northbound			Main Street Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	12	2	60	2	257	15	33	4	5	66	184	15	655
16:15	10	3	49	5	202	12	20	5	5	52	181	6	550
16:30	10	2	57	1	216	14	21	2	3	54	199	3	582
16:45	9	1	69	2	224	10	12	3	1	70	187	8	596
17:00	8	2	79	1	260	18	26	6	1	63	160	3	627
17:15	13	1	66	1	219	13	16	6	3	73	167	11	589
17:30	7	2	73	1	252	10	32	4	3	60	165	5	614
17:45	5	1	59	1	219	17	14	1	4	58	127	8	514
Total	74	14	512	14	1849	109	174	31	25	496	1370	59	4727
Approach%	12.3	2.3	85.3	0.7	93.8	5.5	75.7	13.5	10.9	25.8	71.2	3.1	
Total%	1.6	0.3	10.8	0.3	39.1	2.3	3.7	0.7	0.5	10.5	29.0	1.2	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	37	6	287	5	955	51	86	19	8	266	679	27	2,426
Approach%	11.2	1.8	87.0	0.5	94.5	5.0	76.1	16.8	7.1	27.4	69.9	2.8	
Total%	1.5	0.2	11.8	0.2	39.4	2.1	3.5	0.8	0.3	11.0	28.0	1.1	
PHF			0.93			0.91			0.72			0.92	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

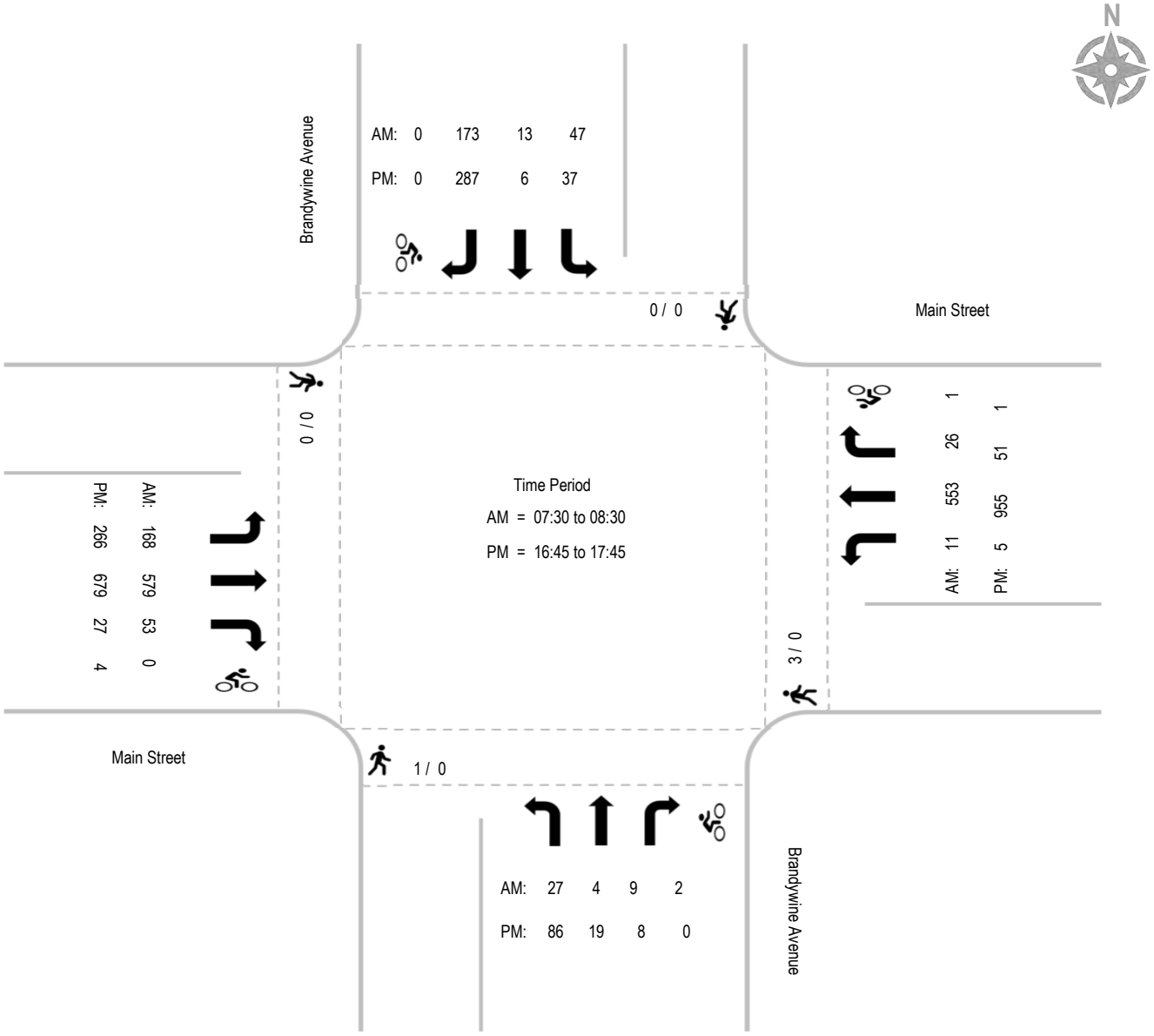
Location:	#06	File Name:	ITM-21-035-06
Intersection:	Brandywine Avenue & Main Street	Project:	LLG Ref. 3-21-3408
Date of Count:	Thursday, June 24, 2021		Chula Vista Shinohara

AM	Brandywine Avenue Southbound				Main Street Westbound				Brandywine Avenue Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1
8:15	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				3				1				0				4	
Bike Total		0	0	0		0	1	0		0	2	0		0	0	0		3

PM	Brandywine Avenue Southbound				Main Street Westbound				Brandywine Avenue Northbound				Main Street Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	1	0		0	0	0		0	4	0		5

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#06	File Name: ITM-21-035-06
	Intersection:	Brandywine Avenue & Main Street	Project: LLG Ref. 3-21-3408
	Date of Count:	Thursday, June 24, 2021	Chula Vista Shinohara



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20

LOCATION: Chula Vista
NORTH & SOUTH: Main Court
EAST & WEST: Main

PROJECT #: SC2286
LOCATION #: 238
CONTROL: SIGNAL

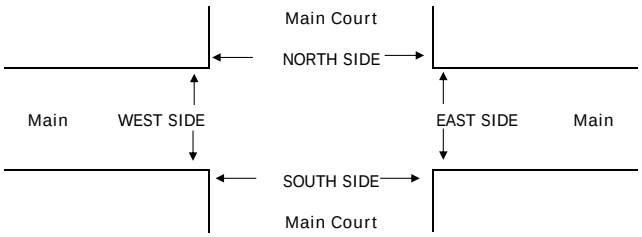
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☐ Add U-Turns to Left Turns

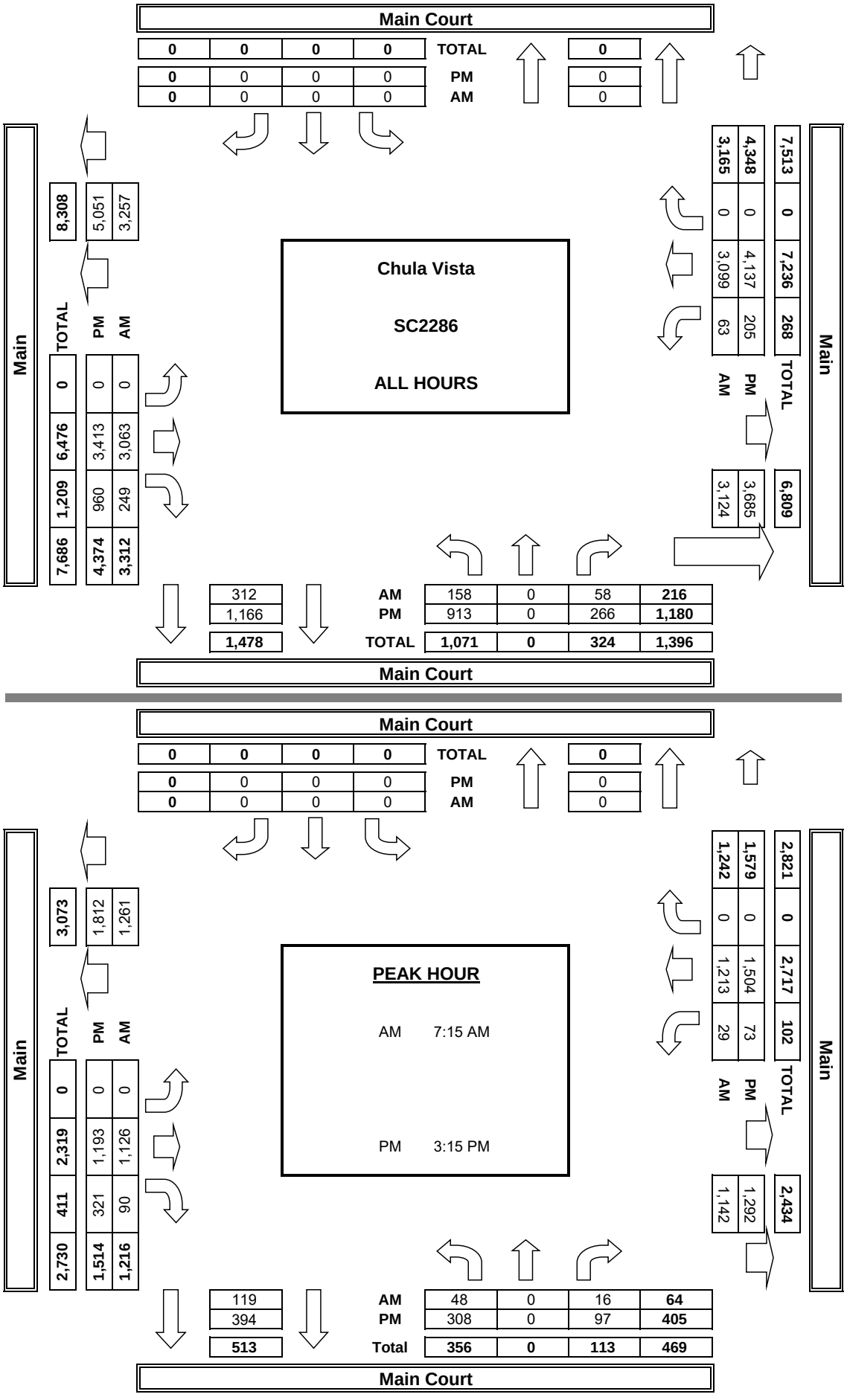
		NORTHBOUND Main Court			SOUTHBOUND Main Court			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 2	NT X	NR 1	SL X	ST X	SR X	EL X	ET 3	ER 1	WL 2	WT 3	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	5	0	3	0	0	0	0	265	9	3	220	0	505	0	0	0	0	0
	6:45 AM	8	0	0	0	0	0	0	324	16	3	207	0	558	0	0	0	0	0
	7:00 AM	6	0	2	0	0	0	0	223	16	2	258	0	507	0	0	0	0	0
	7:15 AM	4	0	0	0	0	0	0	243	22	11	272	0	552	0	0	0	0	0
	7:30 AM	7	0	6	0	0	0	0	282	18	3	345	0	661	0	0	0	0	0
	7:45 AM	22	0	8	0	0	0	0	336	37	11	348	0	762	0	0	0	0	0
	8:00 AM	15	0	2	0	0	0	0	265	13	4	248	0	547	0	0	0	0	0
	8:15 AM	14	0	9	0	0	0	0	226	16	1	263	0	529	0	0	0	0	0
	8:30 AM	22	0	8	0	0	0	0	240	13	3	203	0	489	0	0	0	1	1
	8:45 AM	15	0	6	0	0	0	0	258	25	7	261	0	572	0	0	0	0	0
	9:00 AM	15	0	3	0	0	0	0	193	34	8	205	0	458	0	0	0	0	0
	9:15 AM	25	0	11	0	0	0	0	208	30	7	269	0	550	0	0	0	2	2
	VOLUMES	158	0	58	0	0	0	0	3,063	249	63	3,099	0	6,693	0	0	0	3	3
	APPROACH %	73%	0%	27%	0%	0%	0%	0%	92%	8%	2%	98%	0%						
	APP/DEPART	216	/	0	0	/	312	3,312	/	3,124	3,165	/	3,257	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	48	0	16	0	0	0	0	1,126	90	29	1,213	0	2,522	0	0	0	0	
	APPROACH %	75%	0%	25%	0%	0%	0%	0%	93%	7%	2%	98%	0%						
	PEAK HR FACTOR		0.533			0.000			0.815			0.865		0.827					
	APP/DEPART	64	/	0	0	/	119	1,216	/	1,142	1,242	/	1,261	0					
PM	2:30 PM	70	0	20	0	0	0	0	266	86	16	315	0	773	0	0	0	0	0
	2:45 PM	77	0	20	0	0	0	0	268	80	8	283	0	736	0	0	0	0	0
	3:00 PM	71	0	15	0	0	0	0	316	77	13	357	0	849	0	0	1	1	2
	3:15 PM	87	0	17	0	0	0	0	283	84	17	319	0	807	0	0	0	0	0
	3:30 PM	63	0	24	0	0	0	0	338	75	22	408	0	930	0	0	0	0	0
	3:45 PM	80	0	26	0	0	0	0	293	81	26	351	0	857	0	0	0	0	0
	4:00 PM	78	0	30	0	0	0	0	279	81	8	426	0	902	0	0	0	2	2
	4:15 PM	72	0	22	0	0	0	0	281	85	22	308	0	790	0	0	0	0	0
	4:30 PM	84	0	25	0	0	0	0	284	57	20	365	0	835	1	0	0	0	1
	4:45 PM	79	0	17	0	0	0	0	285	91	19	316	0	807	0	0	0	1	1
	5:00 PM	66	0	27	0	0	0	0	286	70	13	377	0	839	0	0	0	0	0
	5:15 PM	86	0	23	0	0	0	0	234	93	21	312	0	769	0	0	0	2	2
	VOLUMES	913	0	266	0	0	0	0	3,413	960	205	4,137	0	9,902	1	0	1	6	8
	APPROACH %	77%	0%	23%	0%	0%	0%	0%	78%	22%	5%	95%	0%						
	APP/DEPART	1,180	/	0	0	/	1,166	4,374	/	3,685	4,348	/	5,051	0					
	BEGIN PEAK HR		3:15 PM																
	VOLUMES	308	0	97	0	0	0	0	1,193	321	73	1,504	0	3,498	0	0	0	2	
	APPROACH %	76%	0%	24%	0%	0%	0%	0%	79%	21%	5%	95%	0%						
	PEAK HR FACTOR		0.938			0.000			0.916			0.905		0.940					
	APP/DEPART	405	/	0	0	/	394	1,514	/	1,292	1,579	/	1,812	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	7:30 AM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	7:45 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1
	8:00 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	8:15 AM	0	4	0	0	4	0	3	0	0	3	0	1	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	3	0	0	3	0	3	0	0	3	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	TOTAL	0	15	0	0	15	0	12	0	0	12	0	3	0	0	3
	AM BEGIN PEAK HR			7:15 AM			0	3	0	0	3					
PM	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0
	3:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	3:15 PM	0	4	0	0	4	0	1	0	0	1	0	3	0	0	3
	3:30 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1
	4:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1
	4:30 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	5:15 PM	2	3	0	0	5	0	3	0	0	3	2	0	0	0	2
	TOTAL	2	19	0	0	21	0	13	0	0	13	2	6	0	0	8
	PM BEGIN PEAK HR			3:15 PM			0	4	0	0	4					

AimTD LLC

TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20

LOCATION: Chula Vista
NORTH & SOUTH: Oleander
EAST & WEST: Main

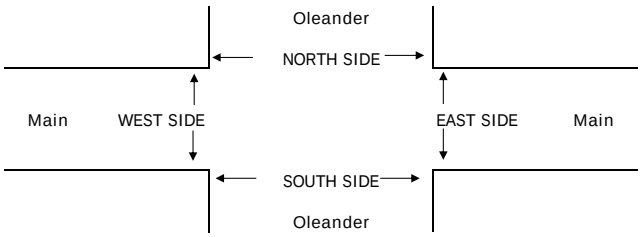
PROJECT #: SC2286
LOCATION #: 138
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☐ Add U-Turns to Left Turns

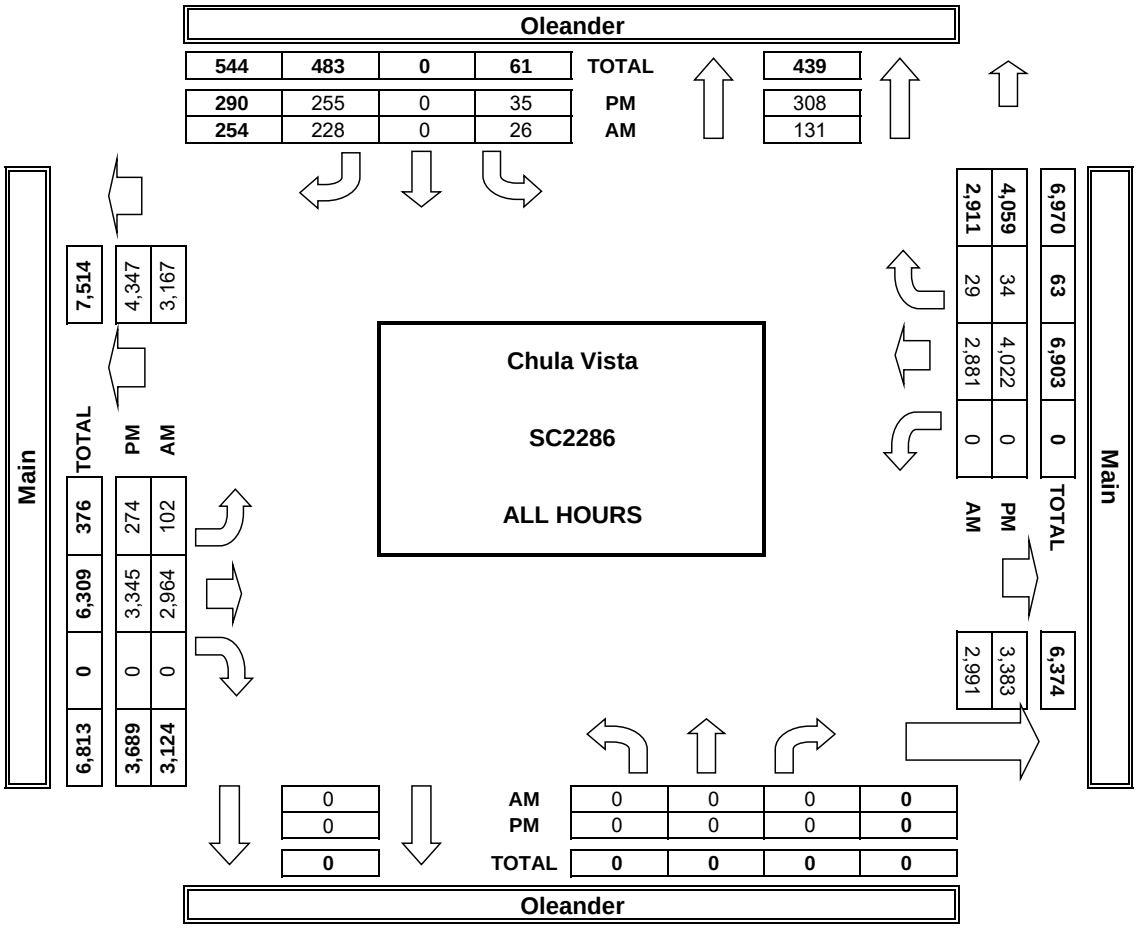
		NORTHBOUND Oleander			SOUTHBOUND Oleander			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 3	ER X	WL X	WT 5	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	0	0	0	1	0	19	4	259	0	0	199	0	482	0	0	5	0	5
AM	6:45 AM	0	0	0	0	0	14	3	317	0	0	192	0	526	0	0	4	0	4
AM	7:00 AM	0	0	0	0	0	17	8	214	0	0	240	2	481	0	0	3	0	3
AM	7:15 AM	0	0	0	0	0	25	10	230	0	0	255	1	521	0	0	3	0	3
AM	7:30 AM	0	0	0	2	0	26	28	246	0	0	308	9	619	0	0	14	0	14
AM	7:45 AM	0	0	0	2	0	40	15	325	0	0	315	6	703	0	0	4	0	4
AM	8:00 AM	0	0	0	10	0	20	8	251	0	0	226	5	520	0	0	8	0	8
AM	8:15 AM	0	0	0	1	0	11	4	225	0	0	247	0	488	0	0	6	0	6
AM	8:30 AM	0	0	0	1	0	18	6	241	0	0	187	3	456	0	0	2	1	3
AM	8:45 AM	0	0	0	5	0	14	3	260	0	0	253	1	536	0	0	1	0	1
AM	9:00 AM	0	0	0	3	0	12	3	190	0	0	198	1	407	0	0	3	0	3
AM	9:15 AM	0	0	0	1	0	12	10	206	0	0	261	1	491	0	0	5	0	5
	VOLUMES	0	0	0	26	0	228	102	2,964	0	0	2,881	29	6,289	0	0	58	1	59
	APPROACH %	0%	0%	0%	10%	0%	90%	3%	95%	0%	0%	99%	1%						
	APP/DEPART	0	/	131	254	/	0	3,124	/	2,991	2,911	/	3,167	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	0	0	0	14	0	111	61	1,052	0	0	1,104	21	2,392	0	0	29	0	
	APPROACH %	0%	0%	0%	11%	0%	89%	5%	92%	0%	0%	98%	2%						
	PEAK HR FACTOR		0.000			0.744			0.830			0.876		0.846					
	APP/DEPART	0	/	82	125	/	0	1,142	/	1,066	1,125	/	1,244	0					
PM	2:30 PM	0	0	0	9	0	43	17	255	0	0	274	0	598	0	0	14	3	17
PM	2:45 PM	0	0	0	3	0	18	19	266	0	0	270	2	578	0	0	3	0	3
PM	3:00 PM	0	0	0	3	0	19	21	306	0	0	347	0	696	0	0	5	0	5
PM	3:15 PM	0	0	0	4	0	19	30	271	0	0	314	2	640	0	0	3	0	3
PM	3:30 PM	0	0	0	1	0	21	30	329	0	0	406	4	791	0	0	3	0	3
PM	3:45 PM	0	0	0	2	0	23	16	301	0	0	352	4	698	0	0	2	0	2
PM	4:00 PM	0	0	0	4	0	18	25	278	0	0	409	8	742	0	0	8	0	8
PM	4:15 PM	0	0	0	1	0	23	28	262	0	0	294	5	613	0	0	13	0	13
PM	4:30 PM	0	0	0	2	0	14	15	292	0	0	369	0	692	0	0	2	0	2
PM	4:45 PM	0	0	0	1	0	18	19	278	0	0	312	4	632	0	0	6	0	6
PM	5:00 PM	0	0	0	2	0	12	33	278	0	0	376	4	705	0	0	2	0	2
PM	5:15 PM	0	0	0	3	0	27	21	229	0	0	299	1	580	0	0	9	0	9
	VOLUMES	0	0	0	35	0	255	274	3,345	0	0	4,022	34	8,038	0	0	70	3	73
	APPROACH %	0%	0%	0%	12%	0%	88%	7%	91%	0%	0%	99%	1%						
	APP/DEPART	0	/	308	290	/	0	3,689	/	3,383	4,059	/	4,347	0					
	BEGIN PEAK HR		3:15 PM																
	VOLUMES	0	0	0	11	0	81	101	1,179	0	0	1,481	18	2,887	0	0	16	0	
	APPROACH %	0%	0%	0%	12%	0%	88%	8%	91%	0%	0%	99%	1%						
	PEAK HR FACTOR		0.000			0.920			0.895			0.899		0.909					
	APP/DEPART	0	/	119	92	/	0	1,296	/	1,190	1,499	/	1,578	0					

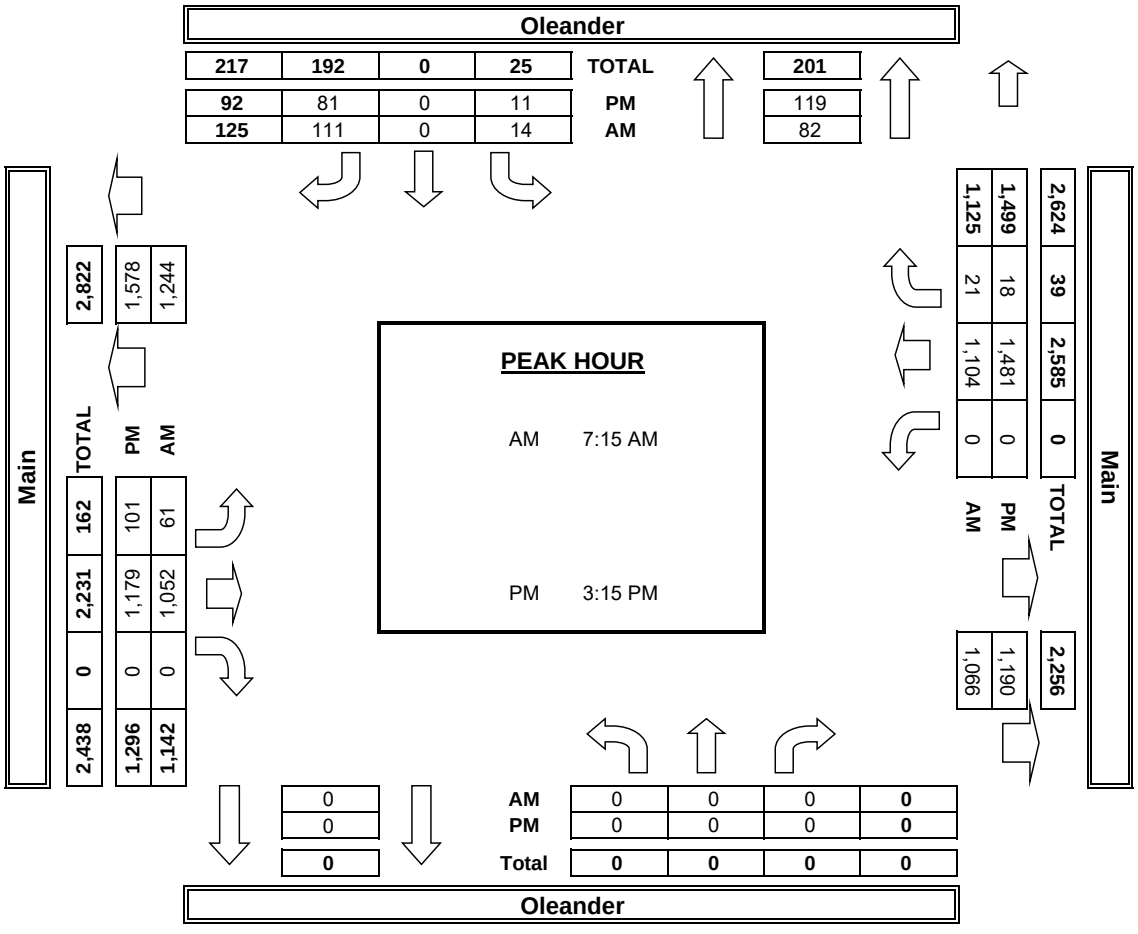


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
AM	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	2	0	2	0	0	2	0	2	0	0	0	0	0
AM	7:30 AM	1	2	0	0	3	1	0	0	0	1	0	2	0	0	2
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
AM	8:45 AM	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0
AM	9:00 AM	0	0	2	0	2	0	0	1	0	1	0	0	1	0	1
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2	2	7	0	11	2	0	6	0	8	0	2	1	0	3
	AM BEGIN PEAK HR			7:15 AM			1	0	2	0	3					
PM	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	2:45 PM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
PM	3:00 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
PM	3:15 PM	0	3	3	0	6	0	0	1	0	1	0	3	2	0	5
PM	3:30 PM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4
PM	3:45 PM	1	1	0	0	2	0	0	0	0	0	1	1	0	0	2
PM	4:00 PM	1	1	1	0	3	0	0	1	0	1	1	1	0	0	2
PM	4:15 PM	3	3	1	0	7	0	0	1	0	1	3	3	0	0	6
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
PM	5:00 PM	1	0	2	0	3	1	0	2	0	3	0	0	0	0	0
PM	5:15 PM	2	0	2	0	4	0	0	2	0	2	2	0	0	0	2
	TOTAL	11	12	11	0	34	1	0	8	0	9	10	12	3	0	25
	PM BEGIN PEAK HR			3:15 PM			0	0	2	0	2					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20

LOCATION: Chula Vista
NORTH & SOUTH: Brandywine
EAST & WEST: Main

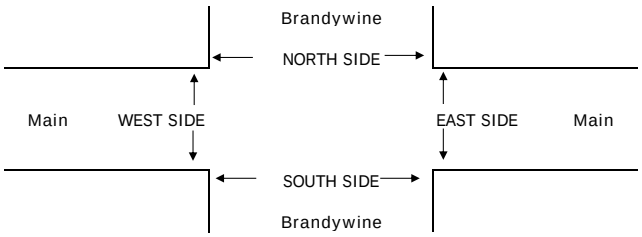
PROJECT #: SC2286
LOCATION #: 137
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

☑ Add U-Turns to Left Turns

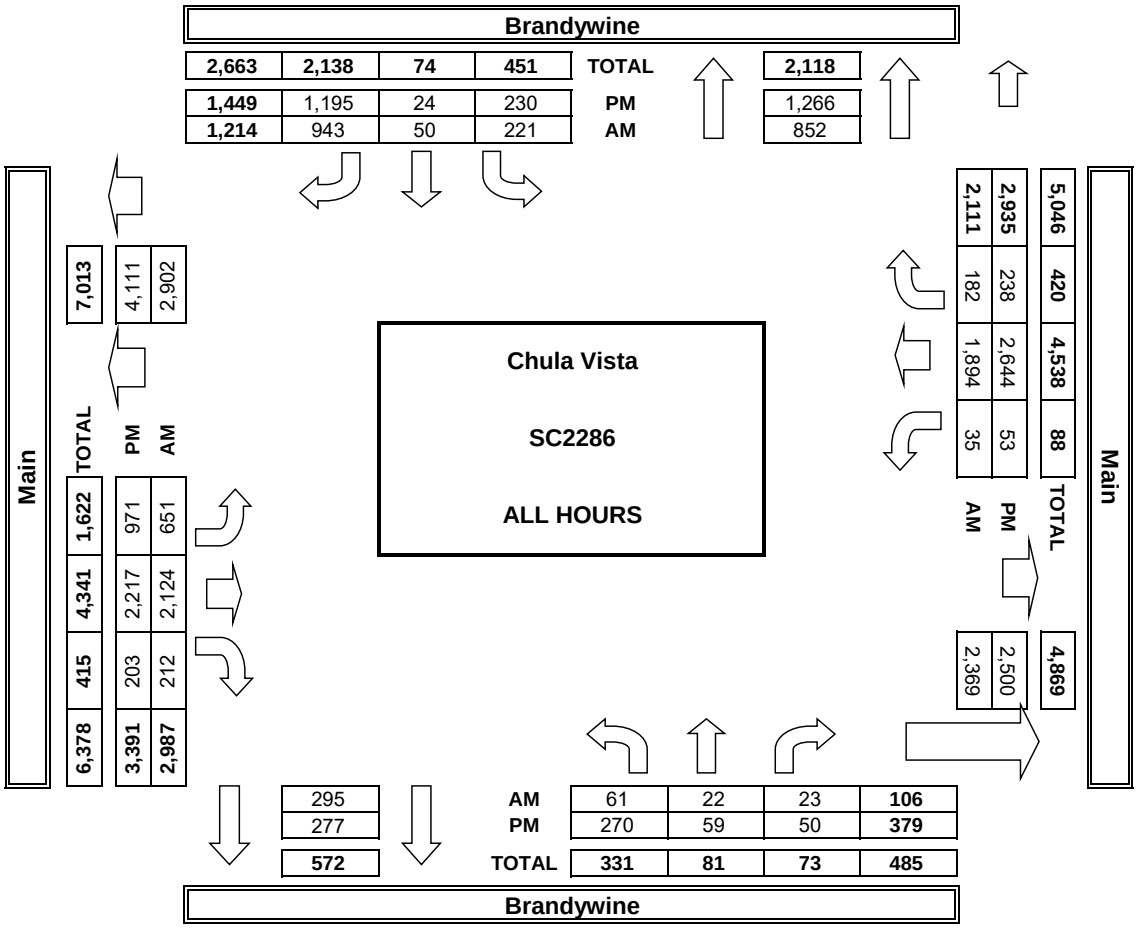
		NORTHBOUND Brandywine			SOUTHBOUND Brandywine			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 2	NT 0.5	NR 0.5	SL 1	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	2	0	0	9	0	35	54	193	13	2	156	14	478	0	0	1	0	1
AM	6:45 AM	1	0	1	14	3	49	84	195	24	1	146	16	534	0	0	0	0	0
AM	7:00 AM	2	0	0	11	3	82	59	158	18	3	138	22	496	0	0	0	0	0
AM	7:15 AM	1	0	2	14	1	82	59	159	12	3	172	20	525	0	0	0	0	0
AM	7:30 AM	5	2	1	18	2	120	60	167	10	3	183	23	594	0	0	0	0	0
AM	7:45 AM	4	2	1	28	9	149	76	223	20	2	171	25	710	0	0	0	0	0
AM	8:00 AM	4	4	3	31	4	82	63	196	20	3	143	12	565	0	0	0	0	0
AM	8:15 AM	11	0	1	14	2	76	51	160	13	1	158	9	496	0	1	1	0	2
AM	8:30 AM	1	2	2	24	7	72	36	169	29	4	121	9	476	0	0	0	1	1
AM	8:45 AM	4	3	3	23	9	96	45	181	23	5	158	7	557	0	0	0	0	0
AM	9:00 AM	18	2	5	26	4	51	20	172	17	2	149	13	479	0	0	0	0	0
AM	9:15 AM	8	7	4	9	6	49	44	151	13	6	199	12	508	0	0	2	1	3
AM	VOLUMES	61	22	23	221	50	943	651	2,124	212	35	1,894	182	6,418	0	1	4	2	7
AM	APPROACH %	58%	21%	22%	18%	4%	78%	22%	71%	7%	2%	90%	9%						
AM	APP/DEPART	106	/	852	1,214	/	295	2,987	/	2,369	2,111	/	2,902	0					
AM	BEGIN PEAK HR		7:15 AM																
AM	VOLUMES	14	8	7	91	16	433	258	745	62	11	669	80	2,394	0	0	0	0	
AM	APPROACH %	48%	28%	24%	17%	3%	80%	24%	70%	6%	1%	88%	11%						
AM	PEAK HR FACTOR		0.659			0.726			0.835			0.909		0.843					
AM	APP/DEPART	29	/	346	540	/	89	1,065	/	843	760	/	1,116	0					
PM	2:30 PM	17	5	4	19	2	66	60	171	20	4	205	21	594	0	0	1	0	1
PM	2:45 PM	15	6	5	17	0	80	87	169	16	6	167	14	582	0	0	0	0	0
PM	3:00 PM	19	3	4	24	2	122	75	211	22	7	208	17	714	0	0	0	1	1
PM	3:15 PM	11	2	9	22	3	92	77	185	22	3	225	16	667	0	0	0	0	0
PM	3:30 PM	29	1	3	21	1	150	68	232	11	4	221	13	754	0	0	1	0	1
PM	3:45 PM	21	6	5	20	1	127	106	181	27	3	234	12	743	0	0	0	0	0
PM	4:00 PM	31	10	2	19	1	111	83	185	15	6	275	24	762	0	0	0	1	1
PM	4:15 PM	16	2	4	24	5	82	84	172	12	3	238	18	660	0	0	0	0	0
PM	4:30 PM	26	3	5	24	1	98	81	205	19	5	216	28	711	0	0	0	1	1
PM	4:45 PM	25	3	5	14	0	78	87	175	14	5	205	19	630	0	0	0	0	0
PM	5:00 PM	34	10	0	9	3	89	77	182	15	4	261	29	713	0	0	0	0	0
PM	5:15 PM	26	8	4	17	5	100	86	149	10	3	189	27	624	0	0	0	0	0
PM	VOLUMES	270	59	50	230	24	1,195	971	2,217	203	53	2,644	238	8,154	0	0	2	3	5
PM	APPROACH %	71%	16%	13%	16%	2%	82%	29%	65%	6%	2%	90%	8%						
PM	APP/DEPART	379	/	1,266	1,449	/	277	3,391	/	2,500	2,935	/	4,111	0					
PM	BEGIN PEAK HR		3:15 PM																
PM	VOLUMES	92	19	19	82	6	480	334	783	75	16	955	65	2,926	0	0	1	1	
PM	APPROACH %	71%	15%	15%	14%	1%	85%	28%	66%	6%	2%	92%	6%						
PM	PEAK HR FACTOR		0.756			0.826			0.949			0.849		0.960					
PM	APP/DEPART	130	/	417	568	/	96	1,192	/	885	1,036	/	1,528	0					

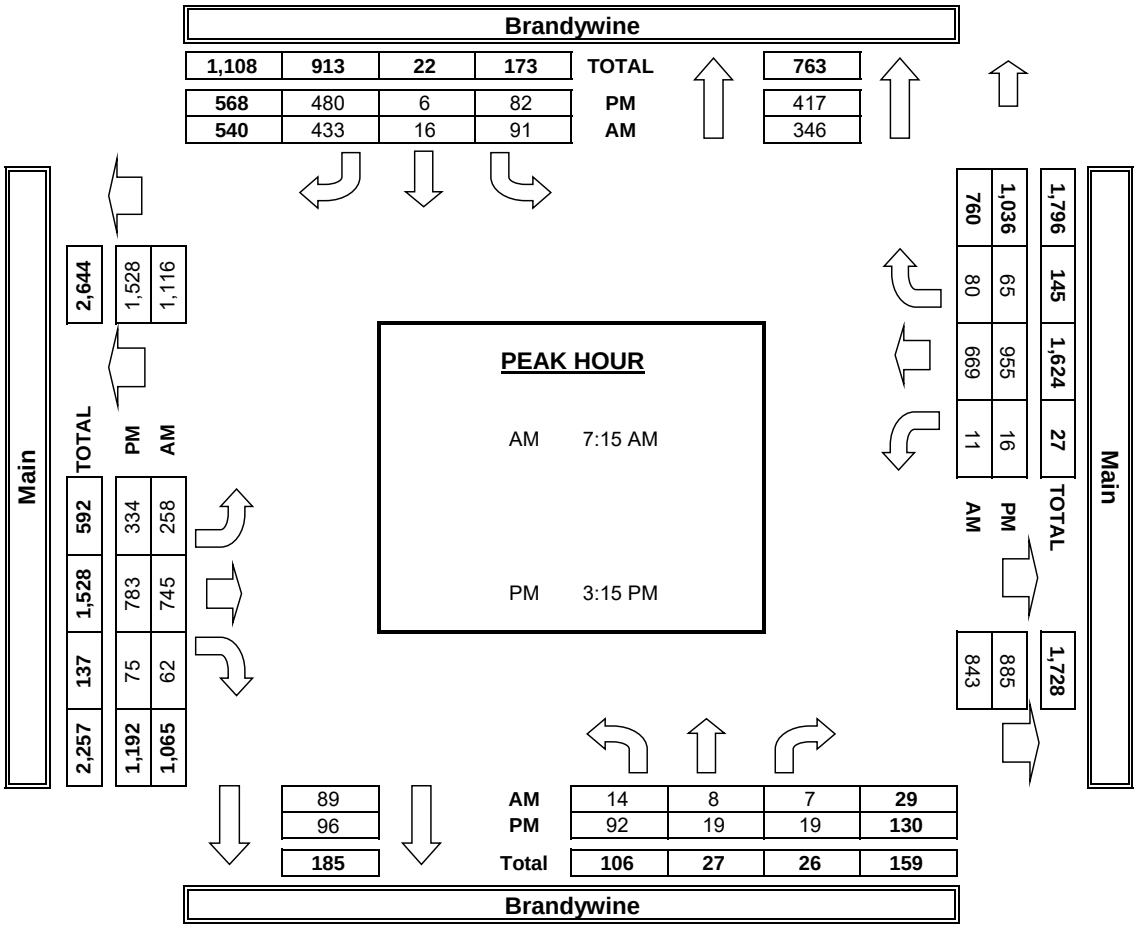


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	2	1	0	3	0	1	1	0	2	0	1	0	0	1
AM	7:45 AM	2	0	0	0	2	1	0	0	0	1	1	0	0	0	1
AM	8:00 AM	1	1	1	0	3	1	1	1	0	3	0	0	0	0	0
AM	8:15 AM	1	0	1	0	2	0	0	1	0	1	1	0	0	0	1
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
AM	9:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
AM	9:15 AM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
AM	TOTAL	8	3	4	0	15	3	2	4	0	9	5	1	0	0	6
	AM BEGIN PEAK HR			7:15 AM			2	2	2	0	6					
PM	2:30 PM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
PM	2:45 PM	1	2	0	0	3	0	1	0	0	1	1	1	0	0	2
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	1	1	1	0	3	0	0	0	0	0	1	1	1	0	3
PM	3:30 PM	1	0	1	0	2	0	0	0	0	0	1	0	1	0	2
PM	3:45 PM	2	0	0	1	3	0	0	0	0	0	2	0	0	1	3
PM	4:00 PM	1	2	1	0	4	0	0	0	0	0	1	2	1	0	4
PM	4:15 PM	2	1	3	0	6	2	0	2	0	4	0	1	1	0	2
PM	4:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
PM	4:45 PM	1	0	1	0	2	1	0	1	0	2	0	0	0	0	0
PM	5:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
PM	5:15 PM	3	0	1	0	4	0	0	1	0	1	3	0	0	0	3
PM	TOTAL	14	7	9	1	31	4	1	4	0	9	10	6	5	1	22
	PM BEGIN PEAK HR			3:15 PM			0	0	0	0	0					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Feb 27, 20

LOCATION: Chula Vista
NORTH & SOUTH: Auto Park Place
EAST & WEST: Main

PROJECT #: SC2286
LOCATION #: 229
CONTROL: SIGNAL

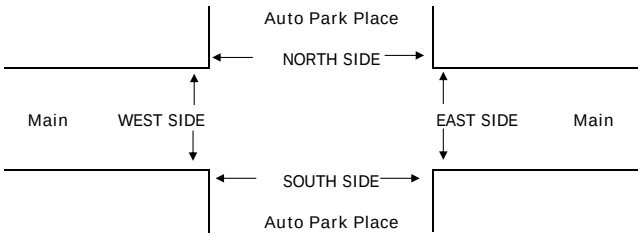
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

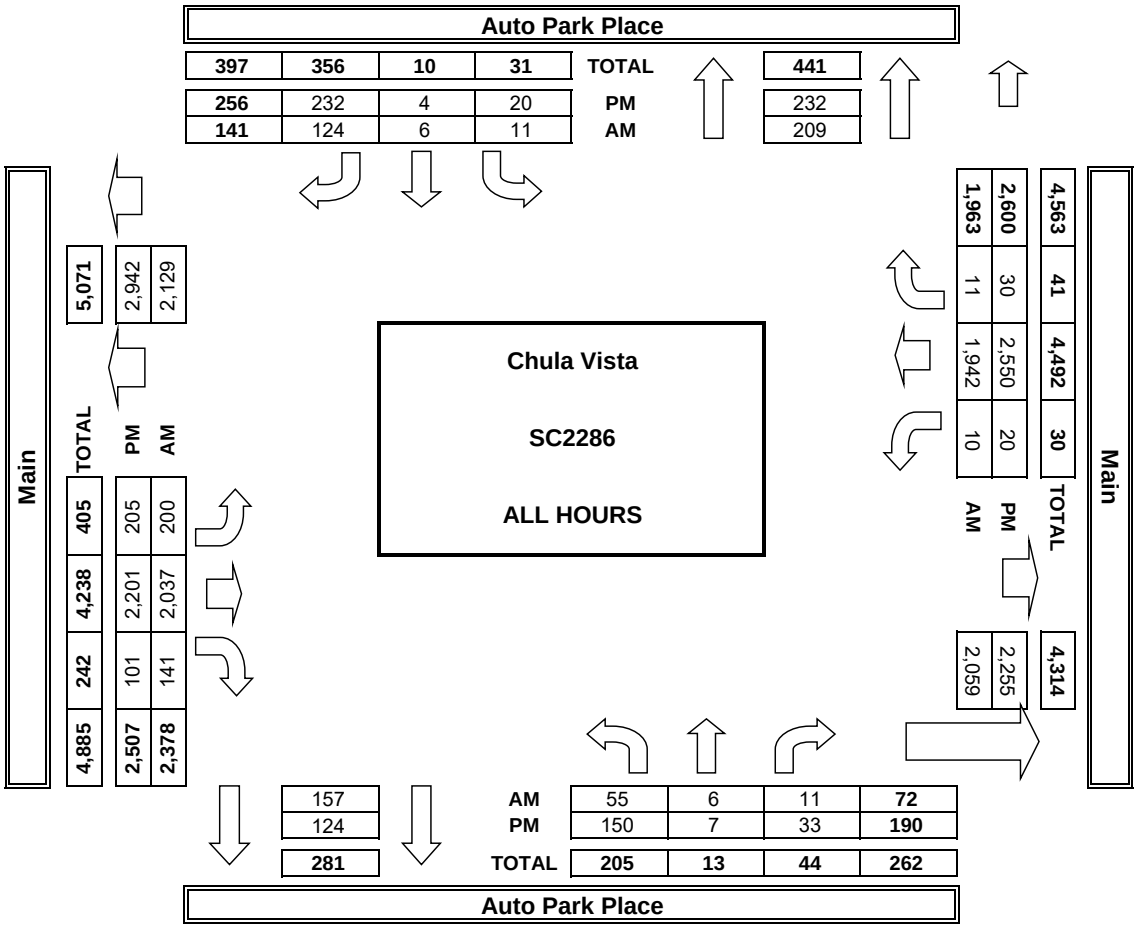
		NORTHBOUND Auto Park Place			SOUTHBOUND Auto Park Place			EASTBOUND Main			WESTBOUND Main				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 0.5	SR 0.5	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	6:30 AM	1	0	0	0	0	1	9	173	8	1	155	0	348	0	0	0	0	0
	6:45 AM	0	0	1	0	0	1	8	186	14	0	166	1	377	0	0	1	0	1
	7:00 AM	2	0	0	1	0	1	6	130	13	0	177	1	331	0	0	0	0	0
	7:15 AM	2	0	0	1	0	5	8	152	12	0	186	1	367	0	0	0	0	0
	7:30 AM	4	0	0	0	0	5	11	179	10	1	213	0	423	0	0	1	0	1
	7:45 AM	2	0	0	1	0	1	16	211	19	3	192	1	446	0	0	2	0	2
	8:00 AM	7	0	2	0	1	5	22	190	17	1	141	0	386	0	0	0	0	0
	8:15 AM	6	0	1	3	0	26	16	145	9	0	127	1	334	0	0	0	0	0
	8:30 AM	2	1	1	0	1	8	26	172	13	2	135	2	363	0	0	0	0	0
	8:45 AM	13	3	2	0	2	22	26	195	11	1	142	0	417	0	0	1	0	1
	9:00 AM	6	1	0	2	1	10	33	156	8	0	147	1	365	0	0	3	0	3
	9:15 AM	10	1	4	3	1	39	19	148	7	1	161	3	397	0	0	0	0	0
	VOLUMES	55	6	11	11	6	124	200	2,037	141	10	1,942	11	4,554	0	0	8	0	8
	APPROACH %	76%	8%	15%	8%	4%	88%	8%	86%	6%	1%	99%	1%						
	APP/DEPART	72	/	209	141	/	157	2,378	/	2,059	1,963	/	2,129	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	15	0	2	2	1	16	57	732	58	5	732	2	1,622	0	0	3	0	
	APPROACH %	88%	0%	12%	11%	5%	84%	7%	86%	7%	1%	99%	0%						
	PEAK HR FACTOR		0.472			0.792			0.861			0.863		0.909					
	APP/DEPART	17	/	56	19	/	64	847	/	736	739	/	766	0					
PM	2:30 PM	8	1	3	3	0	17	18	167	9	1	191	3	421	0	0	0	0	0
	2:45 PM	9	2	1	0	1	21	14	183	5	2	167	3	408	0	0	2	0	2
	3:00 PM	16	1	6	3	0	22	20	212	12	3	210	1	506	0	0	0	0	0
	3:15 PM	8	0	1	1	0	18	15	188	12	1	196	1	441	0	0	0	0	0
	3:30 PM	12	1	5	1	1	10	17	231	8	2	248	1	537	0	0	0	0	0
	3:45 PM	6	0	3	2	0	21	23	167	14	5	210	2	453	0	0	1	1	2
	4:00 PM	18	0	6	1	0	23	20	174	5	2	281	6	536	0	0	1	0	1
	4:15 PM	9	0	1	4	0	22	22	176	13	1	202	0	450	0	0	3	0	3
	4:30 PM	15	1	4	0	0	22	9	204	10	0	209	3	477	0	0	1	0	1
	4:45 PM	14	0	1	2	1	16	14	181	5	0	220	5	459	0	0	1	0	1
	5:00 PM	24	1	2	3	1	19	17	165	7	3	246	1	489	0	0	1	0	1
	5:15 PM	11	0	0	0	0	21	16	153	1	0	170	4	376	0	0	0	0	0
	VOLUMES	150	7	33	20	4	232	205	2,201	101	20	2,550	30	5,553	0	0	10	1	11
	APPROACH %	79%	4%	17%	8%	2%	91%	8%	88%	4%	1%	98%	1%						
	APP/DEPART	190	/	232	256	/	124	2,507	/	2,255	2,600	/	2,942	0					
	BEGIN PEAK HR		3:30 PM																
	VOLUMES	45	1	15	8	1	76	82	748	40	10	941	9	1,976	0	0	5	1	
	APPROACH %	74%	2%	25%	9%	1%	89%	9%	86%	5%	1%	98%	1%						
	PEAK HR FACTOR		0.635			0.817			0.850			0.830		0.920					
	APP/DEPART	61	/	87	85	/	50	870	/	772	960	/	1,067	0					

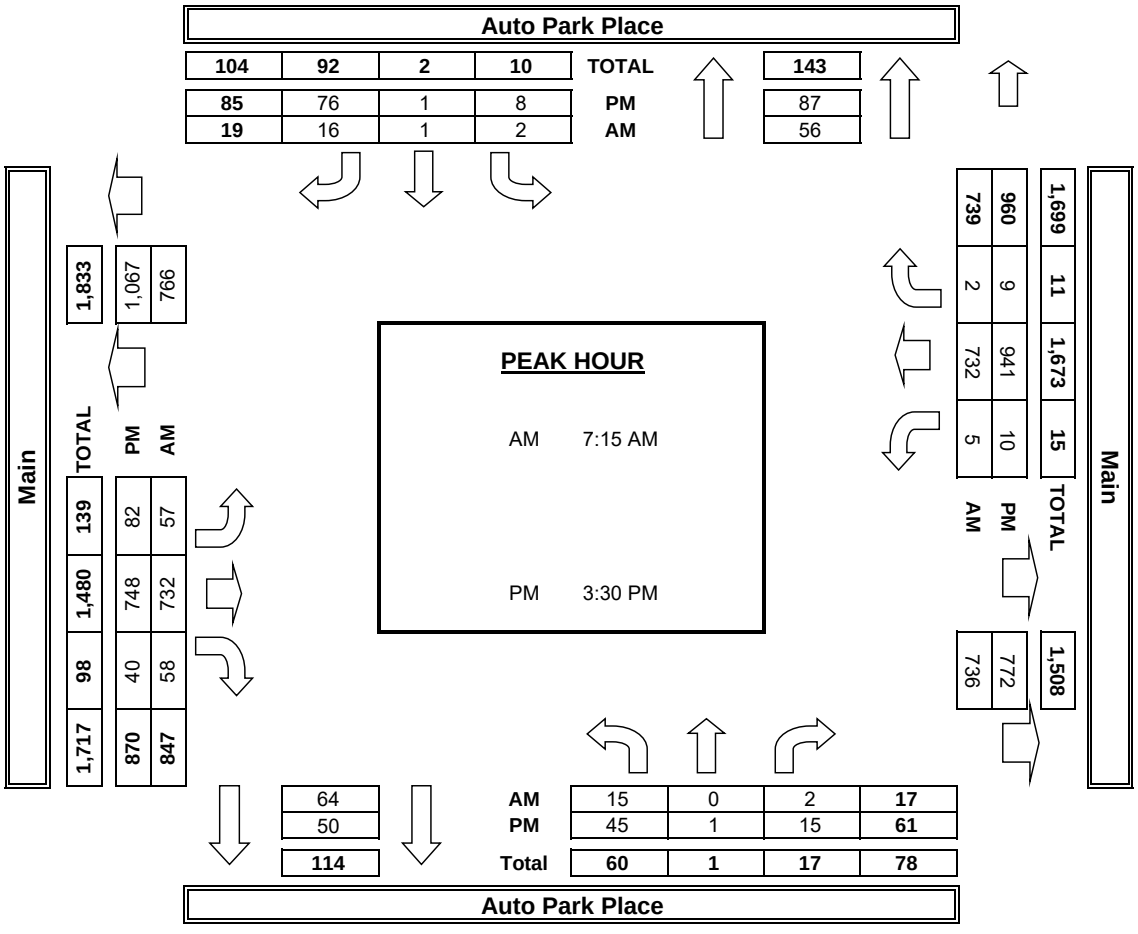


		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	2	1	0	0	3	2	0	0	0	2	0	1	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	2	0	1	3	0	0	0	0	0	0	2	0	1	3
	7:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	8:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	9:15 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	TOTAL	6	3	0	1	10	4	0	0	0	4	2	3	0	1	6
	AM BEGIN PEAK HR			7:15 AM			1	0	0	0	1					
PM	2:30 PM	1	1	0	0	2	1	1	0	0	2	0	0	0	0	0
	2:45 PM	2	1	0	0	3	1	1	0	0	2	1	0	0	0	1
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	3:45 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:00 PM	1	1	0	0	2	1	0	0	0	1	0	1	0	0	1
	4:15 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
	5:00 PM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1
	5:15 PM	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2
	TOTAL	11	3	0	0	14	4	2	0	0	6	7	1	0	0	8
	PM BEGIN PEAK HR			3:30 PM			1	0	0	0	1					

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION	DIRECTION	PROJECT #3408 (THURSDAY, JUNE 24, 2021)						THURSDAY, FEBRUARY 27, 2020						AVERAGE CHANGE
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	
8. Main St / Oleander Ave	Sb	56	69	0	0	5	9	111	81	0	0	14	11	
	Wb	7	15	759	1311	0	0	21	18	1104	1481	0	0	
	Nb	0	0	0	0	0	0	0	0	0	0	0	0	
	Eb	0	0	876	1039	23	86	0	0	1052	1179	61	101	-15.8%
9. Main St / Brandywine Ave	Sb	173	287	13	6	47	37	433	480	16	6	91	82	
	Wb	26	51	553	955	11	5	80	65	669	955	11	16	
	Nb	9	8	4	19	27	86	7	19	8	19	14	92	
	Eb	53	27	579	679	168	266	62	75	745	783	258	334	-23.3%
												Average		-19.5%

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

BRANDYWINE / OLYMPIC

SCN: 162 **ADDRESS: 10**

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=5.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4,7] ; E-E-C=[1,6] ; E-E-D=[3,8] ; E-F-F=[3] ; F-0-8=F-0-9=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1	X														
→ 2	X														X
3	X														
↓ 4	X														
5	X														
← 6	X														X
7	X														
↑ 8	X														

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1			4			2.6	2.6	2.6	55						3.2	1.0
→ 2	7	16	10		1.2	5.5	5.9	2.0	60					1.4	4.3	1.0
3			4			2.0	2.0	2.0	40						3.2	1.0
↓ 4	7	23	7			3.0	3.0	3.0	50						4.4	1.0
5			4			2.5	2.5	2.5	55						3.2	1.0
← 6	7	14	10		1.2	5.5	5.9	2.0	60					1.4	5.2	1.0
7			4			2.0	2.0	2.0	35						3.2	1.0
↑ 8	7	26	7			3.0	3.0	3.0	50						4.0	1.0

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS		DAY
0 =	0630	8	A	[2,3,4,5,6]
1 =	0900	7	A	[2,3,4,5,6]
2 =	1430	9	A	[2,3,4,5,6]
3 =	1900	7	A	[2,3,4,5,6]
4 =	2000	E	A	[2,3,4,5,6]
5 =	1000	7	A	[1,7]
6 =	1900	E	A	[1,7]
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0} D-1-0 = 2.0 ; D-3-0 = 1.5 ; D-2-0 = 2.0 ; D-4-0 = 1.5 ; D-1-6 = 2.0 ; D-3-6 = 1.5 ; D-2-6 = 2.0 ; D-4-6 = 1.5 ;

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF 0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	OFFSET C-E-PLAN	OFFSET C-F-PLAN
1																			
2																			
3																			
4																			
5																			
6																			
7	128	90	0	24	65	90	0	24	65	0	12	0	0	27	255	0	[2,6]	[2,4,6,8]	
8	150	97	0	15	68	97	0	27	68	0	128	0	0	26	255	0	[2,6]	[2,4,6,8]	
9	140	86	0	20	52	86	0	20	52	0	113	0	0	26	255	3	[2,6]	[2,4,6,8]	3

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME	RESERVED ϕs 0	5	6	PRETIMED ϕs 8	MAX RECALL ϕs 9
1							
2							
3							
4							
5							
6							
7							
8							
9							

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : April 20, 2016 VERSION: 2.1

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

BRANDYWINE / SEQUOIA

SCN: 254 ADDRESS: 4

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2] ; E-E-B=[4,7] ; E-E-C=[6] ; E-E-D=[3,8] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

	PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
	1															
→	2	X							X							
	3	X														
↓	4	X			X											X
	5															
←	6	X							X							
	7	X														
↑	8	X			X											X

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

	PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	1																
→	2	7	17	3	0.0	3.0	3.0	3.0	30			4			4.0	1.0	
	3			2	0.0	2.5	2.5	2.5	26						3.0	1.0	
↓	4	7	10	8	0.0	4.5	5.1	2.0	50			3		1.3	4.0	1.0	
	5																
←	6	7	17	3	0.0	3.0	3.0	3.0	30			4			4.0	1.0	
	7			2	0.0	1.2	1.2	1.2	26						3.0	0.5	
↑	8	7	10	8	0.0	5.0	5.8	2.0	50			3		1.3	4.0	1.0	

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS	[DAY]
0 =	0000	E A	[1,2,3,4,5,6,7]
1 =		A	
2 =		A	
3 =		A	
4 =		A	
5 =		A	
6 =		A	
7 =		A	
8 =		A	
9 =		A	
A =		A	
B =		A	
C =		A	
D =		A	
E =		A	
F =		A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0}

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE 0	FORCE-OFF 1	2	3	4	5	6	7	OFFSET 8	9	A	B	C	D	E	F	[SYNC ϕ s] C-E-PLAN	[LAG ϕ s] C-F-PLAN
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PED-ADJ	RSRV-TIME	[RESERVED ϕs]	[PRETIMED ϕs]	[MAX RECALL ϕs]
0	5	6	8	9

INTERSECTION: 230 Main/Main Court

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **230**

N/S Street Name: **Main Ct**
E/W Street Name: **Main St**

Last Database Change: **5/20/2021 9:21**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	0	<C/0+0+2>
Area Address	146	<C/0+0+3>
QuicNet Channel	P:8018:10.242.20	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	3.0	<F/1+0+F>
All Red Start	5.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8	Row
	Phase Names ---->									
0	Ped Walk	0	~~7~~	0	0	0	~~0~~7	0	~~0~~7	0
1	Ped FDW	0	~~19~~	0	0	0	~~0~~11	0	~~0~~19	1
2	Min Green	4	10	0	0	0	10	0	4	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	Veh Extension	2.0	4.5	0.0	0.0	0.0	3.5	0.0	3.5	5
6	Max Gap	2.0	5.3	0.0	0.0	0.0	3.5	0.0	3.5	6
7	Min Gap	2.0	2.0	0.0	0.0	0.0	3.5	0.0	3.5	7
8	Max Limit	30	50	0	0	0	50	0	40	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	PE Min Ped FDW	0	0	0	0	0	0	0	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	D
E	Yellow Change	3.2	4.4	0.0	0.0	0.0	4.4	0.0	3.2	E
F	Red Clear	1.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
View Set Peds	- - - - -
Rest In Walk	
Red Rest	
Dual Entry	
Max Recall	
Soft Recall	
Max 2	
Cond. Service	
Man Cntrl Calls	
Yellow Start	
First Phases	2 6

Preempt Timing

	F	Row
Permit	12 6 8	0
Red Lock		1
Yellow Lock		2
Min Recall	2 6	3
Ped Recall		4
View Set Peds	- - - - -	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start		E
First Phases	2 6	F

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ---->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Allow QuicNet PE
8 =

Row		C	Row
0	EV-A	0	0
1	EV-B	0	1
2	EV-C	0	2
3	EV-D	0	3
4	RR-1 *	- - -	4
5	RR-2 *	- - -	5
6	SE-1	0	6
7	SE-2	0	7

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Configuration <C+0+E=125>

Row	Column Numbers ---->	E	Row
0	Exclusive Phases		0
1	RR-1 Clear Phases		1
2	RR-2 Clear Phases		2
3	RR-2 Limited Service		3
4	Prot / Perm Phases		4
5	Flash to PE Circuits		5
6	Flash Entry Phases		6
7	Disable Yellow Range		7
8	Disable Ovp Yel Range		8
9	Overlap Yellow Flash		9
A	EV-A Phases	2	A
B	EV-B Phases		B
C	EV-C Phases	1 6	C
D	EV-D Phases	8	D
E	Extra 1 Config. Bits	1 3 5	E
F	IC Select (Interconnect)	2	F

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	
Ped for 4P Output	
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Specials <C+0+F=2>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12 6 8
Start-up Ped Calls	2

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8

Coordination Transition Minimums
<C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	56	64	64	72	90	110	110	110	110	0
1	Phase 1 - ForceOff	31	37	0	42	52	52	57	57	57	1
2	Phase 2 - ForceOff	0	0	48	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	17	20	23	23	27	32	37	32	32	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	5	42	109	32	8	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	0	0	0	0	5	5	5	5	5	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	2 6	1
2	Plan 2 - Sync	2 6	2
3	Plan 3 - Sync	1 6	3
4	Plan 4 - Sync	2 6	4
5	Plan 5 - Sync	2 6	5
6	Plan 6 - Sync	2 6	6
7	Plan 7 - Sync	2 6	7
8	Plan 8 - Sync	2 6	8
9	Plan 9 - Sync	2 6	9
A	NEMA Sync		A
B	NEMA Hold		B
C			C
D			D
E	Coord Extra		E
F			F

Sync Phases <C+0+C=1>

Row		1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases										6
7											7
8	Pretimed Phases										8
9	Max Recall										9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase										C
D	Perm 2 Ped Phase										D
E	Perm 3 Veh Phase										E
F	Perm 3 Ped Phase										F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	2 6 8	0
1	Plan 1 - Lag	2 6 8	1
2	Plan 2 - Lag	2 6 8	2
3	Plan 3 - Lag	1 6 8	3
4	Plan 4 - Lag	2 6 8	4
5	Plan 5 - Lag	2 4 6 8	5
6	Plan 6 - Lag	2 4 6 8	6
7	Plan 7 - Lag	2 4 6 8	7
8	Plan 8 - Lag	2 4 6 8	8
9	Plan 9 - Lag	2 4 6 8	9
A	External Lag		A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases		<C/5+1+A>

Coordinated Lag Hold Phases

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	4	<C/5+2+A>
Begin Week	1	<C/5+2+B>
End Month	10	<C/5+2+C>
End Week	5	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	45_7_	2	123	0.0	0.0
1		40	45_7_	6	123	0.0	0.0
2		41	45_7_	4	123	0.0	0.0
3		42	45_7_	8	123	0.0	0.0
4		43	45_7_	2	123	0.0	0.0
5		44	45_7_	6	123	0.0	0.0
6		45	45_7_	4	123	0.0	0.0
7		46	45_7_	8	123	0.0	0.0
8		47	45_7_	2	123	0.0	0.0
9		48	45_7_	6	123	0.0	0.0
A		49	45_7_	4	123	0.0	0.0
B		50	45_7_	8	123	0.0	0.0
C		55	45_7_	5	123	0.0	0.0
D		56	45_7_	1	123	0.0	0.0
E		57	45_7_	7	123	0.0	0.0
F		58	45_7_	3	123	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	45_7_	5	123	0.0	0.0
1		60	45_7_	1	123	0.0	0.0
2		61	45_7_	7	123	0.0	0.0
3		62	45_7_	3	123	0.0	0.0
4		63	45_7_	2	123	0.0	0.0
5		64	45_7_	6	123	0.0	0.0
6		65	45_7_	4	123	0.0	0.0
7		66	45_7_	8	123	0.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7_	2	123	0.0	0.0
D		77	45_7_	6	123	0.0	0.0
E		78	45_7_	4	123	0.0	0.0
F		79	45_7_	8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm		<C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00 : 00	5	A	1234567
1	07 : 00	6	A	_23456_
2	10 : 25	E	A	_23456_
3	10 : 30	7	A	_23456_
4	13 : 55	E	A	_23456_
5	14 : 00	8	A	_23456_
6	18 : 30	5	A	_23456_
7	10 : 30	9	A	1_____7
8	16 : 00	5	A	1_____7
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Min Time (seconds) **2** <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) **2** <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) **0** <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel _____ <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) **0** <F/1+A+D>

Bus Delay

Max Time (seconds) **0** <F/1+A+E>

Max Early Green

Max Time (seconds) **0** <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: 137 Brandywine/Main

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **137**

N/S Street Name: **Brandywine Ave**
E/W Street Name: **Main St**

Last Database Change: **6/23/2021 17:40**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**0**	<C/0+0+2>
Area Address	**141**	<C/0+0+3>
QuicNet Channel	**P:8018:10.242.20**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**3.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8	Row
0	Ped Walk	0	7	0	0	0	7	0	7	0
1	Ped FDW	0	21	0	0	0	19	0	30	1
2	Min Green	4	10	4	10	4	10	4	10	2
3	Type 3 Disconnect	0	0	0	0	0	0	0	0	3
4	Added per Vehicle	0.0	1.2	0.0	0.0	0.0	1.2	0.0	0.0	4
5	Veh Extension	2.0	5.5	2.0	2.0	2.0	5.5	2.0	2.0	5
6	Max Gap	2.0	6.4	2.0	2.0	2.0	6.4	2.0	2.0	6
7	Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	7
8	Max Limit	22	50	22	23	42	50	32	23	8
9	Max Limit 2	0	0	0	0	0	0	0	0	9
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0	A
B	PE Min Ped FDW	0	0	0	0	0	0	0	0	B
C	Cond Serv Check	0	0	0	0	0	0	0	0	C
D	Reduce Every	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	D
E	Yellow Change	3.2	4.7	3.2	4.3	3.2	4.7	3.2	4.3	E
F	Red Clear	1.0	1.7	1.0	1.0	1.0	1.7	1.0	1.0	F

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	20	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	20	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

E	
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	0
EV-B Delay	0
EV-B Clear	0
EV-C Delay	0
EV-C Clear	0
EV-D Delay	0
EV-D Clear	0
RR-2 Delay	0
RR-2 Clear	0
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

F		Row
Permit	**12345678**	0
Red Lock		1
Yellow Lock		2
Min Recall	**2 6**	3
Ped Recall		4
View Set Peds	- - - - -	5
Rest In Walk		6
Red Rest		7
Dual Entry		8
Max Recall		9
Soft Recall		A
Max 2		B
Cond. Service		C
Man Cntrl Calls		D
Yellow Start		E
First Phases	**2 6**	F

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8	Row
	Overlap Name ---->									
0	Load Switch Number	0	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases									1
2	Veh Set 2 - Phases									2
3	Veh Set 3 - Phases									3
4	Neg Veh Phases									4
5	Neg Ped Phases									5
6	Green Omit Phases									6
7	Green Clear Omit Phs.									7
8										8
9										9
A										A
B										B
C										C
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Allow QuicNet PE
8 =

	C	Row
EV-A	0	0
EV-B	0	1
EV-C	0	2
EV-D	0	3
RR-1 *	- - -	4
RR-2 *	- - -	5
SE-1	0	6
SE-2	0	7

Preempt Priority <C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	12345678
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	1 3 5 7
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2	Row
		0
Phase 1	10	1
Phase 2	10	2
Phase 3	10	3
Phase 4	10	4
Phase 5	10	5
Phase 6	10	6
Phase 7	10	7
Phase 8	10	8

Coordination Transition Minimums <C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ----->										
0	Cycle Length	0	72	96	120	144	110	110	110	110	0
1	Phase 1 - ForceOff	0	48	64	68	68	73	73	78	77	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	13	20	22	22	23	23	23	23	3
4	Phase 4 - ForceOff	0	36	43	45	45	52	52	52	51	4
5	Phase 5 - ForceOff	0	48	64	68	68	80	80	80	80	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	13	20	22	22	23	23	23	22	7
8	Phase 8 - ForceOff	0	36	43	45	45	52	52	52	51	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	25	5	5	5	23	99	14	102	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	0	0	0	0	0	5	5	5	5	D
E	Hold Release	0	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
0			0
1	Plan 1 - Sync	_____	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_2___6__	4
5	Plan 5 - Sync	_2___6__	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row		Plan 1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	0	5	5	5	5	7	7	7	7	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_____	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_2_4_6_8	4
5	Plan 5 - Lag	_2_4_6_8	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ----->		0	1	2	3	1	3
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	___45_7_	_2_____	123____	2.0	1.5
1		40	___45_7_	_____6__	123____	0.0	0.0
2		41	___45_7_	___4____	123____	0.0	0.0
3		42	___45_7_	_______8	123____	0.0	0.0
4		43	___45_7_	_2_____	123____	0.0	0.0
5		44	___45_7_	_____6__	123____	0.0	0.0
6		45	___45_7_	___4____	123____	2.0	1.5
7		46	___45_7_	_______8	123____	10.0	0.0
8		47	___45_7_	_2_____	123____	3.0	1.5
9		48	___45_7_	_____6__	123____	2.0	1.5
A		49	___45_7_	___4____	123____	0.0	0.0
B		50	___45_7_	_______8	123____	0.0	0.0
C		55	___45_7_	____5___	123____	0.0	0.0
D		56	___45_7_	1_____	123____	0.0	0.0
E		57	___45_7_	_____7_	123____	0.0	0.0
F		58	___45_7_	__3____	123____	0.0	0.0

		4	5	6	7	2	4
Row	*Detector Name*	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	___45_7_	____5___	123____	2.0	1.5
1		60	___45_7_	1_____	123____	0.0	0.0
2		61	___45_7_	_____7_	123____	0.0	0.0
3		62	___45_7_	__3____	123____	0.0	0.0
4		63	___45_7_	_2_____	123____	0.0	0.0
5		64	___45_7_	_____6__	123____	0.0	0.0
6		65	___45_7_	___4____	123____	2.0	1.5
7		66	___45_7_	_______8	123____	10.0	0.0
8		67	_2_____	_2_____	123____	0.0	0.0
9		68	_2_____	_____6__	123____	10.0	0.0
A		69	_2_____	___4____	123____	0.0	0.0
B		70	_2_____	_______8	123____	0.0	0.0
C		76	___45_7_	_2_____	123____	0.0	0.0
D		77	___45_7_	_____6__	123____	0.0	0.0
E		78	___45_7_	___4____	123____	0.0	0.0
F		79	___45_7_	_______8	123____	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ----->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	_____	<C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00 : 00	E	A	1234567
1	07 : 00	6	A	_23456_
2	10 : 00	E	A	_23456_
3	10 : 30	7	A	_23456_
4	13 : 30	E	A	_23456_
5	14 : 00	8	A	_23456_
6	18 : 30	E	A	_23456_
7	10 : 30	9	A	1_____7
8	16 : 00	E	A	1_____7
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>
Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>
Limited Service Interval

Min Time (seconds) **2** <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) **2** <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) **0** <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel _____ <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) **0** <F/1+A+D>

Bus Delay

Max Time (seconds) **0** <F/1+A+E>

Max Early Green

Max Time (seconds) **0** <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: 229 Auto Park Place/Main

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **229**

N/S Street Name: **Auto Park Pl**
E/W Street Name: **Main St**

Last Database Change: **5/20/2021 9:34**

Change Record					
Change	By	Date	Change	By	Date

Notes:

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**0**	<C/0+0+2>
Area Address	**145**	<C/0+0+3>
QuicNet Channel	**P:8018:10.242.20**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**3.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

	Phase								
Column Numbers ---->	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
Row *Phase Names ---->*									Row
0 Ped Walk	**0**	**7**	**0**	**0**	**0**	**7**	**0**	**7**	**0**
1 Ped FDW	**0**	**17**	**0**	**0**	**0**	**18**	**0**	**35**	**1**
2 Min Green	**4**	**10**	**0**	**7**	**4**	**10**	**0**	**7**	**2**
3 Type 3 Disconnect	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
4 Added per Vehicle	**0.0**	**1.2**	**0.0**	**0.0**	**0.0**	**1.2**	**0.0**	**0.0**	**4**
5 Veh Extension	**2.0**	**5.0**	**0.0**	**3.0**	**2.0**	**5.0**	**0.0**	**3.0**	**5**
6 Max Gap	**2.0**	**5.8**	**0.0**	**3.0**	**2.0**	**5.8**	**0.0**	**3.0**	**6**
7 Min Gap	**2.0**	**2.0**	**0.0**	**3.0**	**2.0**	**2.0**	**0.0**	**3.0**	**7**
8 Max Limit	**24**	**50**	**0**	**34**	**24**	**50**	**0**	**34**	**8**
9 Max Limit 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**
A Adv. / Delay Walk	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**A**
B PE Min Ped FDW	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**4**	**B**
C Cond Serv Check	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**C**
D Reduce Every	**0.0**	**1.0**	**0.0**	**0.0**	**0.0**	**1.0**	**0.0**	**0.0**	**D**
E Yellow Change	**3.2**	**4.7**	**0.0**	**3.6**	**3.2**	**4.7**	**0.0**	**3.6**	**E**
F Red Clear	**1.0**	**1.3**	**0.0**	**1.0**	**1.0**	**1.3**	**0.0**	**1.0**	**F**

Phase Timing - Bank 1 <C+0+F=1>

	9	**A**	**B**	**C**	**D**
	- - -	- - -	- - -	- - -	- - -
Phase 1	**0**	**0**	**0**	**0**	**0.0**
Phase 2	**20**	**0**	**0**	**0**	**0.0**
Phase 3	**0**	**0**	**0**	**0**	**0.0**
Phase 4	**20**	**0**	**0**	**0**	**0.0**
Phase 5	**0**	**0**	**0**	**0**	**0.0**
Phase 6	**20**	**0**	**0**	**0**	**0.0**
Phase 7	**0**	**0**	**0**	**0**	**0.0**
Phase 8	**20**	**0**	**0**	**0**	**0.0**
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	**0**
RR-1 Clear	**0**
EV-A Delay	**0**
EV-A Clear	**0**
EV-B Delay	**0**
EV-B Clear	**0**
EV-C Delay	**0**
EV-C Clear	**0**
EV-D Delay	**0**
EV-D Clear	**0**
RR-2 Delay	**0**
RR-2 Clear	**0**
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	
Permit	**12_456_8**	**0**
Red Lock		**1**
Yellow Lock		**2**
Min Recall	**_2___6__**	**3**
Ped Recall		**4**
View Set Peds	**- - - - -**	**5**
Rest In Walk		**6**
Red Rest		**7**
Dual Entry	**___4___8**	**8**
Max Recall		**9**
Soft Recall		**A**
Max 2		**B**
Cond. Service		**C**
Man Cntrl Calls		**D**
Yellow Start		**E**
First Phases	**_2___6__**	**F**

Phase Functions <C+0+F=1>

Overlap Assignments <C+0+E=29>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Allow QuicNet PE
8 =

Preempt Priority <C+0+E=125>

(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row		C
0	EV-A	0
1	EV-B	0
2	EV-C	0
3	EV-D	0
4	RR-1 *	- - -
5	RR-2 *	- - -
6	SE-1	0
7	SE-2	0

Configuration <C+0+E=125>

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	
3	RR-2 Limited Service	
4	Prot / Perm Phases	
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4
C	EV-C Phases	1 6
D	EV-D Phases	8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	
Ped for 8P Output	8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	3

Specials <C+0+F=2>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	12345678
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

Coordination Transition Minimums <C+0+C=5>

	2
Phase 1	5
Phase 2	5
Phase 3	5
Phase 4	5
Phase 5	5
Phase 6	5
Phase 7	5
Phase 8	5

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ----->										
0	Cycle Length	84	96	108	0	0	110	110	110	110	0
1	Phase 1 - ForceOff	41	49	55	0	0	62	62	57	62	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	20	26	30	0	0	37	37	32	37	4
5	Phase 5 - ForceOff	41	49	55	0	0	62	62	52	62	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	20	26	30	0	0	37	37	32	37	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	10	10	50	0	0	39	5	26	109	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	0	0	0	0	0	5	5	5	5	D
E	Hold Release	255	255	255	0	0	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Row		E	Row
1	Plan 1 - Sync	_2___6__	1
2	Plan 2 - Sync	_2___6__	2
3	Plan 3 - Sync	_2___6__	3
4	Plan 4 - Sync	_____	4
5	Plan 5 - Sync	_____	5
6	Plan 6 - Sync	_2___6__	6
7	Plan 7 - Sync	_2___6__	7
8	Plan 8 - Sync	_2___6__	8
9	Plan 9 - Sync	_2___6__	9
A	NEMA Sync	_____	A
B	NEMA Hold	_____	B
C			C
D			D
E	Coord Extra	_____	E
F			F

Sync Phases <C+0+C=1>

Row		Plan 1	2	3	4	5	6	7	8	9	Row
0	Ped Adjustment	9	6	4	0	0	6	6	9	6	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

Row		F	Row
0	Free Lag	_2_4_6_8	0
1	Plan 1 - Lag	_2_4_6_8	1
2	Plan 2 - Lag	_2_4_6_8	2
3	Plan 3 - Lag	_2_4_6_8	3
4	Plan 4 - Lag	_____	4
5	Plan 5 - Lag	_____	5
6	Plan 6 - Lag	_2_4_6_8	6
7	Plan 7 - Lag	_2_4_6_8	7
8	Plan 8 - Lag	_2_4_6_8	8
9	Plan 9 - Lag	_2_4_6_8	9
A	External Lag	_____	A
B			B
C			C
D			D
E			E
F			F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	0	Max 2	0	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	0	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	0	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	0	0	0	0	0	0	0
1	Ped FDW	0	0	0	0	0	0	0	0
2	Min Green	0	0	0	0	0	0	0	0
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Veh Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	Max Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Max Limit	0	0	0	0	0	0	0	0
9	Max Limit 2	0	0	0	0	0	0	0	0
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	0	0	0	0	0	0	0	0
C	Cond Serv Check	0	0	0	0	0	0	0	0
D	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0

Max Initial
Alternate Walk
Alternate FDW
Alternate Initial
Alternate Extension

Alternate Timing

Column Numbers ---->	0	1	2	3	1	3
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		39	___45_7_	_2_____	123____	2.0	1.5
1		40	___45_7_	_____6__	123____	0.0	0.0
2		41	___45_7_	___4____	123____	0.0	0.0
3		42	___45_7_	_______8	123____	0.0	0.0
4		43	___45_7_	_2_____	123____	0.0	0.0
5		44	___45_7_	_____6__	123____	0.0	0.0
6		45	___45_7_	___4____	123____	0.0	0.0
7		46	___45_7_	_______8	123____	0.0	0.0
8		47	___45_7_	_2_____	123____	0.0	0.0
9		48	___45_7_	_____6__	123____	0.0	0.0
A		49	___45_7_	___4____	123____	0.0	0.0
B		50	___45_7_	_______8	123____	8.0	0.0
C		55	___45_7_	____5___	123____	0.0	0.0
D		56	___45_7_	1_____	123____	0.0	0.0
E		57	___45_7_	_____7_	123____	0.0	0.0
F		58	___45_7_	__3____	123____	0.0	0.0

	4	5	6	7	2	4
Row	Detector Name	C1 Pin Number	Attributes	Phase(s)	Assign	Delay	Carry-over
0		59	___45_7_	____5___	123____	2.0	1.5
1		60	___45_7_	1_____	123____	0.0	0.0
2		61	___45_7_	_____7_	123____	0.0	0.0
3		62	___45_7_	__3____	123____	0.0	0.0
4		63	___45_7_	_2_____	123____	0.0	0.0
5		64	___45_7_	_____6__	123____	0.0	0.0
6		65	___45_7_	___4____	123____	0.0	0.0
7		66	___45_7_	_______8	123____	0.0	0.0
8		67	_2_____	_2_____	123____	0.0	0.0
9		68	_2_____	_____6__	123____	0.0	0.0
A		69	_2_____	___4____	123____	0.0	0.0
B		70	_2_____	_______8	123____	8.0	0.0
C		76	___45_7_	_2_____	123____	0.0	0.0
D		77	___45_7_	_____6__	123____	0.0	0.0
E		78	___45_7_	___4____	123____	0.0	0.0
F		79	___45_7_	_______8	123____	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

	Ped / Phase / Overlap								
Column Numbers ---->	1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	_____	<C/5+F+0>

Disable Alarm Reporting

Row	Time	Plan	Offset	Day of Week
0	00 : 00	E	A	_234567
1	07 : 00	6	A	_23456_
2	10 : 00	E	A	_23456_
3	10 : 30	7	A	_23456_
4	13 : 30	E	A	_23456_
5	14 : 00	8	A	_23456_
6	18 : 30	E	A	_23456_
7	10 : 30	9	A	1_____7
8	16 : 00	E	A	1_____7
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>
Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>
Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Min Time (seconds) **2** <F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes) **2** <F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds) **0** <F/1+0+A>

Min Time Between Same Preempts

(Does Not Apply To Railroad Preempt)

Low Pri. Channel _____ <E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds) **0** <F/1+A+D>

Bus Delay

Max Time (seconds) **0** <F/1+A+E>

Max Early Green

Max Time (seconds) **0** <F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

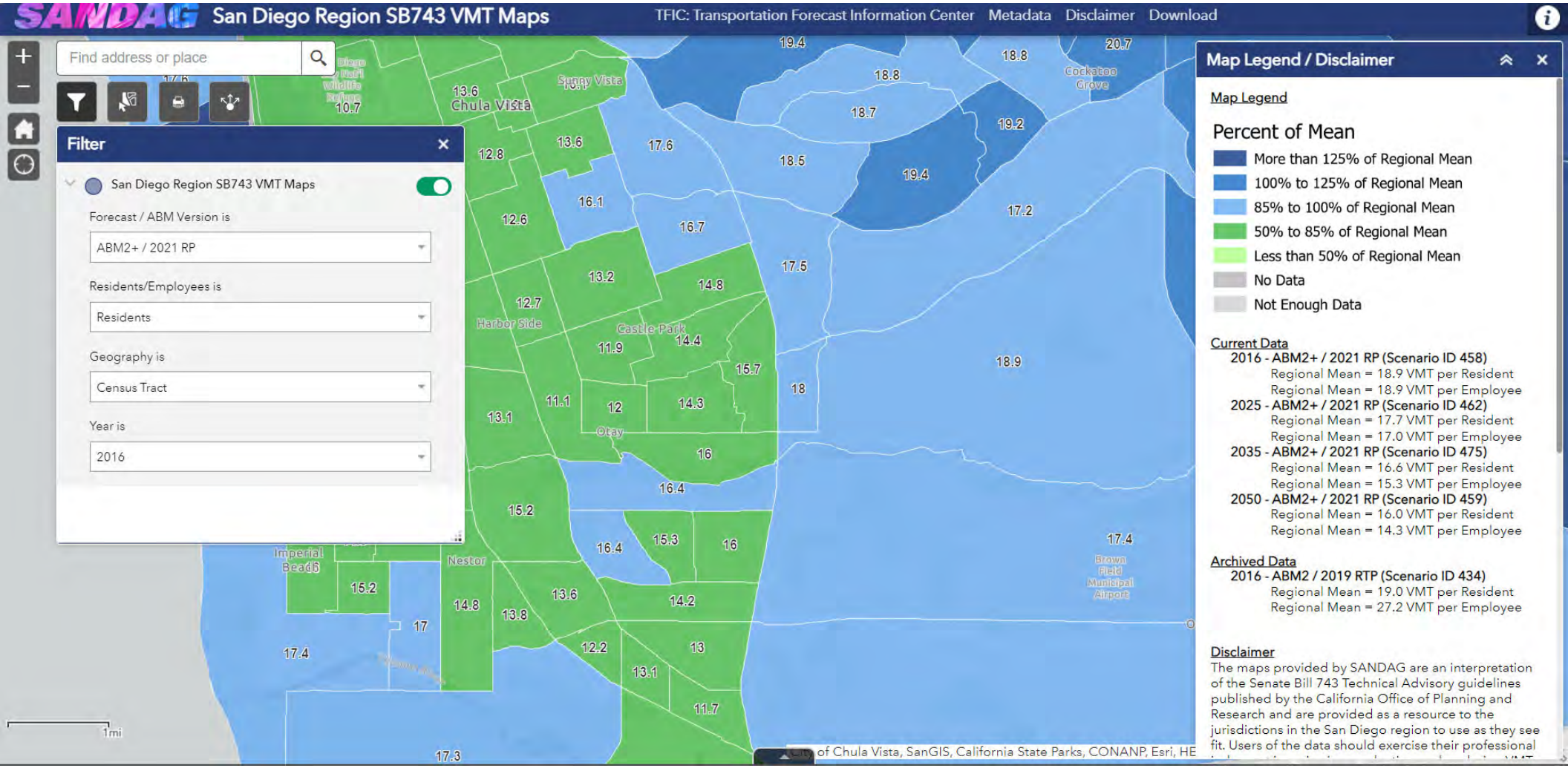
Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

APPENDIX B

SANDAG SCREENING MAP AND SITE-SPECIFIC DISTRIBUTION FACILITY TRIP RATE COMPARISON


SANDAG
San Diego Region SB743 VMT Maps
TFIC: Transportation Forecast Information Center
Metadata
Disclaimer
Download
Find address or place
Filter
San Diego Region SB743 VMT Maps
Forecast / ABM Version is
ABM2+ / 2021 RP
Residents/Employees is
Residents
Geography is
Census Tract
Year is
2016
Map Legend / Disclaimer
Map Legend
Percent of Mean
More than 125% of Regional Mean
100% to 125% of Regional Mean
85% to 100% of Regional Mean
50% to 85% of Regional Mean
Less than 50% of Regional Mean
No Data
Not Enough Data
Current Data
2016 - ABM2+ / 2021 RP (Scenario ID 458)
Regional Mean = 18.9 VMT per Resident
Regional Mean = 18.9 VMT per Employee
2025 - ABM2+ / 2021 RP (Scenario ID 462)
Regional Mean = 17.7 VMT per Resident
Regional Mean = 17.0 VMT per Employee
2035 - ABM2+ / 2021 RP (Scenario ID 475)
Regional Mean = 16.6 VMT per Resident
Regional Mean = 15.3 VMT per Employee
2050 - ABM2+ / 2021 RP (Scenario ID 459)
Regional Mean = 16.0 VMT per Resident
Regional Mean = 14.3 VMT per Employee
Archived Data
2016 - ABM2 / 2019 RTP (Scenario ID 434)
Regional Mean = 19.0 VMT per Resident
Regional Mean = 27.2 VMT per Employee
Disclaimer
The maps provided by SANDAG are an interpretation of the Senate Bill 743 Technical Advisory guidelines published by the California Office of Planning and Research and are provided as a resource to the jurisdictions in the San Diego region to use as they see fit. Users of the data should exercise their professional
Chula Vista
Sunny Vista
Harbor Side
Castle Park
Otay
Nestor
Imperial Beach
Cockatoo Grove
Brown Field Municipal Airport
1mi
of Chula Vista, SanGIS, California State Parks, CONANP, Esri, HE

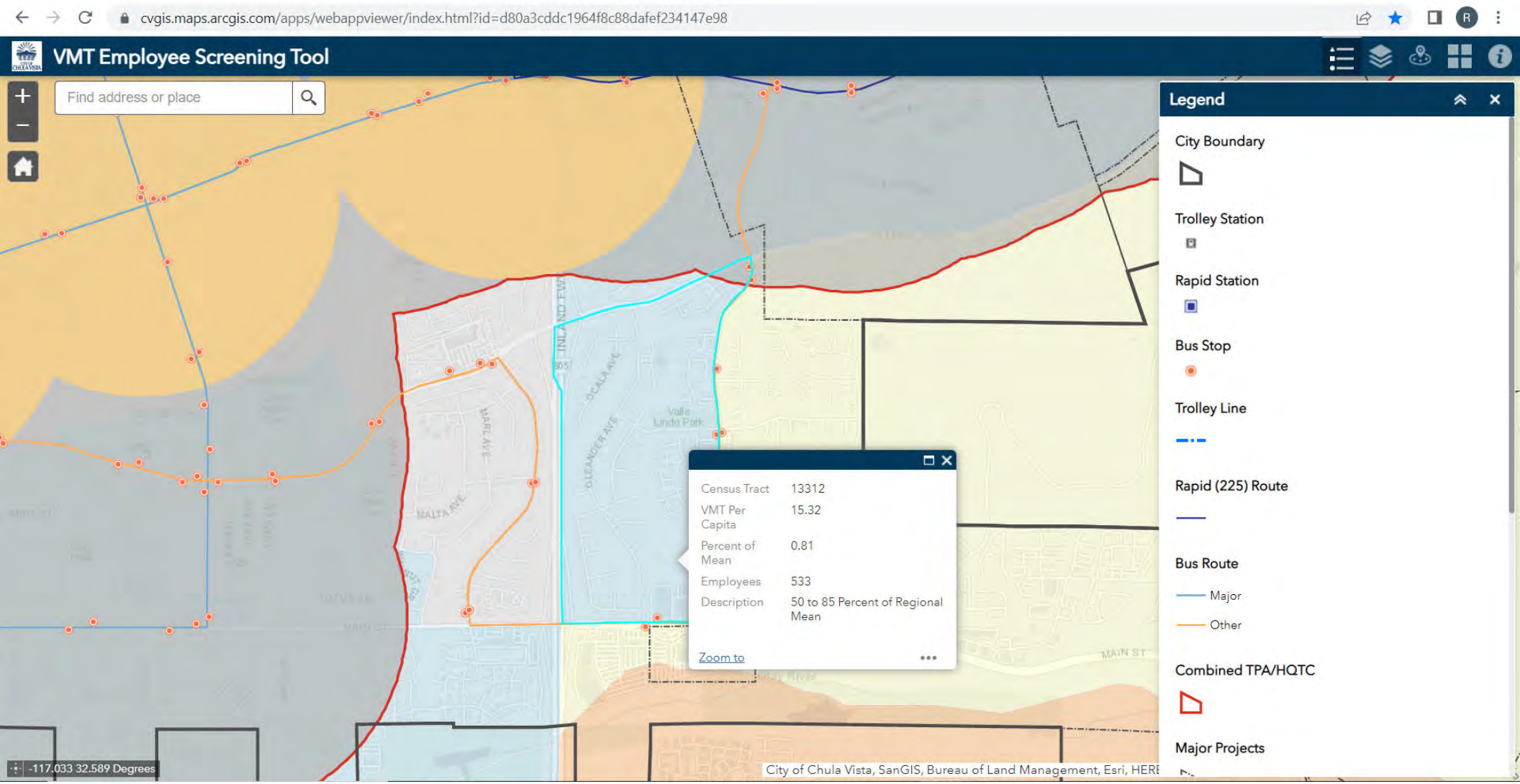

cvgis.maps.arcgis.com/apps/webappviewer/index.html?id=d80a3cddc1964f8c88dafef234147e98
VMT Employee Screening Tool
Find address or place
Legend
City Boundary
Trolley Station
Rapid Station
Bus Stop
Trolley Line
Rapid (225) Route
Bus Route
Major
Other
Combined TPA/HQTC
Major Projects
Census Tract 13312
VMT Per Capita 15.32
Percent of Mean 0.81
Employees 533
Description 50 to 85 Percent of Regional Mean
Zoom to
-117.033 32.589 Degrees
City of Chula Vista, SanGIS, Bureau of Land Management, Esri, HERE

Table A
Distribution Facility Trip Rate Calculations

Project Information						ADT	AM		PM		Rate		Truck Traffic
							In	Out	In	Out			
Project #3285	Weld		Warehouse	124,535	SF	1,476	1	1	61	30	Regular	10.43 / KSF	
			Office	17,000	SF								
					(Peak Season Operations)	3,548	89	152	318	138	Peak	25.07 / KSF	96
							37%	63%	70%	30%			
							6.79%		*12.85%*				
Project #3301	DIB3 Ocean Ranch		Warehouse	125,756	SF	3,556	92	144	313	131		24.91 / KSF	96
			Office	16,990	SF								
							39%	61%	70%	30%			
							6.64%		*12.49%*				

APPENDIX C

INTERSECTION METHODOLOGY

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. **Table 1** summarizes the delay thresholds for signalized intersections.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

TABLE 1

LEVEL OF SERVICE THRESHOLDS FOR SIGNALIZED INTERSECTIONS

AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)			LEVEL OF SERVICE
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

Source: Highway Capacity Manual, 2000.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. **Table 2** depicts the criteria, which are based on the average control delay for any particular minor movement.

TABLE 2

LEVEL OF SERVICE THRESHOLDS FOR UNSIGNALIZED INTERSECTIONS

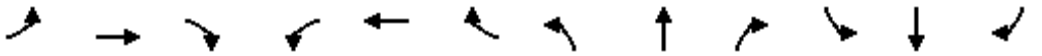
AVERAGE CONTROL DELAY PER VEHICLE (SECONDS/VEHICLE)	LEVEL OF SERVICE	EXPECTED DELAY TO MINOR STREET TRAFFIC
0.0 ≤ 10.0	A	Little or no delay
10.1 to 15.0	B	Short traffic delays
15.1 to 25.0	C	Average traffic delays
25.1 to 35.0	D	Long traffic delays
35.1 to 50.0	E	Very long traffic delays
≥ 50.0	F	Severe congestion

Source: Highway Capacity Manual, 2000.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

APPENDIX D

EXISTING PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1188	47	78	1921	90	56	102	110	62	112	245
Future Volume (veh/h)	192	1188	47	78	1921	90	56	102	110	62	112	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	204	1264	50	83	2044	96	60	109	117	66	119	261
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	226	2727	108	103	2414	721	76	411	428	83	419	343
Arrive On Green	0.13	0.54	0.54	0.06	0.47	0.47	0.04	0.22	0.22	0.05	0.22	0.22
Sat Flow, veh/h	1781	5031	199	1781	5106	1525	1781	1870	1529	1781	1870	1530
Grp Volume(v), veh/h	204	855	459	83	2044	96	60	109	117	66	119	261
Grp Sat Flow(s),veh/h/ln	1781	1702	1826	1781	1702	1525	1781	1870	1529	1781	1870	1530
Q Serve(g_s), s	16.9	23.0	23.1	6.9	52.8	5.3	5.0	7.2	9.0	5.5	7.9	23.9
Cycle Q Clear(g_c), s	16.9	23.0	23.1	6.9	52.8	5.3	5.0	7.2	9.0	5.5	7.9	23.9
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	226	1845	990	103	2414	721	76	411	428	83	419	343
V/C Ratio(X)	0.90	0.46	0.46	0.81	0.85	0.13	0.79	0.26	0.27	0.79	0.28	0.76
Avail Cap(c_a), veh/h	260	1845	990	160	2414	721	100	411	428	105	419	343
HCM Platoon Ratio	1.00	1.00	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	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.6	21.0	21.0	69.8	34.8	22.2	71.1	48.5	42.4	70.8	48.2	54.5
Incr Delay (d2), s/veh	28.4	0.8	1.6	12.8	3.9	0.4	18.8	1.5	1.5	21.4	1.7	14.8
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	9.3	8.9	9.8	3.5	21.5	2.0	2.7	3.6	3.6	3.0	3.9	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.0	21.8	22.6	82.7	38.6	22.6	89.9	50.0	43.9	92.2	49.9	69.2
LnGrp LOS	F	C	C	F	D	C	F	D	D	F	D	E
Approach Vol, veh/h		1518			2223			286			446	
Approach Delay, s/veh		31.6			39.6			55.9			67.5	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	87.5	10.6	39.0	23.2	77.1	11.2	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 14	* 76	* 8.4	33.0	* 22	66.7	* 8.8	* 33
Max Q Clear Time (g_c+I1), s	8.9	25.1	7.0	25.9	18.9	54.8	7.5	11.0
Green Ext Time (p_c), s	0.0	26.2	0.0	0.9	0.1	11.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	18	35	34	29	28	55	212	10	16	385	52
Future Volume (veh/h)	50	18	35	34	29	28	55	212	10	16	385	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.98		0.93	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	25	48	47	40	38	75	290	14	22	527	71
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	73	88	157	117	82	136	1035	846	83	826	111
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.55	0.55	0.05	0.51	0.51
Sat Flow, veh/h	589	437	530	427	699	492	1781	1870	1529	1781	1605	216
Grp Volume(v), veh/h	141	0	0	125	0	0	75	290	14	22	0	598
Grp Sat Flow(s),veh/h/ln	1556	0	0	1618	0	0	1781	1870	1529	1781	0	1822
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	2.3	4.7	0.2	0.7	0.0	13.7
Cycle Q Clear(g_c), s	4.3	0.0	0.0	3.7	0.0	0.0	2.3	4.7	0.2	0.7	0.0	13.7
Prop In Lane	0.48		0.34	0.38		0.30	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	352	0	0	356	0	0	136	1035	846	83	0	938
V/C Ratio(X)	0.40	0.00	0.00	0.35	0.00	0.00	0.55	0.28	0.02	0.27	0.00	0.64
Avail Cap(c_a), veh/h	1018	0	0	1054	0	0	524	1035	846	551	0	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	21.6	0.0	0.0	25.8	6.8	5.8	26.6	0.0	10.1
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.6	0.0	0.0	2.6	0.7	0.0	0.6	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.5	0.0	0.0	1.0	1.6	0.1	0.3	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	0.0	22.2	0.0	0.0	28.3	7.5	5.9	27.2	0.0	11.7
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	B
Approach Vol, veh/h		141			125			379			620	
Approach Delay, s/veh		22.6			22.2			11.6			12.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.7	8.4	34.8	14.7	6.2	37.0
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	6.3	4.3	15.7	5.7	2.7	6.7
Green Ext Time (p_c), s	0.9	0.1	5.7	0.7	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

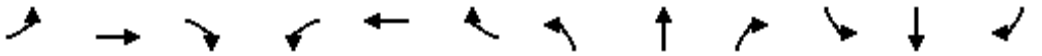
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	5	187	265	0
Future Vol, veh/h	0	2	5	187	265	0
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	6	210	298	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	435	169	308	0	-	0
Stage 1	308	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	549	845	1249	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	535	829	1237	-	-	-
Mov Cap-2 Maneuver	593	-	-	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	876	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1237	-	829	-	-
HCM Lane V/C Ratio	0.005	-	0.003	-	-
HCM Control Delay (s)	7.9	-	9.4	-	-
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)	0	725	311	278	539	0	0	0	0	521	0	378
Future Volume (veh/h)	0	725	311	278	539	0	0	0	0	521	0	378
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	806	346	309	599	0				579	0	420
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1555	663	374	2125	0				1080	0	466
Arrive On Green	0.00	0.45	0.45	0.22	1.00	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	3650	1484	3456	3647	0				3563	0	1539
Grp Volume(v), veh/h	0	788	364	309	599	0				579	0	420
Grp Sat Flow(s),veh/h/ln	0	1702	1561	1728	1777	0				1781	0	1539
Q Serve(g_s), s	0.0	18.3	18.5	9.4	0.0	0.0				14.9	0.0	28.8
Cycle Q Clear(g_c), s	0.0	18.3	18.5	9.4	0.0	0.0				14.9	0.0	28.8
Prop In Lane	0.00		0.95	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1521	697	374	2125	0				1080	0	466
V/C Ratio(X)	0.00	0.52	0.52	0.83	0.28	0.00				0.54	0.00	0.90
Avail Cap(c_a), veh/h	0	1521	697	543	2125	0				1260	0	544
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.91	0.91	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.9	22.0	42.1	0.0	0.0				31.9	0.0	36.7
Incr Delay (d2), s/veh	0.0	1.3	2.8	6.2	0.3	0.0				0.4	0.0	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.2	7.0	3.8	0.1	0.0				6.3	0.0	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.2	24.7	48.3	0.3	0.0				32.3	0.0	53.1
LnGrp LOS	A	C	C	D	A	A				C	A	D
Approach Vol, veh/h		1152			908						999	
Approach Delay, s/veh		23.7			16.6						41.1	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.6	54.9		38.4		71.6
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8
Max Green Setting (Gmax), s	* 17	* 39		38.9		60.2
Max Q Clear Time (g_c+I1), s	11.4	20.5		30.8		2.0
Green Ext Time (p_c), s	0.5	4.9		2.6		2.6

Intersection Summary		
HCM 6th Ctrl Delay		27.3
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	466	790	0	0	515	511	292	4	328	0	0	0
Future Volume (veh/h)	466	790	0	0	515	511	292	4	328	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	536	908	0	0	592	587	336	5	377			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	558	2406	0	0	1640	854	393	6	603			
Arrive On Green	0.63	1.00	0.00	0.00	0.64	0.64	0.22	0.22	0.22			
Sat Flow, veh/h	1781	3647	0	0	5274	2660	1756	26	2692			
Grp Volume(v), veh/h	536	908	0	0	592	587	341	0	377			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1330	1783	0	1346			
Q Serve(g_s), s	31.1	0.0	0.0	0.0	5.9	15.5	20.2	0.0	13.9			
Cycle Q Clear(g_c), s	31.1	0.0	0.0	0.0	5.9	15.5	20.2	0.0	13.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	558	2406	0	0	1640	854	399	0	603			
V/C Ratio(X)	0.96	0.38	0.00	0.00	0.36	0.69	0.85	0.00	0.63			
Avail Cap(c_a), veh/h	717	2406	0	0	1640	854	501	0	756			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.95	0.95	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.9	0.0	0.0	0.0	14.4	16.1	41.0	0.0	38.5			
Incr Delay (d2), s/veh	19.0	0.4	0.0	0.0	0.6	4.3	11.3	0.0	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.3	0.1	0.0	0.0	2.0	3.5	9.8	0.0	4.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.4	0.0	0.0	15.0	20.4	52.3	0.0	39.6			
LnGrp LOS	D	A	A	A	B	C	D	A	D			
Approach Vol, veh/h		1444			1179			718				
Approach Delay, s/veh		14.7			17.7			45.6				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.3			39.2	41.1		29.7				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 69			* 44	19.2		30.9				
Max Q Clear Time (g_c+I1), s		2.0			33.1	17.5		22.2				
Green Ext Time (p_c), s		4.4			1.4	0.8		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



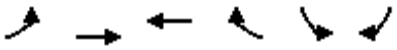
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1126	90	29	1213	48	16
Future Volume (veh/h)	1126	90	29	1213	48	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1357	108	35	1461	58	19
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	4001	1269	103	4390	142	65
Arrive On Green	1.00	1.00	0.06	1.00	0.04	0.04
Sat Flow, veh/h	5274	1536	3456	5274	3456	1585
Grp Volume(v), veh/h	1357	108	35	1461	58	19
Grp Sat Flow(s),veh/h/ln	1702	1536	1728	1702	1728	1585
Q Serve(g_s), s	0.0	0.0	1.1	0.0	1.8	1.3
Cycle Q Clear(g_c), s	0.0	0.0	1.1	0.0	1.8	1.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	4001	1269	103	4390	142	65
V/C Ratio(X)	0.34	0.09	0.34	0.33	0.41	0.29
Avail Cap(c_a), veh/h	4001	1269	311	4390	437	200
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.97	0.97	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	50.7	0.0	51.4	51.2
Incr Delay (d2), s/veh	0.2	0.1	1.9	0.2	1.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.1	0.8	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.1	52.5	0.2	53.3	53.6
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1465			1496	77	
Approach Delay, s/veh	0.2			1.4	53.4	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	92.0			100.4	9.6
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 71			85.2	13.9
Max Q Clear Time (g_c+I1), s	3.1	2.0			2.0	3.8
Green Ext Time (p_c), s	0.0	7.5			8.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	2.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	61	1052	1104	21	14	111
Future Volume (veh/h)	61	1052	1104	21	14	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	1238	1299	25	16	131
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	92	4135	5580	107	183	163
Arrive On Green	0.10	1.00	0.72	0.72	0.10	0.10
Sat Flow, veh/h	1781	5274	8104	149	1781	1585
Grp Volume(v), veh/h	72	1238	1015	309	16	131
Grp Sat Flow(s),veh/h/ln	1781	1702	1515	1838	1781	1585
Q Serve(g_s), s	4.3	0.0	6.2	6.2	0.9	8.9
Cycle Q Clear(g_c), s	4.3	0.0	6.2	6.2	0.9	8.9
Prop In Lane	1.00			0.08	1.00	1.00
Lane Grp Cap(c), veh/h	92	4135	4364	1323	183	163
V/C Ratio(X)	0.78	0.30	0.23	0.23	0.09	0.80
Avail Cap(c_a), veh/h	288	4135	4364	1323	547	487
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	0.0	5.2	5.2	44.7	48.3
Incr Delay (d2), s/veh	5.1	0.2	0.1	0.4	0.2	10.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.1	1.6	2.0	0.4	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.8	0.2	5.3	5.6	44.9	58.8
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1310	1324		147	
Approach Delay, s/veh		3.1	5.4		57.3	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	94.5		15.5	9.9	84.6
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	66.6		* 34	* 18	44.6
Max Q Clear Time (g_c+I1), s	2.0		10.9	6.3	8.2
Green Ext Time (p_c), s	20.7		0.6	0.0	12.7

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th 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)	258	745	62	11	669	80	14	8	7	91	16	433
Future Volume (veh/h)	258	745	62	11	669	80	14	8	7	91	16	433
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	307	887	74	13	796	95	17	10	8	108	19	515
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	2259	674	21	1294	153	51	280	224	120	651	537
Arrive On Green	0.17	0.44	0.44	0.02	0.56	0.56	0.01	0.30	0.30	0.07	0.35	0.35
Sat Flow, veh/h	1781	5106	1523	1781	4610	546	3456	948	759	1781	1870	1543
Grp Volume(v), veh/h	307	887	74	13	586	305	17	0	18	108	19	515
Grp Sat Flow(s),veh/h/ln	1781	1702	1523	1781	1702	1752	1728	0	1707	1781	1870	1543
Q Serve(g_s), s	18.9	12.9	3.1	0.8	12.7	12.9	0.5	0.0	0.8	6.6	0.7	35.9
Cycle Q Clear(g_c), s	18.9	12.9	3.1	0.8	12.7	12.9	0.5	0.0	0.8	6.6	0.7	35.9
Prop In Lane	1.00		1.00	1.00		0.31	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	309	2259	674	21	956	492	51	0	505	120	651	537
V/C Ratio(X)	0.99	0.39	0.11	0.61	0.61	0.62	0.33	0.00	0.04	0.90	0.03	0.96
Avail Cap(c_a), veh/h	309	2259	674	65	956	492	126	0	574	120	687	567
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	20.7	18.0	53.4	20.1	20.2	53.7	0.0	27.6	50.9	23.6	35.1
Incr Delay (d2), s/veh	49.0	0.5	0.3	10.0	2.9	5.7	1.4	0.0	0.0	51.8	0.0	26.7
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	12.2	4.9	1.2	0.4	4.0	4.5	0.2	0.0	0.3	4.6	0.3	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.4	21.2	18.3	63.4	23.0	25.8	55.1	0.0	27.6	102.7	23.6	61.7
LnGrp LOS	F	C	B	E	C	C	E	A	C	F	C	E
Approach Vol, veh/h		1268			904			35			642	
Approach Delay, s/veh		38.7			24.5			40.9			67.5	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	55.1	5.8	43.6	23.3	37.3	11.6	37.8
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 4	* 42	* 4	40.4	* 19	* 26	* 7.4	37.0
Max Q Clear Time (g_c+I1), s	2.8	14.9	2.5	37.9	20.9	14.9	8.6	2.8
Green Ext Time (p_c), s	0.0	13.1	0.0	0.4	0.0	6.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



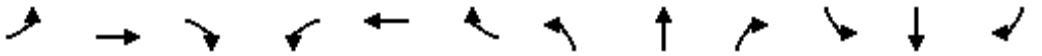
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	732	58	5	732	2	15	0	2	2	1	16
Future Volume (veh/h)	57	732	58	5	732	2	15	0	2	2	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.95	0.98		0.95
Parking Bus, Adj	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	804	64	5	804	2	16	0	2	2	1	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	3705	1114	9	3500	1051	234	0	203	250	11	194
Arrive On Green	0.09	1.00	1.00	0.01	1.00	1.00	0.13	0.00	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1781	5106	1535	1781	5106	1534	1364	0	1506	1384	80	1442
Grp Volume(v), veh/h	63	804	64	5	804	2	16	0	2	2	0	19
Grp Sat Flow(s),veh/h/ln	1781	1702	1535	1781	1702	1534	1364	0	1506	1384	0	1522
Q Serve(g_s), s	3.8	0.0	0.0	0.3	0.0	0.0	1.1	0.0	0.1	0.1	0.0	1.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.3	0.0	0.0	2.3	0.0	0.1	0.3	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	81	3705	1114	9	3500	1051	234	0	203	250	0	205
V/C Ratio(X)	0.78	0.22	0.06	0.54	0.23	0.00	0.07	0.00	0.01	0.01	0.00	0.09
Avail Cap(c_a), veh/h	240	3705	1114	110	3500	1051	571	0	575	592	0	581
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.5	0.0	0.0	54.3	0.0	0.0	42.7	0.0	41.2	41.4	0.0	41.7
Incr Delay (d2), s/veh	5.8	0.1	0.1	17.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	0.1	0.1	71.5	0.2	0.0	42.9	0.0	41.3	41.4	0.0	41.9
LnGrp LOS	E	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		931			811			18			21	
Approach Delay, s/veh		3.9			0.6			42.7			41.8	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.8	85.8		19.4	9.2	81.4		19.4
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6
Max Green Setting (Gmax), s	* 6.8	* 46		42.0	* 15	* 38		42.0
Max Q Clear Time (g_c+I1), s	2.3	2.0		3.2	5.8	2.0		4.3
Green Ext Time (p_c), s	0.0	12.5		0.1	0.0	11.1		0.0

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

* HCM 6th 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)	262	2190	65	134	1645	80	49	180	192	136	192	287
Future Volume (veh/h)	262	2190	65	134	1645	80	49	180	192	136	192	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	279	2330	69	143	1750	85	52	191	204	145	204	305
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	295	3891	115	155	3501	1052	67	441	499	153	531	436
Arrive On Green	0.17	0.76	0.76	0.09	0.69	0.69	0.04	0.24	0.24	0.09	0.28	0.28
Sat Flow, veh/h	1781	5092	150	1781	5106	1534	1781	1870	1532	1781	1870	1537
Grp Volume(v), veh/h	279	1554	845	143	1750	85	52	191	204	145	204	305
Grp Sat Flow(s),veh/h/ln	1781	1702	1838	1781	1702	1534	1781	1870	1532	1781	1870	1537
Q Serve(g_s), s	21.7	27.7	28.1	11.2	22.9	2.6	4.1	12.2	14.6	11.3	12.3	24.8
Cycle Q Clear(g_c), s	21.7	27.7	28.1	11.2	22.9	2.6	4.1	12.2	14.6	11.3	12.3	24.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	2602	1404	155	3501	1052	67	441	499	153	531	436
V/C Ratio(X)	0.95	0.60	0.60	0.92	0.50	0.08	0.78	0.43	0.41	0.95	0.38	0.70
Avail Cap(c_a), veh/h	295	2602	1404	155	3501	1052	123	441	499	153	531	436
HCM Platoon Ratio	1.00	1.00	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	0.64	0.64	0.64	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	7.2	7.2	63.4	10.5	7.3	66.8	45.5	37.0	63.7	40.3	44.8
Incr Delay (d2), s/veh	37.7	1.0	1.9	49.3	0.5	0.2	4.6	2.0	1.6	57.2	2.1	9.0
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	12.6	8.1	9.2	7.1	7.7	0.9	1.9	5.9	5.7	7.5	5.9	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.5	8.2	9.1	112.7	11.0	7.5	71.4	47.5	38.6	120.9	42.4	53.8
LnGrp LOS	F	A	A	F	B	A	E	D	D	F	D	D
Approach Vol, veh/h		2678			1978			447			654	
Approach Delay, s/veh		17.6			18.2			46.2			65.1	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	114.5	9.5	45.1	27.4	103.5	16.2	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 12	* 64	* 9.7	34.9	* 23	52.2	* 12	* 33
Max Q Clear Time (g_c+I1), s	13.2	30.1	6.1	26.8	23.7	24.9	13.3	16.6
Green Ext Time (p_c), s	0.0	32.1	0.0	1.4	0.0	23.1	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	28	22	41	11	28	12	358	46	34	294	41
Future Volume (veh/h)	20	28	22	41	11	28	12	358	46	34	294	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.95	1.00		0.95
Parking Bus, Adj	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	30	24	45	12	30	13	389	50	37	320	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	358	259	442	127	259	14	515	414	45	455	64
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.01	0.28	0.28	0.03	0.29	0.29
Sat Flow, veh/h	397	701	507	715	249	508	1781	1870	1504	1781	1592	224
Grp Volume(v), veh/h	76	0	0	87	0	0	13	389	50	37	0	365
Grp Sat Flow(s),veh/h/ln	1605	0	0	1472	0	0	1781	1870	1504	1781	0	1816
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.5	13.6	1.8	1.5	0.0	12.9
Cycle Q Clear(g_c), s	1.6	0.0	0.0	1.8	0.0	0.0	0.5	13.6	1.8	1.5	0.0	12.9
Prop In Lane	0.29		0.32	0.52		0.34	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	885	0	0	828	0	0	14	515	414	45	0	519
V/C Ratio(X)	0.09	0.00	0.00	0.11	0.00	0.00	0.91	0.76	0.12	0.82	0.00	0.70
Avail Cap(c_a), veh/h	885	0	0	828	0	0	423	835	672	445	0	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	0.0	9.0	0.0	0.0	35.5	23.8	19.5	34.7	0.0	22.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	72.2	4.8	0.3	12.4	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.7	0.0	0.0	0.5	6.2	0.6	0.8	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	0.0	9.3	0.0	0.0	107.7	28.5	19.7	47.2	0.0	25.9
LnGrp LOS	A	A	A	A	A	A	F	C	B	D	A	C
Approach Vol, veh/h		76			87			452			402	
Approach Delay, s/veh		9.2			9.3			29.8			27.8	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	41.6	4.6	25.5	41.6	5.3	24.7
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	3.6	2.5	14.9	3.8	3.5	15.6
Green Ext Time (p_c), s	0.4	0.0	3.2	0.5	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

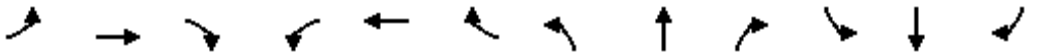
Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	11	1	400	342	0
Future Vol, veh/h	2	11	1	400	342	0
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	11	1	412	353	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	581	197	363	0	-	0
Stage 1	363	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	445	811	1192	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	797	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	436	796	1181	-	-	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1181	-	737	-	-
HCM Lane V/C Ratio	0.001	-	0.018	-	-
HCM Control Delay (s)	8.1	-	10	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	967	551	676	965	0	0	0	0	576	0	570
Future Volume (veh/h)	0	967	551	676	965	0	0	0	0	576	0	570
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	997	568	697	995	0				594	0	588
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1529	695	713	2481	0				1163	0	503
Arrive On Green	0.00	0.45	0.45	0.41	1.00	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	3572	1548	3456	3647	0				3563	0	1541
Grp Volume(v), veh/h	0	997	568	697	995	0				594	0	588
Grp Sat Flow(s),veh/h/ln	0	1702	1548	1728	1777	0				1781	0	1541
Q Serve(g_s), s	0.0	25.1	35.1	21.8	0.0	0.0				14.8	0.0	35.9
Cycle Q Clear(g_c), s	0.0	25.1	35.1	21.8	0.0	0.0				14.8	0.0	35.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1529	695	713	2481	0				1163	0	503
V/C Ratio(X)	0.00	0.65	0.82	0.98	0.40	0.00				0.51	0.00	1.17
Avail Cap(c_a), veh/h	0	1529	695	713	2481	0				1163	0	503
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.37	0.37	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.6	26.4	32.0	0.0	0.0				30.0	0.0	37.0
Incr Delay (d2), s/veh	0.0	2.2	10.3	15.5	0.2	0.0				0.4	0.0	95.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.0	14.1	8.1	0.1	0.0				6.2	0.0	26.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.8	36.7	47.5	0.2	0.0				30.3	0.0	132.8
LnGrp LOS	A	C	D	D	A	A				C	A	F
Approach Vol, veh/h		1565			1692						1182	
Approach Delay, s/veh		29.7			19.7						81.3	
Approach LOS		C			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.4	55.6		41.0		83.0
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8
Max Green Setting (Gmax), s	* 23	* 36		35.9		63.2
Max Q Clear Time (g_c+I1), s	23.8	37.1		37.9		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		5.0

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	497	1056	0	0	1160	798	451	4	565	0	0	0
Future Volume (veh/h)	497	1056	0	0	1160	798	451	4	565	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	512	1089	0	0	1196	823	465	4	582			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	529	2196	0	0	1421	737	500	4	766			
Arrive On Green	0.59	1.00	0.00	0.00	0.56	0.56	0.28	0.28	0.28			
Sat Flow, veh/h	1781	3647	0	0	5274	2648	1767	15	2706			
Grp Volume(v), veh/h	512	1089	0	0	1196	823	469	0	582			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1702	1324	1782	0	1353			
Q Serve(g_s), s	30.2	0.0	0.0	0.0	21.5	30.6	28.2	0.0	21.6			
Cycle Q Clear(g_c), s	30.2	0.0	0.0	0.0	21.5	30.6	28.2	0.0	21.6			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	529	2196	0	0	1421	737	504	0	766			
V/C Ratio(X)	0.97	0.50	0.00	0.00	0.84	1.12	0.93	0.00	0.76			
Avail Cap(c_a), veh/h	555	2196	0	0	1421	737	517	0	785			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.36	0.36	0.00	0.00	0.89	0.89	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.9	0.0	0.0	0.0	22.4	24.4	38.4	0.0	36.0			
Incr Delay (d2), s/veh	15.7	0.3	0.0	0.0	5.6	68.4	23.3	0.0	4.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.2	0.1	0.0	0.0	6.0	12.3	15.1	0.0	7.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	0.3	0.0	0.0	27.9	92.8	61.6	0.0	40.3			
LnGrp LOS	D	A	A	A	C	F	E	A	D			
Approach Vol, veh/h		1601			2019			1051				
Approach Delay, s/veh		12.2			54.3			49.8				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.8			37.3	36.4		36.2				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 68			* 34	28.2		31.9				
Max Q Clear Time (g_c+I1), s		2.0			32.2	32.6		30.2				
Green Ext Time (p_c), s		5.7			0.4	0.0		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



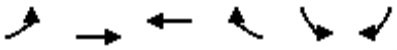
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1193	321	73	1504	308	97
Future Volume (veh/h)	1193	321	73	1504	308	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1269	341	78	1600	328	103
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	3527	1254	143	3974	424	194
Arrive On Green	1.00	1.00	0.08	1.00	0.12	0.12
Sat Flow, veh/h	5274	1534	3456	5274	3456	1585
Grp Volume(v), veh/h	1269	341	78	1600	328	103
Grp Sat Flow(s),veh/h/ln	1702	1534	1728	1702	1728	1585
Q Serve(g_s), s	0.0	0.0	2.4	0.0	10.1	6.7
Cycle Q Clear(g_c), s	0.0	0.0	2.4	0.0	10.1	6.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3527	1254	143	3974	424	194
V/C Ratio(X)	0.36	0.27	0.55	0.40	0.77	0.53
Avail Cap(c_a), veh/h	3527	1254	311	3974	845	388
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.96	0.96	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	49.5	0.0	46.8	45.3
Incr Delay (d2), s/veh	0.2	0.4	3.1	0.3	3.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.0	0.1	4.6	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.4	52.6	0.3	49.8	47.5
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1610			1678	431	
Approach Delay, s/veh	0.3			2.7	49.3	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.6	81.8			91.4	18.6
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 58			72.2	26.9
Max Q Clear Time (g_c+I1), s	4.4	2.0			2.0	12.1
Green Ext Time (p_c), s	0.1	7.5			9.5	1.4

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	101	1179	1481	18	11	81
Future Volume (veh/h)	101	1179	1481	18	11	81
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	1296	1627	20	12	89
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	136	4288	5665	70	130	116
Arrive On Green	0.15	1.00	0.73	0.73	0.07	0.07
Sat Flow, veh/h	1781	5274	8169	96	1781	1585
Grp Volume(v), veh/h	111	1296	1262	385	12	89
Grp Sat Flow(s),veh/h/ln	1781	1702	1515	1849	1781	1585
Q Serve(g_s), s	6.6	0.0	8.0	8.0	0.7	6.1
Cycle Q Clear(g_c), s	6.6	0.0	8.0	8.0	0.7	6.1
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	136	4288	4394	1341	130	116
V/C Ratio(X)	0.81	0.30	0.29	0.29	0.09	0.77
Avail Cap(c_a), veh/h	321	4288	4394	1341	499	444
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	5.3	5.3	47.6	50.1
Incr Delay (d2), s/veh	4.1	0.2	0.2	0.5	0.4	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.1	2.0	2.6	0.3	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.9	0.2	5.4	5.8	48.0	62.2
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1407	1647		101	
Approach Delay, s/veh		4.1	5.5		60.5	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	97.8		12.2	12.6	85.2
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	69.6		* 31	* 20	45.6
Max Q Clear Time (g_c+I1), s	2.0		8.1	8.6	10.0
Green Ext Time (p_c), s	22.6		0.3	0.1	16.9

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

* HCM 6th 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)	334	783	75	16	955	65	92	19	19	82	6	480
Future Volume (veh/h)	334	783	75	16	955	65	92	19	19	82	6	480
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	348	816	78	17	995	68	96	20	20	85	6	500
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	2156	642	26	1207	82	149	277	277	94	631	520
Arrive On Green	0.19	0.42	0.42	0.03	0.50	0.50	0.04	0.33	0.33	0.05	0.34	0.34
Sat Flow, veh/h	1781	5106	1521	1781	4869	332	3456	845	845	1781	1870	1542
Grp Volume(v), veh/h	348	816	78	17	695	368	96	0	40	85	6	500
Grp Sat Flow(s),veh/h/ln	1781	1702	1521	1781	1702	1797	1728	0	1690	1781	1870	1542
Q Serve(g_s), s	20.8	12.1	3.4	1.0	19.1	19.2	3.0	0.0	1.8	5.2	0.2	35.0
Cycle Q Clear(g_c), s	20.8	12.1	3.4	1.0	19.1	19.2	3.0	0.0	1.8	5.2	0.2	35.0
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	337	2156	642	26	844	446	149	0	554	94	631	520
V/C Ratio(X)	1.03	0.38	0.12	0.65	0.82	0.83	0.64	0.00	0.07	0.90	0.01	0.96
Avail Cap(c_a), veh/h	337	2156	642	86	844	446	163	0	568	94	639	527
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	21.8	19.3	53.1	25.7	25.7	51.8	0.0	25.5	51.8	24.2	35.8
Incr Delay (d2), s/veh	57.9	0.5	0.4	9.2	8.6	15.4	5.1	0.0	0.0	61.7	0.0	29.2
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	14.2	4.7	1.3	0.5	6.2	7.4	1.4	0.0	0.7	3.9	0.1	17.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.5	22.4	19.7	62.3	34.3	41.1	56.9	0.0	25.5	113.5	24.2	65.0
LnGrp LOS	F	C	B	E	C	D	E	A	C	F	C	E
Approach Vol, veh/h		1242			1080			136			591	
Approach Delay, s/veh		44.6			37.1			47.7			71.6	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	52.8	8.9	42.4	25.0	33.7	10.0	41.3
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.3	* 42	* 5.2	37.6	* 21	* 26	* 5.8	37.0
Max Q Clear Time (g_c+I1), s	3.0	14.1	5.0	37.0	22.8	21.2	7.2	3.8
Green Ext Time (p_c), s	0.0	12.4	0.0	0.1	0.0	3.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Notes

* HCM 6th 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)	82	748	40	10	941	9	45	1	15	8	1	76
Future Volume (veh/h)	82	748	40	10	941	9	45	1	15	8	1	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	813	43	11	1023	10	49	1	16	9	1	83
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	3464	1040	18	3197	959	232	16	256	295	3	266
Arrive On Green	0.13	1.00	1.00	0.00	0.21	0.21	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	5106	1533	1781	5106	1532	1297	90	1447	1373	18	1506
Grp Volume(v), veh/h	89	813	43	11	1023	10	49	0	17	9	0	84
Grp Sat Flow(s),veh/h/ln	1781	1702	1533	1781	1702	1532	1297	0	1537	1373	0	1524
Q Serve(g_s), s	5.3	0.0	0.0	0.7	18.7	0.6	3.8	0.0	1.0	0.6	0.0	5.3
Cycle Q Clear(g_c), s	5.3	0.0	0.0	0.7	18.7	0.6	9.0	0.0	1.0	1.6	0.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Lane Grp Cap(c), veh/h	112	3464	1040	18	3197	959	232	0	272	295	0	269
V/C Ratio(X)	0.80	0.23	0.04	0.59	0.32	0.01	0.21	0.00	0.06	0.03	0.00	0.31
Avail Cap(c_a), veh/h	240	3464	1040	78	3197	959	498	0	587	577	0	582
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	0.0	54.6	23.7	16.5	43.4	0.0	37.7	38.4	0.0	39.5
Incr Delay (d2), s/veh	4.7	0.2	0.1	10.6	0.3	0.0	0.4	0.0	0.1	0.0	0.0	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	2.3	0.0	0.0	0.3	8.5	0.2	1.2	0.0	0.4	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	0.2	0.1	65.2	24.0	16.6	43.8	0.0	37.8	38.4	0.0	40.1
LnGrp LOS	D	A	A	E	C	B	D	A	D	D	A	D
Approach Vol, veh/h		945			1044			66			93	
Approach Delay, s/veh		5.0			24.4			42.3			39.9	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	80.6		24.0	11.1	74.9		24.0
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6
Max Green Setting (Gmax), s	* 4.8	* 48		42.0	* 15	* 38		42.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		7.3	7.3	20.7		11.0
Green Ext Time (p_c), s	0.0	12.5		0.5	0.0	10.0		0.2

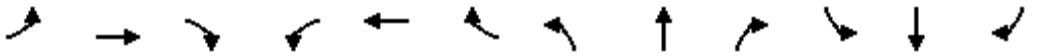
Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX E

EXISTING + PROJECT PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	1188	47	94	1921	90	56	104	116	62	117	245
Future Volume (veh/h)	192	1188	47	94	1921	90	56	104	116	62	117	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	204	1264	50	100	2044	96	60	111	123	66	124	261
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	225	2601	103	121	2340	698	76	402	436	83	409	335
Arrive On Green	0.13	0.53	0.53	0.07	0.47	0.47	0.04	0.22	0.22	0.05	0.22	0.22
Sat Flow, veh/h	1739	4911	194	1739	4985	1488	1739	1826	1493	1739	1826	1493
Grp Volume(v), veh/h	204	855	459	100	2044	96	60	111	123	66	124	261
Grp Sat Flow(s),veh/h/ln	1739	1662	1782	1739	1662	1488	1739	1826	1493	1739	1826	1493
Q Serve(g_s), s	17.4	24.4	24.5	8.5	55.3	5.5	5.1	7.6	9.6	5.6	8.5	24.6
Cycle Q Clear(g_c), s	17.4	24.4	24.5	8.5	55.3	5.5	5.1	7.6	9.6	5.6	8.5	24.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	1760	944	121	2340	698	76	402	436	83	409	335
V/C Ratio(X)	0.90	0.49	0.49	0.83	0.87	0.14	0.79	0.28	0.28	0.80	0.30	0.78
Avail Cap(c_a), veh/h	254	1760	944	157	2340	698	97	402	436	102	409	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	22.3	22.3	68.9	35.8	22.6	71.0	48.6	41.3	70.7	48.4	54.7
Incr Delay (d2), s/veh	30.0	1.0	1.8	22.6	4.9	0.4	21.1	1.7	1.6	23.6	1.9	16.4
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	9.4	9.3	10.2	4.5	22.2	2.0	2.7	3.7	3.7	3.0	4.1	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.3	23.3	24.1	91.6	40.7	23.0	92.1	50.3	42.9	94.3	50.4	71.1
LnGrp LOS	F	C	C	F	D	C	F	D	D	F	D	E
Approach Vol, veh/h		1518			2240			294			451	
Approach Delay, s/veh		33.1			42.2			55.7			68.8	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	85.7	10.7	39.0	23.6	76.6	11.4	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 14	* 76	* 8.4	33.0	* 22	66.7	* 8.8	* 33
Max Q Clear Time (g_c+I1), s	10.5	26.5	7.1	26.6	19.4	57.3	7.6	11.6
Green Ext Time (p_c), s	0.0	25.9	0.0	0.9	0.1	9.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	18	35	34	29	28	55	220	10	16	406	52
Future Volume (veh/h)	50	18	35	34	29	28	55	220	10	16	406	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.98		0.93	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	68	25	48	47	40	38	75	301	14	22	556	71
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	189	72	87	156	115	81	135	1008	824	81	810	103
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.55	0.55	0.05	0.51	0.51
Sat Flow, veh/h	575	429	518	416	684	481	1739	1826	1492	1739	1579	202
Grp Volume(v), veh/h	141	0	0	125	0	0	75	301	14	22	0	627
Grp Sat Flow(s),veh/h/ln	1522	0	0	1582	0	0	1739	1826	1492	1739	0	1781
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	2.4	5.1	0.2	0.7	0.0	15.3
Cycle Q Clear(g_c), s	4.4	0.0	0.0	3.8	0.0	0.0	2.4	5.1	0.2	0.7	0.0	15.3
Prop In Lane	0.48		0.34	0.38		0.30	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	348	0	0	352	0	0	135	1008	824	81	0	913
V/C Ratio(X)	0.41	0.00	0.00	0.36	0.00	0.00	0.56	0.30	0.02	0.27	0.00	0.69
Avail Cap(c_a), veh/h	995	0	0	1030	0	0	510	1008	824	537	0	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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	21.6	0.0	0.0	25.8	7.0	5.9	26.7	0.0	10.6
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.6	0.0	0.0	2.7	0.8	0.0	0.7	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.5	0.0	0.0	1.0	1.7	0.1	0.3	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	0.0	22.3	0.0	0.0	28.4	7.7	5.9	27.3	0.0	12.9
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	B
Approach Vol, veh/h		141			125			390			649	
Approach Delay, s/veh		22.6			22.3			11.6			13.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.8	8.5	34.7	14.8	6.2	37.0
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	6.4	4.4	17.3	5.8	2.7	7.1
Green Ext Time (p_c), s	0.9	0.1	5.7	0.7	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	39	0	5	104	0	2
Future Vol, veh/h	39	0	5	104	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	42	0	5	113	0	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.3	7.7	6.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	5%
Vol Thru, %	0%	100%	95%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	2	39	109
LT Vol	0	0	5
Through Vol	0	39	104
RT Vol	2	0	0
Lane Flow Rate	2	42	118
Geometry Grp	1	1	1
Degree of Util (X)	0.002	0.048	0.133
Departure Headway (Hd)	3.66	4.077	4.03
Convergence, Y/N	Yes	Yes	Yes
Cap	964	879	893
Service Time	1.733	2.1	2.038
HCM Lane V/C Ratio	0.002	0.048	0.132
HCM Control Delay	6.7	7.3	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.2	0.5

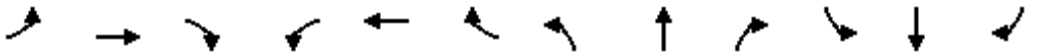
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	33	88	187	265	21
Future Vol, veh/h	8	33	88	187	265	21
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	24	100	99	567	804	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1318	434	838	0	-	0
Stage 1	826	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	145	562	773	-	-	-
Stage 1	383	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	124	551	766	-	-	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	330	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.4	1.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	766	-	440	-	-
HCM Lane V/C Ratio	0.129	-	0.283	-	-
HCM Control Delay (s)	10.4	-	16.4	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	1.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	736	311	282	543	0	0	0	0	557	0	378
Future Volume (veh/h)	0	736	311	282	543	0	0	0	0	557	0	378
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	818	346	313	603	0				619	0	420
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	5	5	0				5	5	5
Cap, veh/h	0	1494	628	376	2053	0				1075	0	465
Arrive On Green	0.00	0.44	0.44	0.22	1.00	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3579	1435	3374	3561	0				3478	0	1503
Grp Volume(v), veh/h	0	796	368	313	603	0				619	0	420
Grp Sat Flow(s),veh/h/ln	0	1662	1526	1687	1735	0				1739	0	1503
Q Serve(g_s), s	0.0	19.5	19.7	9.7	0.0	0.0				16.5	0.0	29.5
Cycle Q Clear(g_c), s	0.0	19.5	19.7	9.7	0.0	0.0				16.5	0.0	29.5
Prop In Lane	0.00		0.94	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1454	668	376	2053	0				1075	0	465
V/C Ratio(X)	0.00	0.55	0.55	0.83	0.29	0.00				0.58	0.00	0.90
Avail Cap(c_a), veh/h	0	1454	668	531	2053	0				1230	0	532
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.88	0.88	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.9	22.9	41.8	0.0	0.0				31.9	0.0	36.4
Incr Delay (d2), s/veh	0.0	1.5	3.3	6.8	0.3	0.0				0.5	0.0	17.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	7.3	3.9	0.1	0.0				6.8	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.4	26.2	48.6	0.3	0.0				32.4	0.0	53.8
LnGrp LOS	A	C	C	D	A	A				C	A	D
Approach Vol, veh/h		1164			916						1039	
Approach Delay, s/veh		24.9			16.8						41.1	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.0	53.9		39.1		70.9
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8
Max Green Setting (Gmax), s	* 17	* 39		38.9		60.2
Max Q Clear Time (g_c+I1), s	11.7	21.7		31.5		2.0
Green Ext Time (p_c), s	0.5	4.9		2.5		2.7

Intersection Summary	
HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	466	837	0	0	523	524	292	4	338	0	0	0
Future Volume (veh/h)	466	837	0	0	523	524	292	4	338	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1826	0	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	536	962	0	0	601	602	336	5	389			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	5	5	0	0	5	5	5	5	5			
Cap, veh/h	556	2335	0	0	1547	805	391	6	600			
Arrive On Green	0.64	1.00	0.00	0.00	0.52	0.52	0.23	0.23	0.23			
Sat Flow, veh/h	1739	3561	0	0	5149	2594	1715	26	2630			
Grp Volume(v), veh/h	536	962	0	0	601	602	341	0	389			
Grp Sat Flow(s),veh/h/ln	1739	1735	0	0	1662	1297	1740	0	1315			
Q Serve(g_s), s	31.8	0.0	0.0	0.0	8.0	20.1	20.7	0.0	14.7			
Cycle Q Clear(g_c), s	31.8	0.0	0.0	0.0	8.0	20.1	20.7	0.0	14.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	556	2335	0	0	1547	805	397	0	600			
V/C Ratio(X)	0.96	0.41	0.00	0.00	0.39	0.75	0.86	0.00	0.65			
Avail Cap(c_a), veh/h	700	2335	0	0	1547	805	489	0	739			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.80	0.80	0.00	0.00	0.94	0.94	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.2	0.0	0.0	0.0	20.2	23.1	40.8	0.0	38.5			
Incr Delay (d2), s/veh	19.6	0.4	0.0	0.0	0.7	5.9	12.2	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.1	0.1	0.0	0.0	2.8	5.1	9.9	0.0	4.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.4	0.0	0.0	20.9	29.1	53.0	0.0	39.9			
LnGrp LOS	D	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1498			1203			730				
Approach Delay, s/veh		14.2			25.0			46.0				
Approach LOS		B			C			D				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		79.8			39.9	39.9		30.2				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 69			* 44	19.2		30.9				
Max Q Clear Time (g_c+I1), s		2.0			33.8	22.1		22.7				
Green Ext Time (p_c), s		4.8			1.4	0.0		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



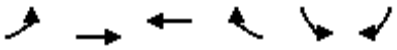
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1183	90	29	1234	48	16
Future Volume (veh/h)	1183	90	29	1234	48	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	1425	108	35	1487	67	22
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	3899	1239	101	4279	143	66
Arrive On Green	1.00	1.00	0.06	1.00	0.04	0.04
Sat Flow, veh/h	5149	1499	3374	5149	3374	1547
Grp Volume(v), veh/h	1425	108	35	1487	67	22
Grp Sat Flow(s),veh/h/ln	1662	1499	1687	1662	1687	1547
Q Serve(g_s), s	0.0	0.0	1.1	0.0	2.1	1.5
Cycle Q Clear(g_c), s	0.0	0.0	1.1	0.0	2.1	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3899	1239	101	4279	143	66
V/C Ratio(X)	0.37	0.09	0.35	0.35	0.47	0.33
Avail Cap(c_a), veh/h	3899	1239	304	4279	426	196
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.97	0.97	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	50.7	0.0	51.5	51.2
Incr Delay (d2), s/veh	0.2	0.1	2.0	0.2	2.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.1	1.0	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.1	52.7	0.2	53.8	54.1
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1533			1522	89	
Approach Delay, s/veh	0.2			1.4	53.9	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	91.8			100.2	9.8
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 71			85.2	13.9
Max Q Clear Time (g_c+I1), s	3.1	2.0			2.0	4.1
Green Ext Time (p_c), s	0.0	8.2			8.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	2.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	61	1109	1125	25	25	111
Future Volume (veh/h)	61	1109	1125	25	25	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	72	1305	1324	29	29	131
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	91	4023	5403	118	184	163
Arrive On Green	0.10	1.00	0.72	0.72	0.11	0.11
Sat Flow, veh/h	1739	5149	7888	165	1739	1547
Grp Volume(v), veh/h	72	1305	1038	315	29	131
Grp Sat Flow(s),veh/h/ln	1739	1662	1479	1790	1739	1547
Q Serve(g_s), s	4.4	0.0	6.6	6.7	1.7	9.1
Cycle Q Clear(g_c), s	4.4	0.0	6.6	6.7	1.7	9.1
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	91	4023	4238	1282	184	163
V/C Ratio(X)	0.79	0.32	0.24	0.25	0.16	0.80
Avail Cap(c_a), veh/h	281	4023	4238	1282	534	475
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	0.0	5.4	5.4	44.7	48.1
Incr Delay (d2), s/veh	5.3	0.2	0.1	0.5	0.5	10.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.1	1.6	2.1	0.8	8.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.9	0.2	5.5	5.8	45.2	58.5
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1377	1353		160	
Approach Delay, s/veh		3.0	5.6		56.1	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	94.2		15.8	10.0	84.2
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	66.6		* 34	* 18	44.6
Max Q Clear Time (g_c+I1), s	2.0		11.1	6.4	8.7
Green Ext Time (p_c), s	22.6		0.6	0.0	13.1

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th 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)	326	745	62	11	669	95	14	8	7	97	16	458
Future Volume (veh/h)	326	745	62	11	669	95	14	8	7	97	16	458
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	388	887	74	13	796	113	17	10	8	115	19	545
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	302	2110	629	21	1150	162	50	291	233	117	671	554
Arrive On Green	0.17	0.42	0.42	0.02	0.52	0.52	0.01	0.31	0.31	0.07	0.37	0.37
Sat Flow, veh/h	1739	4985	1485	1739	4395	619	3374	926	741	1739	1826	1507
Grp Volume(v), veh/h	388	887	74	13	600	309	17	0	18	115	19	545
Grp Sat Flow(s),veh/h/ln	1739	1662	1485	1739	1662	1691	1687	0	1667	1739	1826	1507
Q Serve(g_s), s	19.1	13.7	3.3	0.8	14.8	15.1	0.5	0.0	0.8	7.3	0.7	39.4
Cycle Q Clear(g_c), s	19.1	13.7	3.3	0.8	14.8	15.1	0.5	0.0	0.8	7.3	0.7	39.4
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	302	2110	629	21	869	442	50	0	525	117	671	554
V/C Ratio(X)	1.29	0.42	0.12	0.63	0.69	0.70	0.34	0.00	0.03	0.98	0.03	0.98
Avail Cap(c_a), veh/h	302	2110	629	63	869	442	123	0	561	117	671	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	22.2	19.2	53.4	22.9	23.0	53.7	0.0	26.1	51.2	22.3	34.5
Incr Delay (d2), s/veh	151.1	0.6	0.4	10.8	4.4	8.7	1.5	0.0	0.0	77.5	0.0	34.1
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	20.6	5.2	1.2	0.4	4.6	5.3	0.2	0.0	0.3	5.6	0.3	19.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.5	22.9	19.6	64.2	27.3	31.6	55.2	0.0	26.1	128.7	22.3	68.6
LnGrp LOS	F	C	B	E	C	C	E	A	C	F	C	E
Approach Vol, veh/h		1349			922			35			679	
Approach Delay, s/veh		72.6			29.3			40.2			77.5	
Approach LOS		E			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.0	5.8	45.7	23.3	35.2	11.6	39.9
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 4	* 42	* 4	40.4	* 19	* 26	* 7.4	37.0
Max Q Clear Time (g_c+I1), s	2.8	15.7	2.5	41.4	21.1	17.1	9.3	2.8
Green Ext Time (p_c), s	0.0	12.9	0.0	0.0	0.0	5.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	60.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



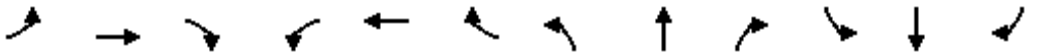
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	738	58	5	747	2	15	0	2	2	1	16
Future Volume (veh/h)	57	738	58	5	747	2	15	0	2	2	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.95	0.98		0.95
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	63	811	64	5	821	2	16	0	2	2	1	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	80	3617	1087	9	3413	1025	230	0	198	246	11	190
Arrive On Green	0.09	1.00	1.00	0.01	1.00	1.00	0.13	0.00	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1739	4985	1498	1739	4985	1497	1332	0	1470	1351	78	1407
Grp Volume(v), veh/h	63	811	64	5	821	2	16	0	2	2	0	19
Grp Sat Flow(s),veh/h/ln	1739	1662	1498	1739	1662	1497	1332	0	1470	1351	0	1486
Q Serve(g_s), s	3.9	0.0	0.0	0.3	0.0	0.0	1.2	0.0	0.1	0.1	0.0	1.2
Cycle Q Clear(g_c), s	3.9	0.0	0.0	0.3	0.0	0.0	2.4	0.0	0.1	0.3	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	80	3617	1087	9	3413	1025	230	0	198	246	0	200
V/C Ratio(X)	0.79	0.22	0.06	0.56	0.24	0.00	0.07	0.00	0.01	0.01	0.00	0.09
Avail Cap(c_a), veh/h	234	3617	1087	107	3413	1025	559	0	561	580	0	567
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.4	0.0	0.0	54.3	0.0	0.0	42.8	0.0	41.2	41.4	0.0	41.7
Incr Delay (d2), s/veh	5.9	0.1	0.1	18.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	0.2	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	0.1	0.1	72.8	0.2	0.0	42.9	0.0	41.3	41.4	0.0	41.9
LnGrp LOS	E	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		938			828			18			21	
Approach Delay, s/veh		3.8			0.6			42.7			41.9	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	85.8		19.4	9.3	81.3		19.4				
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	* 6.8	* 46		42.0	* 15	* 38		42.0				
Max Q Clear Time (g_c+I1), s	2.3	2.0		3.2	5.9	2.0		4.4				
Green Ext Time (p_c), s	0.0	12.6		0.1	0.0	11.4		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

* HCM 6th 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)	262	2190	65	143	1645	80	49	185	207	136	195	287
Future Volume (veh/h)	262	2190	65	143	1645	80	49	185	207	136	195	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	279	2330	69	152	1750	85	52	197	220	145	207	305
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	288	3799	112	152	3418	1027	66	430	487	149	517	425
Arrive On Green	0.17	0.76	0.76	0.09	0.69	0.69	0.04	0.24	0.24	0.09	0.28	0.28
Sat Flow, veh/h	1739	4971	146	1739	4985	1497	1739	1826	1495	1739	1826	1501
Grp Volume(v), veh/h	279	1554	845	152	1750	85	52	197	220	145	207	305
Grp Sat Flow(s),veh/h/ln	1739	1662	1794	1739	1662	1497	1739	1826	1495	1739	1826	1501
Q Serve(g_s), s	22.3	29.0	29.4	12.2	23.8	2.6	4.2	12.9	16.4	11.6	12.8	25.6
Cycle Q Clear(g_c), s	22.3	29.0	29.4	12.2	23.8	2.6	4.2	12.9	16.4	11.6	12.8	25.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	2540	1371	152	3418	1027	66	430	487	149	517	425
V/C Ratio(X)	0.97	0.61	0.62	1.00	0.51	0.08	0.78	0.46	0.45	0.97	0.40	0.72
Avail Cap(c_a), veh/h	288	2540	1371	152	3418	1027	120	430	487	149	517	425
HCM Platoon Ratio	1.00	1.00	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	0.60	0.60	0.60	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	7.3	7.4	63.9	10.7	7.3	66.8	45.8	37.6	63.8	40.6	45.1
Incr Delay (d2), s/veh	44.1	1.1	2.1	73.9	0.6	0.2	4.5	2.1	1.8	65.0	2.3	10.0
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	13.0	8.3	9.4	8.4	7.8	0.9	1.9	6.1	6.2	7.8	6.1	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.1	8.4	9.4	137.8	11.2	7.5	71.3	47.9	39.4	128.8	42.9	55.1
LnGrp LOS	F	A	A	F	B	A	E	D	D	F	D	E
Approach Vol, veh/h		2678			1987			469			657	
Approach Delay, s/veh		18.5			20.7			46.5			67.5	
Approach LOS		B			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	114.5	9.5	45.1	27.4	103.5	16.2	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 12	* 64	* 9.7	34.9	* 23	52.2	* 12	* 33
Max Q Clear Time (g_c+I1), s	14.2	31.4	6.2	27.6	24.3	25.8	13.6	18.4
Green Ext Time (p_c), s	0.0	31.0	0.0	1.4	0.0	22.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	28	22	41	11	28	12	378	46	34	306	41
Future Volume (veh/h)	20	28	22	41	11	28	12	378	46	34	306	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.95	1.00		0.95
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	22	30	24	45	12	30	13	411	50	37	333	45
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	257	342	247	424	121	248	14	529	426	45	470	64
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.01	0.29	0.29	0.03	0.30	0.30
Sat Flow, veh/h	387	684	495	698	243	495	1739	1826	1471	1739	1564	211
Grp Volume(v), veh/h	76	0	0	87	0	0	13	411	50	37	0	378
Grp Sat Flow(s),veh/h/ln	1566	0	0	1437	0	0	1739	1826	1471	1739	0	1775
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.5	15.1	1.8	1.6	0.0	13.9
Cycle Q Clear(g_c), s	1.7	0.0	0.0	2.0	0.0	0.0	0.5	15.1	1.8	1.6	0.0	13.9
Prop In Lane	0.29		0.32	0.52		0.34	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	846	0	0	793	0	0	14	529	426	45	0	534
V/C Ratio(X)	0.09	0.00	0.00	0.11	0.00	0.00	0.92	0.78	0.12	0.83	0.00	0.71
Avail Cap(c_a), veh/h	846	0	0	793	0	0	404	798	643	425	0	786
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.6	0.0	0.0	9.6	0.0	0.0	36.3	23.8	19.1	35.5	0.0	22.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	76.5	5.4	0.3	13.2	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.7	0.0	0.0	0.5	6.8	0.6	0.8	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	0.0	0.0	9.9	0.0	0.0	112.8	29.2	19.4	48.7	0.0	25.7
LnGrp LOS	A	A	A	A	A	A	F	C	B	D	A	C
Approach Vol, veh/h		76			87			474			415	
Approach Delay, s/veh		9.8			9.9			30.4			27.8	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	41.6	4.6	27.0	41.6	5.4	26.2
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	3.7	2.5	15.9	4.0	3.6	17.1
Green Ext Time (p_c), s	0.4	0.0	3.2	0.5	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	100	0	1	60	0	13
Future Vol, veh/h	100	0	1	60	0	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	109	0	1	65	0	14
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	7.5	6.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	2%
Vol Thru, %	0%	100%	98%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	100	61
LT Vol	0	0	1
Through Vol	0	100	60
RT Vol	13	0	0
Lane Flow Rate	14	109	66
Geometry Grp	1	1	1
Degree of Util (X)	0.014	0.123	0.075
Departure Headway (Hd)	3.685	4.06	4.095
Convergence, Y/N	Yes	Yes	Yes
Cap	957	885	875
Service Time	1.764	2.076	2.119
HCM Lane V/C Ratio	0.015	0.123	0.075
HCM Control Delay	6.8	7.6	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.4	0.2

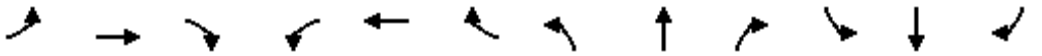
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	91	49	400	342	12
Future Vol, veh/h	22	91	49	400	342	12
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	61	253	51	1113	952	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1637	502	974	0	-	0
Stage 1	968	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	89	507	686	-	-	-
Stage 1	322	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	81	497	679	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	295	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.8	0.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	679	-	385	-	-
HCM Lane V/C Ratio	0.074	-	0.817	-	-
HCM Control Delay (s)	10.7	-	44.8	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.2	-	7.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	973	551	686	975	0	0	0	0	597	0	570
Future Volume (veh/h)	0	973	551	686	975	0	0	0	0	597	0	570
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1003	568	707	1005	0				615	0	588
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	5	5	5	5	0				5	5	5
Cap, veh/h	0	1492	679	696	2422	0				1135	0	491
Arrive On Green	0.00	0.45	0.45	0.41	1.00	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	3487	1511	3374	3561	0				3478	0	1504
Grp Volume(v), veh/h	0	1003	568	707	1005	0				615	0	588
Grp Sat Flow(s),veh/h/ln	0	1662	1511	1687	1735	0				1739	0	1504
Q Serve(g_s), s	0.0	26.2	36.5	22.7	0.0	0.0				15.9	0.0	35.9
Cycle Q Clear(g_c), s	0.0	26.2	36.5	22.7	0.0	0.0				15.9	0.0	35.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1492	679	696	2422	0				1135	0	491
V/C Ratio(X)	0.00	0.67	0.84	1.02	0.41	0.00				0.54	0.00	1.20
Avail Cap(c_a), veh/h	0	1492	679	696	2422	0				1135	0	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.22	0.22	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.9	26.7	32.3	0.0	0.0				30.3	0.0	37.1
Incr Delay (d2), s/veh	0.0	2.4	11.7	20.0	0.1	0.0				0.5	0.0	107.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.2	14.5	8.6	0.0	0.0				6.5	0.0	27.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.3	38.5	52.3	0.1	0.0				30.8	0.0	144.3
LnGrp LOS	A	C	D	F	A	A				C	A	F
Approach Vol, veh/h		1571			1712						1203	
Approach Delay, s/veh		30.7			21.7						86.3	
Approach LOS		C			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.4	55.6		41.0		83.0
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8
Max Green Setting (Gmax), s	* 23	* 36		35.9		63.2
Max Q Clear Time (g_c+I1), s	24.7	38.5		37.9		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		5.1

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	497	1083	0	0	1180	833	451	4	571	0	0	0
Future Volume (veh/h)	497	1083	0	0	1180	833	451	4	571	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1826	0	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	512	1116	0	0	1216	859	465	4	589			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	5	5	0	0	5	5	5	5	5			
Cap, veh/h	527	2146	0	0	1361	705	494	4	757			
Arrive On Green	0.61	1.00	0.00	0.00	0.55	0.55	0.29	0.29	0.29			
Sat Flow, veh/h	1739	3561	0	0	5149	2584	1725	15	2642			
Grp Volume(v), veh/h	512	1116	0	0	1216	859	469	0	589			
Grp Sat Flow(s),veh/h/ln	1739	1735	0	0	1662	1292	1740	0	1321			
Q Serve(g_s), s	31.1	0.0	0.0	0.0	23.8	30.0	29.0	0.0	22.5			
Cycle Q Clear(g_c), s	31.1	0.0	0.0	0.0	23.8	30.0	29.0	0.0	22.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	527	2146	0	0	1361	705	498	0	757			
V/C Ratio(X)	0.97	0.52	0.00	0.00	0.89	1.22	0.94	0.00	0.78			
Avail Cap(c_a), veh/h	542	2146	0	0	1361	705	505	0	766			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.30	0.30	0.00	0.00	0.86	0.86	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.2	0.0	0.0	0.0	23.6	25.0	38.3	0.0	36.0			
Incr Delay (d2), s/veh	14.9	0.3	0.0	0.0	8.2	109.0	25.9	0.0	5.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.9	0.1	0.0	0.0	6.6	15.9	15.4	0.0	7.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.3	0.0	0.0	31.7	134.0	64.3	0.0	41.1			
LnGrp LOS	D	A	A	A	C	F	E	A	D			
Approach Vol, veh/h		1628			2075			1058				
Approach Delay, s/veh		11.6			74.1			51.4				
Approach LOS		B			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.9			38.0	35.8		36.6				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 68			* 34	28.2		31.9				
Max Q Clear Time (g_c+I1), s		2.0			33.1	32.0		31.0				
Green Ext Time (p_c), s		5.9			0.3	0.0		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	47.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



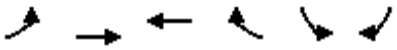
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1226	321	73	1559	308	97
Future Volume (veh/h)	1226	321	73	1559	308	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	1304	341	78	1659	377	119
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	3355	1224	139	3791	473	217
Arrive On Green	1.00	1.00	0.08	1.00	0.14	0.14
Sat Flow, veh/h	5149	1497	3374	5149	3374	1547
Grp Volume(v), veh/h	1304	341	78	1659	377	119
Grp Sat Flow(s),veh/h/ln	1662	1497	1687	1662	1687	1547
Q Serve(g_s), s	0.0	0.0	2.4	0.0	11.9	7.9
Cycle Q Clear(g_c), s	0.0	0.0	2.4	0.0	11.9	7.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3355	1224	139	3791	473	217
V/C Ratio(X)	0.39	0.28	0.56	0.44	0.80	0.55
Avail Cap(c_a), veh/h	3355	1224	304	3791	825	378
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	49.5	0.0	45.8	44.0
Incr Delay (d2), s/veh	0.3	0.4	3.3	0.4	3.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	1.0	0.1	5.2	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.4	52.8	0.4	48.9	46.2
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1645			1737	496	
Approach Delay, s/veh	0.3			2.7	48.2	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.6	79.8			89.5	20.5
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 58			72.2	26.9
Max Q Clear Time (g_c+I1), s	4.4	2.0			2.0	13.9
Green Ext Time (p_c), s	0.1	7.9			10.2	1.5

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	101	1212	1536	28	17	81
Future Volume (veh/h)	101	1212	1536	28	17	81
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	111	1332	1688	31	19	89
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	136	4175	5463	100	131	116
Arrive On Green	0.16	1.00	0.72	0.72	0.08	0.08
Sat Flow, veh/h	1739	5149	7919	139	1739	1547
Grp Volume(v), veh/h	111	1332	1318	401	19	89
Grp Sat Flow(s),veh/h/ln	1739	1662	1479	1795	1739	1547
Q Serve(g_s), s	6.8	0.0	8.8	8.8	1.1	6.2
Cycle Q Clear(g_c), s	6.8	0.0	8.8	8.8	1.1	6.2
Prop In Lane	1.00			0.08	1.00	1.00
Lane Grp Cap(c), veh/h	136	4175	4268	1295	131	116
V/C Ratio(X)	0.82	0.32	0.31	0.31	0.15	0.77
Avail Cap(c_a), veh/h	313	4175	4268	1295	487	433
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	5.5	5.5	47.6	49.9
Incr Delay (d2), s/veh	4.2	0.2	0.2	0.6	0.6	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.1	2.2	2.8	0.5	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.8	0.2	5.7	6.1	48.2	61.8
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1443	1719		108	
Approach Delay, s/veh		4.0	5.8		59.4	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	97.5		12.5	12.8	84.8
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	69.6		* 31	* 20	45.6
Max Q Clear Time (g_c+I1), s	2.0		8.2	8.8	10.8
Green Ext Time (p_c), s	23.7		0.4	0.1	17.7

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

* HCM 6th 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)	373	783	75	16	955	74	92	19	19	97	6	545
Future Volume (veh/h)	373	783	75	16	955	74	92	19	19	97	6	545
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	389	816	78	17	995	77	96	20	20	101	6	568
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	329	2079	619	26	1142	88	148	275	275	92	624	515
Arrive On Green	0.19	0.42	0.42	0.02	0.32	0.32	0.04	0.33	0.33	0.05	0.34	0.34
Sat Flow, veh/h	1739	4985	1485	1739	4706	363	3374	825	825	1739	1826	1506
Grp Volume(v), veh/h	389	816	78	17	702	370	96	0	40	101	6	568
Grp Sat Flow(s),veh/h/ln	1739	1662	1485	1739	1662	1746	1687	0	1650	1739	1826	1506
Q Serve(g_s), s	20.8	12.6	3.6	1.1	21.9	22.0	3.1	0.0	1.8	5.8	0.2	37.6
Cycle Q Clear(g_c), s	20.8	12.6	3.6	1.1	21.9	22.0	3.1	0.0	1.8	5.8	0.2	37.6
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	329	2079	619	26	806	424	148	0	549	92	624	515
V/C Ratio(X)	1.18	0.39	0.13	0.66	0.87	0.87	0.65	0.00	0.07	1.10	0.01	1.10
Avail Cap(c_a), veh/h	329	2079	619	84	806	424	159	0	555	92	624	515
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.96	0.96	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	22.4	19.7	53.7	35.6	35.7	51.8	0.0	25.1	52.1	23.9	36.2
Incr Delay (d2), s/veh	109.1	0.6	0.4	10.0	12.0	20.7	5.9	0.0	0.0	124.1	0.0	71.1
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	18.6	4.7	1.3	0.5	9.0	10.5	1.4	0.0	0.7	5.7	0.1	23.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.7	22.9	20.2	63.7	47.6	56.3	57.6	0.0	25.1	176.2	23.9	107.3
LnGrp LOS	F	C	C	E	D	E	E	A	C	F	C	F
Approach Vol, veh/h		1283			1089			136			675	
Approach Delay, s/veh		62.4			50.8			48.1			116.9	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	52.3	9.0	42.9	25.0	33.1	10.0	41.9
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.3	* 42	* 5.2	37.6	* 21	* 26	* 5.8	37.0
Max Q Clear Time (g_c+I1), s	13.1	14.6	5.1	39.6	22.8	24.0	7.8	3.8
Green Ext Time (p_c), s	0.0	12.3	0.0	0.0	0.0	1.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	69.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



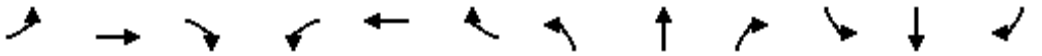
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	763	40	10	950	9	45	1	15	8	1	76
Future Volume (veh/h)	82	763	40	10	950	9	45	1	15	8	1	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	89	829	43	11	1033	10	49	1	16	9	1	83
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	111	3374	1013	18	3109	932	229	16	252	292	3	262
Arrive On Green	0.13	1.00	1.00	0.00	0.21	0.21	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1739	4985	1497	1739	4985	1495	1266	88	1413	1341	18	1470
Grp Volume(v), veh/h	89	829	43	11	1033	10	49	0	17	9	0	84
Grp Sat Flow(s),veh/h/ln	1739	1662	1497	1739	1662	1495	1266	0	1501	1341	0	1488
Q Serve(g_s), s	5.5	0.0	0.0	0.7	19.4	0.6	3.9	0.0	1.0	0.6	0.0	5.4
Cycle Q Clear(g_c), s	5.5	0.0	0.0	0.7	19.4	0.6	9.3	0.0	1.0	1.7	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Lane Grp Cap(c), veh/h	111	3374	1013	18	3109	932	229	0	267	292	0	265
V/C Ratio(X)	0.80	0.25	0.04	0.61	0.33	0.01	0.21	0.00	0.06	0.03	0.00	0.32
Avail Cap(c_a), veh/h	171	3374	1013	76	3109	932	487	0	573	565	0	568
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	0.0	54.6	24.2	16.7	43.4	0.0	37.6	38.3	0.0	39.4
Incr Delay (d2), s/veh	7.1	0.2	0.1	11.5	0.3	0.0	0.5	0.0	0.1	0.0	0.0	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	2.4	0.1	0.0	0.4	8.6	0.2	1.3	0.0	0.4	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.2	0.1	66.1	24.4	16.7	43.9	0.0	37.7	38.3	0.0	40.1
LnGrp LOS	D	A	A	E	C	B	D	A	D	D	A	D
Approach Vol, veh/h		961			1054			66			93	
Approach Delay, s/veh		5.2			24.8			42.3			39.9	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	80.5		24.2	11.2	74.6		24.2
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6
Max Green Setting (Gmax), s	* 4.8	* 48		42.0	* 11	* 42		42.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		7.4	7.5	21.4		11.3
Green Ext Time (p_c), s	0.0	12.9		0.5	0.0	11.3		0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

* HCM 6th 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)	192	1188	47	97	1921	90	56	113	140	62	118	245
Future Volume (veh/h)	192	1188	47	97	1921	90	56	113	140	62	118	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	204	1264	50	103	2044	96	60	120	149	66	126	261
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	225	2593	103	124	2340	698	76	402	438	83	409	335
Arrive On Green	0.13	0.53	0.53	0.07	0.47	0.47	0.04	0.22	0.22	0.05	0.22	0.22
Sat Flow, veh/h	1739	4911	194	1739	4985	1488	1739	1826	1493	1739	1826	1493
Grp Volume(v), veh/h	204	855	459	103	2044	96	60	120	149	66	126	261
Grp Sat Flow(s),veh/h/ln	1739	1662	1782	1739	1662	1488	1739	1826	1493	1739	1826	1493
Q Serve(g_s), s	17.4	24.5	24.5	8.8	55.3	5.5	5.1	8.2	11.8	5.6	8.6	24.6
Cycle Q Clear(g_c), s	17.4	24.5	24.5	8.8	55.3	5.5	5.1	8.2	11.8	5.6	8.6	24.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	1754	941	124	2340	698	76	402	438	83	409	335
V/C Ratio(X)	0.90	0.49	0.49	0.83	0.87	0.14	0.79	0.30	0.34	0.80	0.31	0.78
Avail Cap(c_a), veh/h	254	1754	941	157	2340	698	97	402	438	102	409	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(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	64.4	22.5	22.5	68.8	35.8	22.6	71.0	48.8	41.9	70.7	48.5	54.7
Incr Delay (d2), s/veh	30.0	1.0	1.8	24.0	4.9	0.4	20.7	1.8	2.0	23.6	1.9	16.4
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	9.4	9.4	10.3	4.6	22.2	2.0	2.7	4.0	4.6	3.0	4.1	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.3	23.5	24.3	92.7	40.7	23.0	91.8	50.7	43.9	94.3	50.5	71.1
LnGrp LOS	F	C	C	F	D	C	F	D	D	F	D	E
Approach Vol, veh/h		1518			2243			329			453	
Approach Delay, s/veh		33.3			42.3			55.1			68.7	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	85.4	10.7	39.0	23.6	76.6	11.4	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 14	* 76	* 8.4	33.0	* 22	66.7	* 8.8	* 33
Max Q Clear Time (g_c+I1), s	10.8	26.5	7.1	26.6	19.4	57.3	7.6	13.8
Green Ext Time (p_c), s	0.0	25.9	0.0	0.9	0.1	9.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	18	35	34	29	28	55	253	10	16	410	52
Future Volume (veh/h)	50	18	35	34	29	28	55	253	10	16	410	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.98		0.93	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	68	25	48	47	40	38	75	347	14	22	562	71
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	189	72	87	156	115	81	135	1008	824	81	811	102
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.08	0.55	0.55	0.05	0.51	0.51
Sat Flow, veh/h	575	429	518	416	684	481	1739	1826	1492	1739	1581	200
Grp Volume(v), veh/h	141	0	0	125	0	0	75	347	14	22	0	633
Grp Sat Flow(s),veh/h/ln	1522	0	0	1582	0	0	1739	1826	1492	1739	0	1781
Q Serve(g_s), s	0.6	0.0	0.0	0.0	0.0	0.0	2.4	6.1	0.2	0.7	0.0	15.6
Cycle Q Clear(g_c), s	4.4	0.0	0.0	3.8	0.0	0.0	2.4	6.1	0.2	0.7	0.0	15.6
Prop In Lane	0.48		0.34	0.38		0.30	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	348	0	0	352	0	0	135	1008	824	81	0	913
V/C Ratio(X)	0.41	0.00	0.00	0.36	0.00	0.00	0.56	0.34	0.02	0.27	0.00	0.69
Avail Cap(c_a), veh/h	995	0	0	1030	0	0	510	1008	824	537	0	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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	21.6	0.0	0.0	25.8	7.2	5.9	26.7	0.0	10.7
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.6	0.0	0.0	2.7	0.9	0.0	0.7	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.0	1.5	0.0	0.0	1.0	2.0	0.1	0.3	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	0.0	0.0	22.3	0.0	0.0	28.4	8.1	5.9	27.3	0.0	13.0
LnGrp LOS	C	A	A	C	A	A	C	A	A	C	A	B
Approach Vol, veh/h		141			125			436			655	
Approach Delay, s/veh		22.6			22.3			11.5			13.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.8	8.5	34.7	14.8	6.2	37.0
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	6.4	4.4	17.6	5.8	2.7	8.1
Green Ext Time (p_c), s	0.9	0.1	5.7	0.7	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	203	0	5	125	0	2
Future Vol, veh/h	203	0	5	125	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	221	0	5	136	0	2
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8	7.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	4%
Vol Thru, %	0%	100%	96%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	2	203	130
LT Vol	0	0	5
Through Vol	0	203	125
RT Vol	2	0	0
Lane Flow Rate	2	221	141
Geometry Grp	1	1	1
Degree of Util (X)	0.003	0.251	0.163
Departure Headway (Hd)	4.162	4.094	4.16
Convergence, Y/N	Yes	Yes	Yes
Cap	865	876	858
Service Time	2.162	2.127	2.208
HCM Lane V/C Ratio	0.002	0.252	0.164
HCM Control Delay	7.2	8.5	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	1	0.6

Intersection	
Int Delay, s/veh	69.9

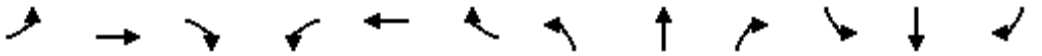
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	164	105	187	265	25
Future Vol, veh/h	41	164	105	187	265	25
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	124	498	118	567	804	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1358	436	842	0	-	0
Stage 1	828	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	136	560	770	-	-	-
Stage 1	382	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 113	549	763	-	-	-
Mov Cap-2 Maneuver	230	-	-	-	-	-
Stage 1	320	-	-	-	-	-
Stage 2	541	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	238.4	1.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	763	-	430	-	-
HCM Lane V/C Ratio	0.155	-	1.446	-	-
HCM Control Delay (s)	10.6	-	238.4	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.5	-	31.4	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	738	311	298	560	0	0	0	0	564	0	378
Future Volume (veh/h)	0	738	311	298	560	0	0	0	0	564	0	378
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	820	346	331	622	0				627	0	420
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	5	5	0				5	5	5
Cap, veh/h	0	1477	619	393	2052	0				1076	0	465
Arrive On Green	0.00	0.43	0.43	0.23	1.00	0.00				0.31	0.00	0.31
Sat Flow, veh/h	0	3582	1433	3374	3561	0				3478	0	1503
Grp Volume(v), veh/h	0	797	369	331	622	0				627	0	420
Grp Sat Flow(s),veh/h/ln	0	1662	1527	1687	1735	0				1739	0	1503
Q Serve(g_s), s	0.0	19.7	19.9	10.3	0.0	0.0				16.7	0.0	29.5
Cycle Q Clear(g_c), s	0.0	19.7	19.9	10.3	0.0	0.0				16.7	0.0	29.5
Prop In Lane	0.00		0.94	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1436	660	393	2052	0				1076	0	465
V/C Ratio(X)	0.00	0.56	0.56	0.84	0.30	0.00				0.58	0.00	0.90
Avail Cap(c_a), veh/h	0	1436	660	531	2052	0				1230	0	532
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.86	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.3	23.4	41.2	0.0	0.0				32.0	0.0	36.4
Incr Delay (d2), s/veh	0.0	1.6	3.4	7.7	0.3	0.0				0.5	0.0	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	7.4	4.1	0.1	0.0				6.9	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.9	26.8	49.0	0.3	0.0				32.5	0.0	53.7
LnGrp LOS	A	C	C	D	A	A				C	A	D
Approach Vol, veh/h		1166			953						1047	
Approach Delay, s/veh		25.5			17.2						41.0	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	17.5	53.3		39.1		70.9						
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8						
Max Green Setting (Gmax), s	* 17	* 39		38.9		60.2						
Max Q Clear Time (g_c+I1), s	12.3	21.9		31.5		2.0						
Green Ext Time (p_c), s	0.5	4.9		2.6		2.8						

Intersection Summary		
HCM 6th Ctrl Delay		28.1
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	466	846	0	0	556	582	292	4	341	0	0	0
Future Volume (veh/h)	466	846	0	0	556	582	292	4	341	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1826	0	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	536	972	0	0	639	669	336	5	392			
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87			
Percent Heavy Veh, %	5	5	0	0	5	5	5	5	5			
Cap, veh/h	556	2334	0	0	1546	805	391	6	600			
Arrive On Green	0.64	1.00	0.00	0.00	0.52	0.52	0.23	0.23	0.23			
Sat Flow, veh/h	1739	3561	0	0	5149	2594	1715	26	2630			
Grp Volume(v), veh/h	536	972	0	0	639	669	341	0	392			
Grp Sat Flow(s),veh/h/ln	1739	1735	0	0	1662	1297	1740	0	1315			
Q Serve(g_s), s	31.8	0.0	0.0	0.0	8.6	24.0	20.7	0.0	14.9			
Cycle Q Clear(g_c), s	31.8	0.0	0.0	0.0	8.6	24.0	20.7	0.0	14.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	556	2334	0	0	1546	805	397	0	600			
V/C Ratio(X)	0.96	0.42	0.00	0.00	0.41	0.83	0.86	0.00	0.65			
Avail Cap(c_a), veh/h	700	2334	0	0	1546	805	489	0	739			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00			
Upstream Filter(I)	0.80	0.80	0.00	0.00	0.93	0.93	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.2	0.0	0.0	0.0	20.4	24.1	40.8	0.0	38.5			
Incr Delay (d2), s/veh	19.6	0.4	0.0	0.0	0.8	9.2	12.2	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.1	0.1	0.0	0.0	3.0	6.2	9.9	0.0	4.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.4	0.0	0.0	21.1	33.2	53.0	0.0	40.0			
LnGrp LOS	D	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1508			1308			733				
Approach Delay, s/veh		14.1			27.3			46.0				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		79.8			39.9	39.9		30.2				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 69			* 44	19.2		30.9				
Max Q Clear Time (g_c+I1), s		2.0			33.8	26.0		22.7				
Green Ext Time (p_c), s		4.9			1.4	0.0		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	25.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



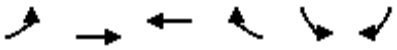
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1195	90	29	1325	48	16
Future Volume (veh/h)	1195	90	29	1325	48	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	1440	108	35	1596	75	25
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	3895	1239	101	4275	146	67
Arrive On Green	1.00	1.00	0.06	1.00	0.04	0.04
Sat Flow, veh/h	5149	1499	3374	5149	3374	1547
Grp Volume(v), veh/h	1440	108	35	1596	75	25
Grp Sat Flow(s),veh/h/ln	1662	1499	1687	1662	1687	1547
Q Serve(g_s), s	0.0	0.0	1.1	0.0	2.4	1.7
Cycle Q Clear(g_c), s	0.0	0.0	1.1	0.0	2.4	1.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3895	1239	101	4275	146	67
V/C Ratio(X)	0.37	0.09	0.35	0.37	0.51	0.37
Avail Cap(c_a), veh/h	3895	1239	304	4275	426	196
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.96	0.96	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	50.7	0.0	51.5	51.2
Incr Delay (d2), s/veh	0.2	0.1	2.0	0.2	2.8	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.5	0.1	1.1	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.2	0.1	52.6	0.2	54.3	54.6
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1548			1631	100	
Approach Delay, s/veh	0.2			1.4	54.3	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.4	91.8			100.1	9.9
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 71			85.2	13.9
Max Q Clear Time (g_c+I1), s	3.1	2.0			2.0	4.4
Green Ext Time (p_c), s	0.0	8.3			9.6	0.2

Intersection Summary	
HCM 6th Ctrl Delay	2.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	61	1121	1216	41	26	111
Future Volume (veh/h)	61	1121	1216	41	26	111
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	72	1319	1431	48	31	131
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	91	4023	5329	178	184	164
Arrive On Green	0.10	1.00	0.72	0.72	0.11	0.11
Sat Flow, veh/h	1739	5149	7786	249	1739	1547
Grp Volume(v), veh/h	72	1319	1137	342	31	131
Grp Sat Flow(s),veh/h/ln	1739	1662	1479	1771	1739	1547
Q Serve(g_s), s	4.4	0.0	7.4	7.5	1.8	9.1
Cycle Q Clear(g_c), s	4.4	0.0	7.4	7.5	1.8	9.1
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	91	4023	4238	1269	184	164
V/C Ratio(X)	0.79	0.33	0.27	0.27	0.17	0.80
Avail Cap(c_a), veh/h	281	4023	4238	1269	534	475
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	0.0	5.5	5.5	44.8	48.1
Incr Delay (d2), s/veh	5.2	0.2	0.2	0.5	0.5	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.1	1.8	2.4	0.8	8.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.9	0.2	5.6	6.0	45.3	58.4
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1391	1479		162	
Approach Delay, s/veh		3.0	5.7		55.9	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	94.2		15.8	10.0	84.2
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	66.6		* 34	* 18	44.6
Max Q Clear Time (g_c+I1), s	2.0		11.1	6.4	9.5
Green Ext Time (p_c), s	23.0		0.6	0.0	14.7

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th 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)	339	745	62	11	669	99	14	8	7	121	16	565
Future Volume (veh/h)	339	745	62	11	669	99	14	8	7	121	16	565
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	404	887	74	13	796	118	17	10	8	144	19	673
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	302	2110	629	21	1142	168	50	291	233	117	671	554
Arrive On Green	0.17	0.42	0.42	0.02	0.52	0.52	0.01	0.31	0.31	0.07	0.37	0.37
Sat Flow, veh/h	1739	4985	1485	1739	4367	642	3374	926	741	1739	1826	1507
Grp Volume(v), veh/h	404	887	74	13	604	310	17	0	18	144	19	673
Grp Sat Flow(s),veh/h/ln	1739	1662	1485	1739	1662	1686	1687	0	1667	1739	1826	1507
Q Serve(g_s), s	19.1	13.7	3.3	0.8	15.0	15.2	0.5	0.0	0.8	7.4	0.7	40.4
Cycle Q Clear(g_c), s	19.1	13.7	3.3	0.8	15.0	15.2	0.5	0.0	0.8	7.4	0.7	40.4
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	302	2110	629	21	869	441	50	0	525	117	671	554
V/C Ratio(X)	1.34	0.42	0.12	0.63	0.69	0.70	0.34	0.00	0.03	1.23	0.03	1.22
Avail Cap(c_a), veh/h	302	2110	629	63	869	441	123	0	561	117	671	554
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	22.2	19.2	53.4	22.9	23.0	53.7	0.0	26.1	51.3	22.3	34.8
Incr Delay (d2), s/veh	172.9	0.6	0.4	10.8	4.5	8.9	1.5	0.0	0.0	157.9	0.0	112.9
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	22.4	5.2	1.2	0.4	4.7	5.3	0.2	0.0	0.3	8.3	0.3	31.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	218.3	22.9	19.6	64.2	27.4	31.9	55.2	0.0	26.1	209.2	22.3	147.7
LnGrp LOS	F	C	B	E	C	C	E	A	C	F	C	F
Approach Vol, veh/h		1365			927			35			836	
Approach Delay, s/veh		80.5			29.4			40.2			155.4	
Approach LOS		F			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	53.0	5.8	45.7	23.3	35.2	11.6	39.9
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 4	* 42	* 4	40.4	* 19	* 26	* 7.4	37.0
Max Q Clear Time (g_c+I1), s	2.8	15.7	2.5	42.4	21.1	17.2	9.4	2.8
Green Ext Time (p_c), s	0.0	12.9	0.0	0.0	0.0	5.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	84.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



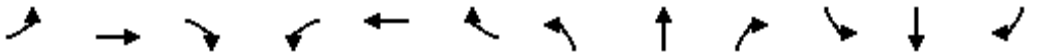
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	762	58	5	751	2	15	0	2	2	1	16
Future Volume (veh/h)	57	762	58	5	751	2	15	0	2	2	1	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		0.95	0.98		0.95
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	66	837	64	5	825	2	16	0	2	2	1	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	84	3617	1087	9	3402	1022	230	0	198	246	11	190
Arrive On Green	0.10	1.00	1.00	0.01	1.00	1.00	0.13	0.00	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1739	4985	1498	1739	4985	1497	1332	0	1470	1351	78	1407
Grp Volume(v), veh/h	66	837	64	5	825	2	16	0	2	2	0	19
Grp Sat Flow(s),veh/h/ln	1739	1662	1498	1739	1662	1497	1332	0	1470	1351	0	1486
Q Serve(g_s), s	4.1	0.0	0.0	0.3	0.0	0.0	1.2	0.0	0.1	0.1	0.0	1.2
Cycle Q Clear(g_c), s	4.1	0.0	0.0	0.3	0.0	0.0	2.4	0.0	0.1	0.3	0.0	1.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.95
Lane Grp Cap(c), veh/h	84	3617	1087	9	3402	1022	230	0	198	246	0	200
V/C Ratio(X)	0.79	0.23	0.06	0.56	0.24	0.00	0.07	0.00	0.01	0.01	0.00	0.09
Avail Cap(c_a), veh/h	234	3617	1087	107	3402	1022	559	0	561	580	0	567
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.1	0.0	0.0	54.3	0.0	0.0	42.8	0.0	41.2	41.4	0.0	41.7
Incr Delay (d2), s/veh	5.6	0.1	0.1	18.4	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	0.0	0.2	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	0.1	0.1	72.8	0.2	0.0	42.9	0.0	41.3	41.4	0.0	41.9
LnGrp LOS	D	A	A	E	A	A	D	A	D	D	A	D
Approach Vol, veh/h		967			832			18			21	
Approach Delay, s/veh		3.9			0.6			42.7			41.9	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	85.8		19.4	9.5	81.1		19.4				
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6				
Max Green Setting (Gmax), s	* 6.8	* 46		42.0	* 15	* 38		42.0				
Max Q Clear Time (g_c+I1), s	2.3	2.0		3.2	6.1	2.0		4.4				
Green Ext Time (p_c), s	0.0	13.1		0.1	0.0	11.5		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	3.2
HCM 6th LOS	A

Notes

* HCM 6th 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)	262	2190	65	199	1645	80	49	189	220	136	214	287
Future Volume (veh/h)	262	2190	65	199	1645	80	49	189	220	136	214	287
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	279	2330	69	212	1750	85	52	201	234	145	228	305
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	288	3799	112	152	3418	1027	66	430	487	149	517	425
Arrive On Green	0.17	0.76	0.76	0.09	0.69	0.69	0.04	0.24	0.24	0.09	0.28	0.28
Sat Flow, veh/h	1739	4971	146	1739	4985	1497	1739	1826	1495	1739	1826	1501
Grp Volume(v), veh/h	279	1554	845	212	1750	85	52	201	234	145	228	305
Grp Sat Flow(s),veh/h/ln	1739	1662	1794	1739	1662	1497	1739	1826	1495	1739	1826	1501
Q Serve(g_s), s	22.3	29.0	29.4	12.2	23.8	2.6	4.2	13.2	17.6	11.6	14.3	25.6
Cycle Q Clear(g_c), s	22.3	29.0	29.4	12.2	23.8	2.6	4.2	13.2	17.6	11.6	14.3	25.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	2540	1371	152	3418	1027	66	430	487	149	517	425
V/C Ratio(X)	0.97	0.61	0.62	1.40	0.51	0.08	0.78	0.47	0.48	0.97	0.44	0.72
Avail Cap(c_a), veh/h	288	2540	1371	152	3418	1027	120	430	487	149	517	425
HCM Platoon Ratio	1.00	1.00	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	0.59	0.59	0.59	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	7.3	7.4	63.9	10.7	7.3	66.8	45.9	38.1	63.8	41.1	45.1
Incr Delay (d2), s/veh	44.1	1.1	2.1	214.4	0.6	0.2	4.4	2.1	2.0	65.0	2.7	10.0
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	13.0	8.3	9.4	14.3	7.8	0.9	1.9	6.3	6.7	7.8	6.8	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.1	8.4	9.4	278.3	11.2	7.5	71.2	48.1	40.0	128.8	43.8	55.1
LnGrp LOS	F	A	A	F	B	A	E	D	D	F	D	E
Approach Vol, veh/h		2678			2047			487			678	
Approach Delay, s/veh		18.5			38.7			46.7			67.1	
Approach LOS		B			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	114.5	9.5	45.1	27.4	103.5	16.2	38.4
Change Period (Y+Rc), s	* 4.2	* 6.2	* 4.2	5.4	* 4.2	6.2	* 4.2	* 5.4
Max Green Setting (Gmax), s	* 12	* 64	* 9.7	34.9	* 23	52.2	* 12	* 33
Max Q Clear Time (g_c+I1), s	14.2	31.4	6.2	27.6	24.3	25.8	13.6	19.6
Green Ext Time (p_c), s	0.0	31.0	0.0	1.4	0.0	22.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	33.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	28	22	41	11	28	12	395	46	34	381	41
Future Volume (veh/h)	20	28	22	41	11	28	12	395	46	34	381	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	1.00		0.95	1.00		0.95
Parking Bus, Adj	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	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	22	30	24	45	12	30	13	429	50	37	414	45
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	253	336	243	417	119	243	14	550	444	45	503	55
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.01	0.30	0.30	0.03	0.31	0.31
Sat Flow, veh/h	387	684	495	698	243	495	1739	1826	1473	1739	1609	175
Grp Volume(v), veh/h	76	0	0	87	0	0	13	429	50	37	0	459
Grp Sat Flow(s),veh/h/ln	1566	0	0	1436	0	0	1739	1826	1473	1739	0	1784
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.6	16.0	1.8	1.6	0.0	17.7
Cycle Q Clear(g_c), s	1.8	0.0	0.0	2.1	0.0	0.0	0.6	16.0	1.8	1.6	0.0	17.7
Prop In Lane	0.29		0.32	0.52		0.34	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	832	0	0	779	0	0	14	550	444	45	0	557
V/C Ratio(X)	0.09	0.00	0.00	0.11	0.00	0.00	0.92	0.78	0.11	0.83	0.00	0.82
Avail Cap(c_a), veh/h	832	0	0	779	0	0	397	785	633	418	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	0.0	0.0	10.1	0.0	0.0	36.9	23.8	18.8	36.1	0.0	23.7
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	76.1	5.6	0.2	13.1	0.0	6.8
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	0.7	0.0	0.0	0.8	0.0	0.0	0.5	7.2	0.6	0.8	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	0.0	0.0	10.4	0.0	0.0	113.0	29.4	19.0	49.2	0.0	30.5
LnGrp LOS	B	A	A	B	A	A	F	C	B	D	A	C
Approach Vol, veh/h		76			87			492			496	
Approach Delay, s/veh		10.3			10.4			30.5			31.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	41.6	4.6	28.3	41.6	5.4	27.4
Change Period (Y+Rc), s	5.0	4.0	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	36.6	17.0	32.4	36.6	17.9	32.0
Max Q Clear Time (g_c+I1), s	3.8	2.6	19.7	4.1	3.6	18.0
Green Ext Time (p_c), s	0.4	0.0	3.5	0.5	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	185	0	1	434	0	13
Future Vol, veh/h	185	0	1	434	0	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	201	0	1	472	0	14
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9	12.2	7.9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	0%	100%	100%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	185	435
LT Vol	0	0	1
Through Vol	0	185	434
RT Vol	13	0	0
Lane Flow Rate	14	201	473
Geometry Grp	1	1	1
Degree of Util (X)	0.019	0.25	0.547
Departure Headway (Hd)	4.832	4.48	4.161
Convergence, Y/N	Yes	Yes	Yes
Cap	744	806	856
Service Time	2.842	2.483	2.233
HCM Lane V/C Ratio	0.019	0.249	0.553
HCM Control Delay	7.9	9	12.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.1	1	3.4

Intersection	
Int Delay, s/veh	114.4

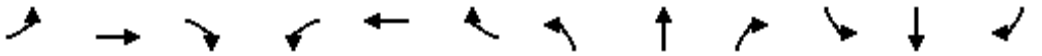
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	159	348	400	342	87
Future Vol, veh/h	39	159	348	400	342	87
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	109	443	359	1113	952	90

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2292	541	1052	0	-	0
Stage 1	1007	-	-	-	-	-
Stage 2	1285	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	~ 32	478	640	-	-	-
Stage 1	307	-	-	-	-	-
Stage 2	218	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 14	469	634	-	-	-
Mov Cap-2 Maneuver	~ 81	-	-	-	-	-
Stage 1	132	-	-	-	-	-
Stage 2	216	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 624.5	4.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	634	-	241	-	-
HCM Lane V/C Ratio	0.566	-	2.287	-	-
HCM Control Delay (s)	17.8	-	$ 624.5	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	3.5	-	43.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1010	551	694	984	0	0	0	0	728	0	570
Future Volume (veh/h)	0	1010	551	694	984	0	0	0	0	728	0	570
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00				1.00		0.97
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1041	568	715	1014	0				751	0	588
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	5	5	5	5	0				5	5	5
Cap, veh/h	0	1492	679	696	2422	0				1135	0	491
Arrive On Green	0.00	0.45	0.45	0.41	1.00	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	3487	1511	3374	3561	0				3478	0	1504
Grp Volume(v), veh/h	0	1041	568	715	1014	0				751	0	588
Grp Sat Flow(s),veh/h/ln	0	1662	1511	1687	1735	0				1739	0	1504
Q Serve(g_s), s	0.0	27.6	36.5	22.7	0.0	0.0				20.4	0.0	35.9
Cycle Q Clear(g_c), s	0.0	27.6	36.5	22.7	0.0	0.0				20.4	0.0	35.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1492	679	696	2422	0				1135	0	491
V/C Ratio(X)	0.00	0.70	0.84	1.03	0.42	0.00				0.66	0.00	1.20
Avail Cap(c_a), veh/h	0	1492	679	696	2422	0				1135	0	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.19	0.19	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.3	26.7	32.3	0.0	0.0				31.8	0.0	37.1
Incr Delay (d2), s/veh	0.0	2.7	11.7	22.3	0.1	0.0				1.4	0.0	107.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.8	14.5	8.8	0.0	0.0				8.5	0.0	27.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.0	38.5	54.6	0.1	0.0				33.3	0.0	144.3
LnGrp LOS	A	C	D	F	A	A				C	A	F
Approach Vol, veh/h		1609			1729						1339	
Approach Delay, s/veh		31.1			22.7						82.1	
Approach LOS		C			C						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.4	55.6		41.0		83.0
Change Period (Y+Rc), s	* 4.7	* 5.8		5.1		5.8
Max Green Setting (Gmax), s	* 23	* 36		35.9		63.2
Max Q Clear Time (g_c+I1), s	24.7	38.5		37.9		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		5.2

Intersection Summary	
HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th 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)	497	1251	0	0	1197	863	451	4	609	0	0	0
Future Volume (veh/h)	497	1251	0	0	1197	863	451	4	609	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.95	1.00		0.97			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1826	1826	0	0	1826	1826	1826	1826	1826			
Adj Flow Rate, veh/h	512	1290	0	0	1234	890	465	4	628			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	5	5	0	0	5	5	5	5	5			
Cap, veh/h	527	2159	0	0	1379	715	494	4	757			
Arrive On Green	0.61	1.00	0.00	0.00	0.55	0.55	0.29	0.29	0.29			
Sat Flow, veh/h	1739	3561	0	0	5149	2585	1725	15	2642			
Grp Volume(v), veh/h	512	1290	0	0	1234	890	469	0	628			
Grp Sat Flow(s),veh/h/ln	1739	1735	0	0	1662	1292	1740	0	1321			
Q Serve(g_s), s	31.1	0.0	0.0	0.0	24.1	30.4	29.0	0.0	24.5			
Cycle Q Clear(g_c), s	31.1	0.0	0.0	0.0	24.1	30.4	29.0	0.0	24.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	527	2159	0	0	1379	715	499	0	757			
V/C Ratio(X)	0.97	0.60	0.00	0.00	0.90	1.24	0.94	0.00	0.83			
Avail Cap(c_a), veh/h	542	2159	0	0	1379	715	505	0	766			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.22	0.22	0.00	0.00	0.84	0.84	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.2	0.0	0.0	0.0	23.2	24.6	38.3	0.0	36.7			
Incr Delay (d2), s/veh	12.1	0.3	0.0	0.0	8.0	120.1	25.9	0.0	7.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.4	0.1	0.0	0.0	6.6	17.1	15.4	0.0	8.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.3	0.0	0.0	31.2	144.7	64.2	0.0	44.3			
LnGrp LOS	C	A	A	A	C	F	E	A	D			
Approach Vol, veh/h		1802			2124			1097				
Approach Delay, s/veh		9.7			78.7			52.8				
Approach LOS		A			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		74.3			38.0	36.3		36.6				
Change Period (Y+Rc), s		* 5.8			* 4.7	5.8		5.1				
Max Green Setting (Gmax), s		* 68			* 34	28.2		31.9				
Max Q Clear Time (g_c+I1), s		2.0			33.1	32.4		31.0				
Green Ext Time (p_c), s		7.4			0.3	0.0		0.6				

Intersection Summary	
HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



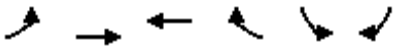
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1432	321	73	1606	308	97
Future Volume (veh/h)	1432	321	73	1606	308	97
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.97	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	1523	341	78	1709	426	134
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	3279	1225	139	3716	525	241
Arrive On Green	1.00	1.00	0.05	0.99	0.16	0.16
Sat Flow, veh/h	5149	1496	3374	5149	3374	1547
Grp Volume(v), veh/h	1523	341	78	1709	426	134
Grp Sat Flow(s),veh/h/ln	1662	1496	1687	1662	1687	1547
Q Serve(g_s), s	0.0	0.0	2.5	0.6	13.4	8.8
Cycle Q Clear(g_c), s	0.0	0.0	2.5	0.6	13.4	8.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3279	1225	139	3716	525	241
V/C Ratio(X)	0.46	0.28	0.56	0.46	0.81	0.56
Avail Cap(c_a), veh/h	3279	1225	304	3716	825	378
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	51.0	0.1	44.9	42.9
Incr Delay (d2), s/veh	0.3	0.4	3.3	0.4	3.4	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	1.1	0.2	5.9	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.4	54.3	0.5	48.3	45.0
LnGrp LOS	A	A	D	A	D	D
Approach Vol, veh/h	1864			1787	560	
Approach Delay, s/veh	0.3			2.9	47.5	
Approach LOS	A			A	D	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.6	78.2			87.8	22.2
Change Period (Y+Rc), s	5.1	* 5.8			5.8	5.1
Max Green Setting (Gmax), s	9.3	* 58			72.2	26.9
Max Q Clear Time (g_c+I1), s	4.5	2.0			2.6	15.4
Green Ext Time (p_c), s	0.1	9.9			10.8	1.7

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	101	1418	1583	36	54	81
Future Volume (veh/h)	101	1418	1583	36	54	81
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	111	1558	1740	40	59	89
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	136	4159	5408	124	136	121
Arrive On Green	0.16	1.00	0.72	0.72	0.08	0.08
Sat Flow, veh/h	1739	5149	7878	173	1739	1547
Grp Volume(v), veh/h	111	1558	1366	414	59	89
Grp Sat Flow(s),veh/h/ln	1739	1662	1479	1788	1739	1547
Q Serve(g_s), s	6.8	0.0	9.3	9.3	3.6	6.2
Cycle Q Clear(g_c), s	6.8	0.0	9.3	9.3	3.6	6.2
Prop In Lane	1.00			0.10	1.00	1.00
Lane Grp Cap(c), veh/h	136	4159	4248	1284	136	121
V/C Ratio(X)	0.82	0.37	0.32	0.32	0.43	0.73
Avail Cap(c_a), veh/h	313	4159	4248	1284	487	433
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	0.0	5.7	5.7	48.4	49.6
Incr Delay (d2), s/veh	3.9	0.2	0.2	0.7	2.6	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.1	2.3	3.0	1.7	5.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.6	0.2	5.9	6.3	51.0	59.4
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1669	1780		148	
Approach Delay, s/veh		3.5	6.0		56.0	
Approach LOS		A	A		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	97.2		12.8	12.8	84.4
Change Period (Y+Rc), s	5.4		* 4.2	* 4.2	5.4
Max Green Setting (Gmax), s	69.6		* 31	* 20	45.6
Max Q Clear Time (g_c+I1), s	2.0		8.2	8.8	11.3
Green Ext Time (p_c), s	30.8		0.5	0.1	18.4

Intersection Summary	
HCM 6th Ctrl Delay	6.9
HCM 6th LOS	A

Notes

* HCM 6th 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)	616	783	75	16	955	130	92	19	19	110	6	600
Future Volume (veh/h)	616	783	75	16	955	130	92	19	19	110	6	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	642	816	78	17	995	135	96	20	20	115	6	625
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	329	2079	619	26	1072	145	148	275	275	92	624	515
Arrive On Green	0.19	0.42	0.42	0.03	0.49	0.49	0.04	0.33	0.33	0.05	0.34	0.34
Sat Flow, veh/h	1739	4985	1485	1739	4419	598	3374	825	825	1739	1826	1506
Grp Volume(v), veh/h	642	816	78	17	748	382	96	0	40	115	6	625
Grp Sat Flow(s),veh/h/ln	1739	1662	1485	1739	1662	1694	1687	0	1650	1739	1826	1506
Q Serve(g_s), s	20.8	12.6	3.6	1.1	23.2	23.3	3.1	0.0	1.8	5.8	0.2	37.6
Cycle Q Clear(g_c), s	20.8	12.6	3.6	1.1	23.2	23.3	3.1	0.0	1.8	5.8	0.2	37.6
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	329	2079	619	26	806	411	148	0	549	92	624	515
V/C Ratio(X)	1.95	0.39	0.13	0.66	0.93	0.93	0.65	0.00	0.07	1.25	0.01	1.21
Avail Cap(c_a), veh/h	329	2079	619	84	806	411	159	0	555	92	624	515
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.6	22.4	19.7	53.1	27.4	27.4	51.8	0.0	25.1	52.1	23.9	36.2
Incr Delay (d2), s/veh	439.5	0.6	0.4	9.9	17.6	28.9	5.9	0.0	0.0	177.0	0.0	113.4
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	48.8	4.7	1.3	0.5	7.8	9.2	1.4	0.0	0.7	7.0	0.1	29.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	484.1	22.9	20.2	63.0	45.0	56.4	57.6	0.0	25.1	229.1	23.9	149.6
LnGrp LOS	F	C	C	E	D	E	E	A	C	F	C	F
Approach Vol, veh/h		1536			1147			136			746	
Approach Delay, s/veh		215.6			49.0			48.1			160.8	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	52.3	9.0	42.9	25.0	33.1	10.0	41.9
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.3	* 42	* 5.2	37.6	* 21	* 26	* 5.8	37.0
Max Q Clear Time (g_c+I1), s	3.1	14.6	5.1	39.6	22.8	25.3	7.8	3.8
Green Ext Time (p_c), s	0.0	12.3	0.0	0.0	0.0	0.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	144.1
HCM 6th LOS	F

Notes

* HCM 6th 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)	82	776	40	10	1006	9	45	1	15	8	1	76
Future Volume (veh/h)	82	776	40	10	1006	9	45	1	15	8	1	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	89	843	43	11	1093	10	49	1	16	9	1	83
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	111	3374	1013	18	3108	932	229	16	252	292	3	262
Arrive On Green	0.13	1.00	1.00	0.00	0.21	0.21	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1739	4985	1497	1739	4985	1495	1266	88	1413	1341	18	1470
Grp Volume(v), veh/h	89	843	43	11	1093	10	49	0	17	9	0	84
Grp Sat Flow(s),veh/h/ln	1739	1662	1497	1739	1662	1495	1266	0	1501	1341	0	1488
Q Serve(g_s), s	5.5	0.0	0.0	0.7	20.7	0.6	3.9	0.0	1.0	0.6	0.0	5.4
Cycle Q Clear(g_c), s	5.5	0.0	0.0	0.7	20.7	0.6	9.3	0.0	1.0	1.7	0.0	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	1.00		0.99
Lane Grp Cap(c), veh/h	111	3374	1013	18	3108	932	229	0	267	292	0	265
V/C Ratio(X)	0.80	0.25	0.04	0.61	0.35	0.01	0.21	0.00	0.06	0.03	0.00	0.32
Avail Cap(c_a), veh/h	234	3374	1013	76	3108	932	487	0	573	565	0	568
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	0.0	54.6	24.6	16.7	43.4	0.0	37.6	38.3	0.0	39.4
Incr Delay (d2), s/veh	4.7	0.2	0.1	11.5	0.3	0.0	0.5	0.0	0.1	0.0	0.0	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	2.3	0.1	0.0	0.4	9.1	0.2	1.3	0.0	0.4	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	0.2	0.1	66.1	25.0	16.7	43.9	0.0	37.7	38.3	0.0	40.1
LnGrp LOS	D	A	A	E	C	B	D	A	D	D	A	D
Approach Vol, veh/h		975			1114			66			93	
Approach Delay, s/veh		4.9			25.3			42.3			39.9	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	80.5		24.2	11.2	74.6		24.2
Change Period (Y+Rc), s	* 4.2	* 6		4.6	* 4.2	* 6		4.6
Max Green Setting (Gmax), s	* 4.8	* 48		42.0	* 15	* 38		42.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		7.4	7.5	22.7		11.3
Green Ext Time (p_c), s	0.0	13.1		0.5	0.0	9.8		0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX F

QUEUE CALCULATION SHEETS AND EXCERPTS FROM THE AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREET MANUAL ON SIGHT DISTANCE CALCULATIONS

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	SB	SB
Directions Served	LR	L	T	T	TR
Maximum Queue (ft)	26	21	24	14	44
Average Queue (ft)	1	2	1	1	3
95th Queue (ft)	12	14	13	10	21
Link Distance (ft)	326		483	818	818
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		50			
Storage Blk Time (%)		0	0		
Queuing Penalty (veh)		0	0		

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (ft)	254	315	222	216	131	80	228	315	425	17	40	38
Average Queue (ft)	179	98	97	96	24	12	90	113	184	1	10	9
95th Queue (ft)	265	232	173	180	73	49	186	239	362	9	30	28
Link Distance (ft)		764	764	764			863	863	863			305
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	230				150	210				125	125	
Storage Blk Time (%)	5	0		2	0		0					
Queuing Penalty (veh)	14	0		1	0		0					

Intersection: 9: Brandywine Ave & Main St

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	155	98	270
Average Queue (ft)	73	14	136
95th Queue (ft)	132	63	242
Link Distance (ft)		483	483
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	140		
Storage Blk Time (%)	3		
Queuing Penalty (veh)	0		

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	35	10	61	5	24	70
Average Queue (ft)	10	0	4	0	1	4
95th Queue (ft)	34	5	32	6	13	30
Link Distance (ft)	326		483	483	818	818
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		50				
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (ft)	254	460	285	237	175	74	349	486	586	114	136	103
Average Queue (ft)	202	177	122	127	34	12	162	213	294	21	68	20
95th Queue (ft)	292	386	209	207	103	47	315	423	535	77	125	61
Link Distance (ft)		764	764	764			863	863	863			304
Upstream Blk Time (%)									0			
Queuing Penalty (veh)									0			
Storage Bay Dist (ft)	230				150	210				125	125	
Storage Blk Time (%)	13			5	0	0	3			0	2	
Queuing Penalty (veh)	34			4	0	0	0			0	1	

Intersection: 9: Brandywine Ave & Main St

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	140	91	338
Average Queue (ft)	58	8	202
95th Queue (ft)	115	52	323
Link Distance (ft)		483	483
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	140		
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	120	72	146	17	55	68
Average Queue (ft)	50	31	14	1	5	8
95th Queue (ft)	95	62	78	12	26	39
Link Distance (ft)	326		483	483	818	818
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		2	1			
Queuing Penalty (veh)		6	0			

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (ft)	254	450	267	207	156	39	244	312	447	34	53	45
Average Queue (ft)	215	151	112	104	31	10	98	120	212	2	12	9
95th Queue (ft)	289	366	216	186	97	32	186	234	382	15	37	30
Link Distance (ft)		764	764	764			863	863	863			305
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	230				150	210				125	125	
Storage Blk Time (%)	15	0		3	0		1					
Queuing Penalty (veh)	38	0		2	0		0					

Intersection: 9: Brandywine Ave & Main St

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	155	80	326
Average Queue (ft)	73	15	148
95th Queue (ft)	137	58	255
Link Distance (ft)		483	483
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	140		
Storage Blk Time (%)	3		
Queuing Penalty (veh)	0		

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	328	64	231	73	61	99
Average Queue (ft)	253	28	38	5	8	10
95th Queue (ft)	340	58	145	42	35	53
Link Distance (ft)	326		483	483	818	818
Upstream Blk Time (%)	7					
Queuing Penalty (veh)	8					
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		2	2			
Queuing Penalty (veh)		10	1			

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	B26	B26	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	T	T	L	T	T	TR	L
Maximum Queue (ft)	255	596	326	239	137	26	16	210	549	699	742	129
Average Queue (ft)	217	251	130	129	28	2	1	22	221	354	443	28
95th Queue (ft)	297	594	261	205	83	27	12	98	435	672	735	91
Link Distance (ft)		764	764	764		136	136		863	863	863	
Upstream Blk Time (%)		1				0				0	0	
Queuing Penalty (veh)		4				1				0	1	
Storage Bay Dist (ft)	230				150			210				125
Storage Blk Time (%)	23	0		5	0				10			0
Queuing Penalty (veh)	59	0		3	0				2			0

Intersection: 9: Brandywine Ave & Main St

Movement	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R
Maximum Queue (ft)	132	129	151	117	387
Average Queue (ft)	72	25	74	9	205
95th Queue (ft)	132	81	138	81	360
Link Distance (ft)		304		483	483
Upstream Blk Time (%)					0
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	125		140		
Storage Blk Time (%)	5	0	3		
Queuing Penalty (veh)	2	0	0		

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	332	73	145	48	59	50
Average Queue (ft)	259	37	17	2	6	6
95th Queue (ft)	323	67	80	25	30	32
Link Distance (ft)	326		483	483	818	818
Upstream Blk Time (%)	3					
Queuing Penalty (veh)	6					
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		3	0			
Queuing Penalty (veh)		8	0			

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	R	L	T	T	TR	L	L	TR
Maximum Queue (ft)	254	484	374	226	158	78	282	402	520	11	50	30
Average Queue (ft)	223	206	124	110	25	9	105	138	246	1	11	8
95th Queue (ft)	289	451	265	194	82	44	219	305	455	7	36	26
Link Distance (ft)		764	764	764			863	863	863			305
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	230				150	210				125	125	
Storage Blk Time (%)	21	0		4	0		1					
Queuing Penalty (veh)	51	0		2	0		0					

Intersection: 9: Brandywine Ave & Main St

Movement	SB	SB	SB
Directions Served	L	T	R
Maximum Queue (ft)	154	88	326
Average Queue (ft)	82	14	156
95th Queue (ft)	143	68	266
Link Distance (ft)		483	483
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	140		
Storage Blk Time (%)	3		
Queuing Penalty (veh)	1		

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	NB	NB	NB	SB	SB
Directions Served	LR	L	T	T	T	TR
Maximum Queue (ft)	340	75	429	407	68	193
Average Queue (ft)	329	68	207	91	9	23
95th Queue (ft)	343	85	421	283	43	103
Link Distance (ft)	326		483	483	818	818
Upstream Blk Time (%)	86		0	0		
Queuing Penalty (veh)	169		0	0		
Storage Bay Dist (ft)		50				
Storage Blk Time (%)		38	3			
Queuing Penalty (veh)		205	9			

Intersection: 9: Brandywine Ave & Main St

Movement	EB	EB	EB	EB	EB	B26	B26	WB	WB	WB	WB	NB
Directions Served	L	T	T	T	R	T	T	L	T	T	TR	L
Maximum Queue (ft)	255	870	730	432	175	226	107	145	874	900	890	132
Average Queue (ft)	251	699	178	137	31	99	6	18	453	678	755	23
95th Queue (ft)	277	1083	503	318	95	259	51	77	902	1080	1050	83
Link Distance (ft)		764	764	764		136	136		863	863	863	
Upstream Blk Time (%)		37	0			19	0		1	7	25	
Queuing Penalty (veh)		183	0			93	0		2	26	93	
Storage Bay Dist (ft)	230				150			210				125
Storage Blk Time (%)	64	1		3	0				10			0
Queuing Penalty (veh)	167	5		2	0				2			0

Intersection: 9: Brandywine Ave & Main St

Movement	NB	NB	SB	SB	SB
Directions Served	L	TR	L	T	R
Maximum Queue (ft)	146	148	149	162	350
Average Queue (ft)	68	26	64	9	160
95th Queue (ft)	130	84	125	78	292
Link Distance (ft)		304		483	483
Upstream Blk Time (%)					0
Queuing Penalty (veh)					1
Storage Bay Dist (ft)	125		140		
Storage Blk Time (%)	5	0	3		
Queuing Penalty (veh)	2	0	0		

in Table 9-6. The length of the sight triangle leg to the right needed for a left-turn maneuver by a passenger car onto the major road, shown as dimension *b* in the drawing on the right in Figure 9-17, is based on a time gap of 7.5 s. A sight triangle to the left is also needed for the left-turning vehicle to cross the near lane(s) of the major road on which traffic approaches from the left; the length of the leg of this sight triangle along the major road is shown as dimension *b* in the drawing to the left in Figure 9-17. This sight triangle to the left is normally provided by Case B2 for the right-turn maneuver (see below). In the rare case where a right-turn maneuver is not permitted onto a two-way street, Case B2 should still be provided so that sight distance is available for crossing the near lane(s) in a left-turn maneuver. In applying Table 9-6, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered.

Table 9-6 includes appropriate adjustments to the gap times for the number of lanes on the major road and for the approach grade of the minor road. The adjustment for the grade of the minor-road approach is needed only if the rear wheels of the design vehicle would be on an upgrade that exceeds 3 percent when the vehicle is at the stop line of the minor-road approach.

Table 9-6. Time Gap for Case B1, Left Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	7.5
Single-unit truck	9.5
Combination truck	11.5

Note: Time gaps are for a stopped vehicle to turn left onto a two-lane highway with no median and with minor-road approach grades of 3 percent or less. The time gaps are applicable to determining sight distance to the right in left-turn maneuvers. The table values should be adjusted as follows:

For multilane roadways or medians—For left turns onto two-way roadways with more than two lanes, including turn lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane, from the left, in excess of one, to be crossed by the turning vehicle. Median widths should be converted to an equivalent number of lanes in applying the 0.5 and 0.7 s criteria presented above; for example, an 18-ft [5.5-m] median is equivalent to one and a half lanes, and would require an additional 0.75 s for a passenger to cross and an additional 1.05 s for a truck to cross.

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.2 s for each percent grade by which the approach grade exceeds zero percent.

The intersection sight distance along the major road (distance *b* in Figure 9-17) is determined by:

U.S. Customary	Metric
$ISD = 1.47\ V_{major}\ t_g$	$ISD = 0.278\ V_{major}\ t_g$ (9-1)
where:	where:
ISD = intersection sight distance (length of the leg of sight triangle along the major road) (ft)	ISD = intersection sight distance (length of the leg of sight triangle along the major road) (m)
V_{major} = design speed of major road (mph)	V_{major} = design speed of major road (km/h)
t_g = time gap for minor road vehicle to enter the major road (s)	t_g = time gap for minor road vehicle to enter the major road (s)

For example, a passenger car turning left onto a two-lane major road should be provided sight distance equivalent to a time gap of 7.5 s in major-road traffic. If the design speed of the major road is 60 mph [100 km/h], this corresponds to a sight distance of 1.47(60)(7.5) = 661.5 or 665 ft [0.278(100)(7.5) = 208.5 or 210 m], rounded for design.

A passenger car turning left onto a four-lane undivided roadway will need to cross two near lanes, rather than one. This increases the recommended gap in major-road traffic from 7.5 to 8.0 s. The corresponding value of sight distance for this example would be 706 ft [223 m]. If the minor-road approach to such an intersection is located on a 4 percent upgrade, then the time gap selected for intersection sight distance design for left turns should be increased from 8.0 to 8.8 s, equivalent to an increase of 0.2 s for each percent grade.

The design values for intersection sight distance for passenger cars are shown in Table 9-7.

No adjustment of the recommended sight distance values for the major-road grade is generally needed because both the major- and minor-road vehicle will be on the same grade when departing from the intersection. However, if the minor-road design vehicle is a heavy truck and the intersection is located near a sag vertical curve with grades over 3 percent, then an adjustment to extend the recommended sight distance based on the major-road grade should be considered.

Table 9-7. Design Intersection Sight Distance—Case B1, Left Turn from Stop

U.S. Customary				Metric			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars		Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)			Calculated (m)	Design (m)
15	80	165.4	170	20	20	41.7	45
20	115	220.5	225	30	35	62.6	65
25	155	275.6	280	40	50	83.4	85
30	200	330.8	335	50	65	104.3	105
35	250	385.9	390	60	85	125.1	130
40	305	441.0	445	70	105	146.0	150
45	360	496.1	500	80	130	166.8	170
50	425	551.3	555	90	160	187.7	190
55	495	606.4	610	100	185	208.5	210
60	570	661.5	665	110	220	229.4	230
65	645	716.6	720	120	250	250.2	255
70	730	771.8	775	130	285	271.1	275
75	820	826.9	830				
80	910	882.0	885				

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

Sight distance design for left turns at intersections on divided roads or streets should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for an intersection on a divided road or street is larger than a passenger car, then sight distance for left turns should be checked for that selected design vehicle and for a passenger car as well. If the median on a divided road or street is wide enough to store the design vehicle with a clearance to the through lanes of approximately 3 ft [1 m] at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (Case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of Case B3.

If the design vehicle can be stored in the median with adequate clearance to the through lanes, a departure sight triangle to the right for left turns should be provided for that design vehicle turning left from the median roadway. Where the median is not wide enough to store the design vehicle, a departure sight triangle should be provided for that design vehicle to turn left from the minor-road approach.

The median width should be considered in determining the number of lanes to be crossed. The median width should be converted to equivalent lanes. For example, an 18-ft [5.5-m] median should be considered as one and a half additional lanes to be crossed in applying the multilane roadway adjustment for time gaps in Table 9-6. Furthermore, a departure sight triangle for left turns from the median roadway should be provided for the largest design vehicle that can be stored on the median roadway with adequate clearance to the through lanes.

If the sight distance along the major road shown in Figure 9-17, including any appropriate adjustments, cannot be provided, then consideration should be given to installing regulatory speed signing on the major-road approaches.

For left-turns onto a one-way roadway, time gaps based on Case B2 (see below) can be applied in determining the sight triangle needed for looking at vehicles approaching from the right.

9.5.3.2.2 Case B2—Right Turn from the Minor Road

A departure sight triangle for traffic approaching from the left like that shown in Figure 9-17 should be provided for right turns from the minor road onto the major road. The intersection sight distance for right turns is determined in the same manner as for Case B1, except that the time gaps (t_g) in Table 9-6 should be adjusted. Field observations indicate that, in making right turns, drivers generally accept gaps that are slightly shorter than those accepted in making left turns (*21*). The time gaps in Table 9-6 can be decreased by 1.0 s for right-turn maneuvers without undue interference with major-road traffic. These adjusted time gaps for the right turn from the minor road are shown in Table 9-8. Design values based on these adjusted time gaps are shown in Table 9-9 for passenger cars. This 1.0-s reduction in the time gap applies only where turns are limited to right turns; where left turns are also permitted, the time gaps for Case B1 from Table 9-5 apply. When the minimum recommended sight distance for a right-turn maneuver cannot be provided, even with the reduction of 1.0 s from the values in Table 9-6, consideration should be given to installing regulatory speed signing or other traffic control devices on the major-road approaches.

Table 9-8. Time Gap for Case B2—Right Turn from Stop

Design Vehicle	Time Gap (t_g)(s) at Design Speed of Major Road
Passenger car	6.5
Single-unit truck	8.5
Combination truck	10.5

Note: Time gaps are for a stopped vehicle to turn right onto or to cross a two-lane roadway with no median and with minor-road approach grades of 3 percent or less. The table values should be adjusted as follows:

For minor-road approach grades—If the approach grade is an upgrade that exceeds 3 percent, add 0.1 s for each percent grade by which the approach grade exceeds zero percent.

Table 9-9. Design Intersection Sight Distance—Case B2, Right Turn from Stop

U.S. Customary			
Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance for Passenger Cars	
		Calculated (ft)	Design (ft)
15	80	143.3	145
20	115	191.1	195
25	155	238.9	240
30	200	286.7	290
35	250	334.4	335
40	305	382.2	385
45	360	430.0	430
50	425	477.8	480
55	495	525.5	530
60	570	573.3	575
65	645	621.1	625
70	730	668.9	670
75	820	716.6	720
80	910	764.4	765

Metric			
Design Speed (km/h)	Stopping Sight Distance (m)	Intersection Sight Distance for Passenger Cars	
		Calculated (m)	Design (m)
20	20	36.1	40
30	35	54.2	55
40	50	72.3	75
50	65	90.4	95
60	85	108.4	110
70	105	126.5	130
80	130	144.6	145
90	160	162.6	165
100	185	180.7	185
110	220	198.8	200
120	250	216.8	220
130	285	234.9	235

Note: Intersection sight distance shown is for a stopped passenger car to turn right onto or to cross a two-lane roadway with no median and with grades of 3 percent or less. For other conditions, the time gap should be adjusted and the sight distance recalculated.

9.5.3.2.3 Case B3—Crossing Maneuver from the Minor Road

In most cases, the departure sight triangles for left and right turns onto the major road, as described for Cases B1 and B2, will also provide adequate sight distance for minor-road vehicles to cross the major road. However, in the following situations, it is advisable to check the availability of sight distance for crossing maneuvers:

- where left or right turns or both are not permitted from a particular approach and the crossing maneuver is the only legal maneuver;
- where the crossing vehicle would cross the equivalent width of more than six lanes; or
- where substantial volumes of heavy vehicles cross the roadway and steep grades that might slow the vehicle while its back portion is still in the intersection are present on the departure roadway on the far side of the intersection.

The equation for intersection sight distance in Case B1 (see Equation 9-1) is used again for the crossing maneuver except that time gaps (t_g) are the same as those for the Right Turn from Stop maneuver, which presents time gaps and appropriate adjustment factors to determine the intersection sight distance along the major road to accommodate crossing maneuvers. At divid-


Mendocino Dr
Timber St
Oleander Ave
Mercury Dumpsters
Fabricas de Calzado Andrea SA de CV
Shoe store
Tecnico Corporation
Juiced Bikes
Curbell Plastics, Inc
Tarata Ct
Ocala Ave
Transpere
Jump Around Now Trampoline &...
Auto Park Pl
Enterprise
Tesota Ct
Surgical Specialties Corporation
Surgical supply store
Brandywine Ave
540'
592'
Del Amo Motorsports of South Bay
Motorcycle dealer
Mossy Nissan Chula Vista
Nissan dealer
Crash Champions Collision Repair (Ford...
Jabil
Tanbark St
Mossy Nissan Chula Vista Service
Auto parts store
Auto Park Ave
Main St
Main St
Main St
Main St
Main St
Main Ct
Auto Park Dr
Auto Park Dr
Brandywine Ave
Toyota Chula Vista
Toyota dealer
Chula Vista Ford
Ford dealer
Chula Vista Honda
Car dealer

ON SHINOHARA LANE LOOKING NORTH



ON SHINOHARA LANE LOOKING SOUTH



APPENDIX G

BUS ROUTE MAP AND SCHEDULE

ONE-WAY FARES / *Tarifas Sencillas*

Exact fare, please / *Favor de pagar la cantidad exacta*

Adult / *Adulto*	**$2.50**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$1.25**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$2.50**

DAY PASS (Regional) / *Pase diario (Regional)*

Adult / *Adulto*	**$6.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$3.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$3.00**

MONTHLY PASSES / *Pases mensual*

Adult / *Adulto*	**$72.00**
Senior/Disabled/Medicare* *Personas Mayores/con Discapacidades/Medicare**	**$23.00**
Youth (ages 6-18)* *Jóvenes (edades 6-18)**	**$23.00**

*Proof of eligibility required. Senior Eligibility: Age 65+ or born on or before September 1, 1959.
**Se requiere verificación de elegibilidad. Elegibilidad para Personas Mayores: Edad 65+ o nacido en o antes del 1 de septiembre, 1959.*

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Effective SEPTEMBER 1, 2019

704

E Street Transit Center – Palomar St. Transit Center

via Naples St. / Sharp Medical Center / Orange Av.

DESTINATIONS
- Chula Vista Library
- Civic Center
- Memorial Park
- Sharp CV Medical Center
- South County Regional Center
- Veterans Home

TROLLEY CONNECTIONS
- E St.
- Palomar St.

09/19

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Route 704 – Monday through Friday / *lunes a viernes*

E St. Transit Center ➡ Sharp Medical Center ➡ Palomar St. Transit Center

Ⓐ E St. Transit Center **DEPART**	Ⓑ 3rd Av. & J St.	Ⓒ Naples St. & Hilltop Dr.	Ⓓ Sharp Chula Vista Medical Center	Ⓔ Melrose Av. & Main St.	Ⓕ Orange Av. & 3rd Av.	Ⓖ Palomar St. Transit Center **ARRIVE**
—	—	—	—	5:29a	5:38a	5:45a
—	—	—	6:02a	6:12	6:21	6:28
6:03a	6:14a	6:21a	6:33	6:43	6:52	6:59
6:33	6:45	6:53	7:06	7:17	7:27	7:34
7:03	7:15	7:23	7:36	7:47	7:57	8:04
7:35	7:47	7:55	8:08	8:19	8:29	8:36
8:05	8:17	8:25	8:37	8:47	8:56	9:04
8:35	8:47	8:55	9:07	9:17	9:26	9:34
9:05	9:17	9:25	9:37	9:47	9:56	10:04
9:49	10:01	10:09	10:21	10:31	10:40	10:48
10:19	10:31	10:39	10:51	11:01	11:10	11:18
10:49	11:01	11:09	11:21	11:31	11:40	11:48
11:17	11:29	11:38	11:50	**12:01p**	**12:10p**	**12:18p**
11:47	11:59	**12:08p**	**12:20p**	**12:31**	**12:40**	**12:48**
12:17p	**12:29p**	**12:38**	**12:50**	**1:01**	**1:10**	**1:18**
12:47	**12:59**	**1:08**	**1:20**	**1:31**	**1:40**	**1:48**
1:13	**1:25**	**1:35**	**1:48**	**1:59**	**2:08**	**2:16**
1:43	**1:55**	**2:05**	**2:18**	**2:29**	**2:38**	**2:46**
2:13	**2:25**	**2:35**	**2:49**	**3:00**	**3:10**	**3:18**
2:43	**2:55**	**3:05**	**3:19**	**3:30**	**3:40**	**3:48**
3:13	**3:25**	**3:35**	**3:49**	**4:00**	**4:10**	**4:18**
3:43	**3:55**	**4:05**	**4:19**	**4:30**	**4:40**	**4:48**
4:13	**4:25**	**4:35**	**4:49**	**5:00**	**5:10**	**5:18**
4:43	**4:55**	**5:05**	**5:19**	**5:30**	**5:40**	**5:48**
5:13	**5:25**	**5:34**	**5:47**	**5:58**	**6:07**	**6:15**
5:43	**5:55**	**6:04**	**6:17**	**6:28**	**6:37**	**6:45**
6:27	**6:38**	**6:47**	**6:59**	**7:09**	**7:18**	**7:26**
7:20	**7:30**	**7:38**	**7:49**	**7:59**	**8:08**	**8:15**
8:20	**8:30**	**8:38**	**8:49**	**8:59**	**9:08**	**9:15**

Palomar St. Transit Center ➡ Sharp Medical Center ➡ E St. Transit Center

Ⓖ Palomar St. Transit Center **DEPART**	Ⓕ Orange Av. & 3rd Av.	Ⓔ Melrose Av. & Main St.	Ⓓ Sharp Chula Vista Medical Center	Ⓒ Naples St. & Hilltop Dr.	Ⓑ 3rd Av. & J St.	Ⓐ E St. Transit Center **ARRIVE**
—	—	—	5:22a	5:34a	5:41a	5:51a
5:28a	5:33a	5:41a	5:52	6:04	6:11	6:21
5:58	6:03	6:11	6:22	6:34	6:41	6:51
6:28	6:33	6:41	6:53	7:06	7:14	7:25
6:58	7:03	7:11	7:23	7:36	7:44	7:55
7:28	7:33	7:41	7:53	8:06	8:14	8:25
7:58	8:03	8:11	8:23	8:36	8:44	8:55
8:28	8:33	8:41	8:53	9:06	9:14	9:25
9:03	9:09	9:18	9:30	9:43	9:51	10:03
9:33	9:39	9:48	10:00	10:13	10:21	10:33
10:03	10:09	10:18	10:30	10:43	10:51	11:03
10:33	10:39	10:48	11:00	11:13	11:21	11:33
11:03	11:09	11:18	11:30	11:43	11:51	**12:03p**
11:33	11:39	11:48	**12:00p**	**12:13p**	**12:21p**	**12:33**
12:03p	**12:09p**	**12:18p**	**12:30**	**12:43**	**12:51**	**1:03**
12:33	**12:39**	**12:48**	**1:00**	**1:13**	**1:21**	**1:33**
1:03	**1:09**	**1:18**	**1:30**	**1:43**	**1:51**	**2:03**
1:33	**1:39**	**1:48**	**2:00**	**2:13**	**2:21**	**2:33**
2:01	**2:07**	**2:16**	**2:28**	**2:41**	**2:50**	**3:03**
2:31	**2:37**	**2:46**	**2:58**	**3:11**	**3:20**	**3:33**
3:00	**3:06**	**3:15**	**3:27**	**3:40**	**3:49**	**4:02**
3:30	**3:36**	**3:45**	**3:57**	**4:10**	**4:19**	**4:32**
4:00	**4:06**	**4:15**	**4:27**	**4:40**	**4:49**	**5:02**
4:30	**4:36**	**4:45**	**4:56**	**5:09**	**5:17**	**5:30**
5:00	**5:06**	**5:15**	**5:26**	**5:39**	**5:47**	**6:00**
5:30	**5:36**	**5:45**	**5:56**	—	—	—
6:00	**6:06**	**6:15**	**6:26**	**6:38**	**6:46**	**6:58**
6:30	**6:36**	**6:45**	**6:56**	—	—	—
7:00	**7:06**	**7:15**	**7:26**	**7:37**	**7:44**	**7:56**
8:00	**8:05**	**8:14**	**8:25**	**8:36**	**8:42**	**8:53**
9:00	**9:05**	**9:14**	**9:25**	**9:36**	**9:42**	**9:53**

Route 704 – Saturday / *sábado*

E St. Transit Center ➡ Sharp Medical Center ➡ Palomar St. Transit Center

Ⓐ E St. Transit Center **DEPART**	Ⓑ 3rd Av. & J St.	Ⓒ Naples St. & Hilltop Dr.	Ⓓ Sharp Chula Vista Medical Center	Ⓔ Melrose Av. & Main St.	Ⓕ Orange Av. & 3rd Av.	Ⓖ Palomar St. Transit Center **ARRIVE**
—	—	—	—	6:03a	6:11a	6:18a
6:26a	6:36a	6:43a	6:54a	7:03	7:11	7:18
7:26	7:36	7:43	7:54	8:03	8:11	8:18
8:23	8:34	8:42	8:53	9:02	9:10	9:17
9:23	9:34	9:42	9:53	10:02	10:10	10:17
10:21	10:32	10:40	10:52	11:01	11:09	11:17
11:19	11:30	11:39	11:51	**12:00p**	**12:09p**	**12:17p**
12:19p	**12:30p**	**12:39p**	**12:51p**	**1:00**	**1:09**	**1:17**
1:19	**1:30**	**1:39**	**1:51**	**2:00**	**2:09**	**2:17**
2:19	**2:30**	**2:39**	**2:51**	**3:00**	**3:09**	**3:17**
3:20	**3:31**	**3:40**	**3:52**	**4:01**	**4:10**	**4:18**
4:20	**4:31**	**4:40**	**4:52**	**5:01**	**5:10**	**5:18**
5:21	**5:32**	**5:40**	**5:52**	**6:01**	**6:09**	**6:17**
6:23	**6:34**	**6:42**	**6:53**	**7:02**	**7:10**	**7:17**
7:23	**7:34**	**7:42**	**7:53**	**8:02**	**8:10**	**8:17**
8:25	**8:35**	**8:42**	**8:53**	**9:02**	**9:10**	**9:17**

Palomar St. Transit Center ➡ Sharp Medical Center ➡ E St. Transit Center

Ⓖ Palomar St. Transit Center **DEPART**	Ⓕ Orange Av. & 3rd Av.	Ⓔ Melrose Av. & Main St.	Ⓓ Sharp Chula Vista Medical Center	Ⓒ Naples St. & Hilltop Dr.	Ⓑ 3rd Av. & J St.	Ⓐ E St. Transit Center **ARRIVE**
—	—	—	5:51a	6:03a	6:10a	6:20a
6:28a	6:32a	6:40a	6:51	7:03	7:10	7:20
7:29	7:33	7:41	7:52	8:04	8:11	8:21
8:29	8:34	8:42	8:53	9:05	9:12	9:23
9:29	9:34	9:42	9:53	10:05	10:12	10:24
10:29	10:34	10:42	10:53	11:05	11:12	11:24
11:28	11:34	11:42	11:53	**12:05p**	**12:13p**	**12:25p**
12:28p	**12:34p**	**12:42p**	**12:53p**	**1:05**	**1:13**	**1:25**
1:28	**1:34**	**1:42**	**1:53**	**2:05**	**2:13**	**2:25**
2:28	**2:34**	**2:42**	**2:53**	**3:05**	**3:13**	**3:25**
3:28	**3:34**	**3:42**	**3:53**	**4:05**	**4:13**	**4:25**
4:29	**4:35**	**4:43**	**4:54**	**5:06**	**5:13**	**5:24**
5:29	**5:35**	**5:43**	**5:54**	**6:06**	**6:13**	**6:24**
6:29	**6:34**	**6:42**	**6:52**	**7:04**	**7:11**	**7:22**
7:29	**7:34**	**7:42**	**7:52**	**8:03**	**8:09**	**8:19**
8:29	**8:34**	**8:42**	**8:52**	**9:03**	**9:09**	**9:19**

Route 704 – Sunday / *domingo*

Sharp Medical Center ➡ Palomar St. Transit Center

Ⓐ E St. Transit Center **DEPART**	Ⓑ 3rd Av. & J St.	Ⓒ Naples St. & Hilltop Dr.	Ⓓ Sharp Chula Vista Medical Center	Ⓔ Melrose Av. & Main St.	Ⓕ Orange Av. & 3rd Av.	Ⓖ Palomar St. Transit Center **ARRIVE**
—	—	—	7:22a	7:31a	7:39a	7:46a
—	—	—	8:22	8:31	8:39	8:46
—	—	—	9:22	9:31	9:39	9:46
—	—	—	10:21	10:30	10:38	10:46
—	—	—	11:20	11:29	11:38	11:46
—	—	—	**12:20p**	**12:29p**	**12:38p**	**12:46p**
—	—	—	**1:20**	**1:29**	**1:38**	**1:46**
—	—	—	**2:20**	**2:29**	**2:38**	**2:46**
—	—	—	**3:20**	**3:29**	**3:38**	**3:46**
—	—	—	**4:20**	**4:29**	**4:38**	**4:46**
—	—	—	**5:21**	**5:30**	**5:38**	**5:46**
—	—	—	**6:22**	**6:31**	**6:39**	**6:46**

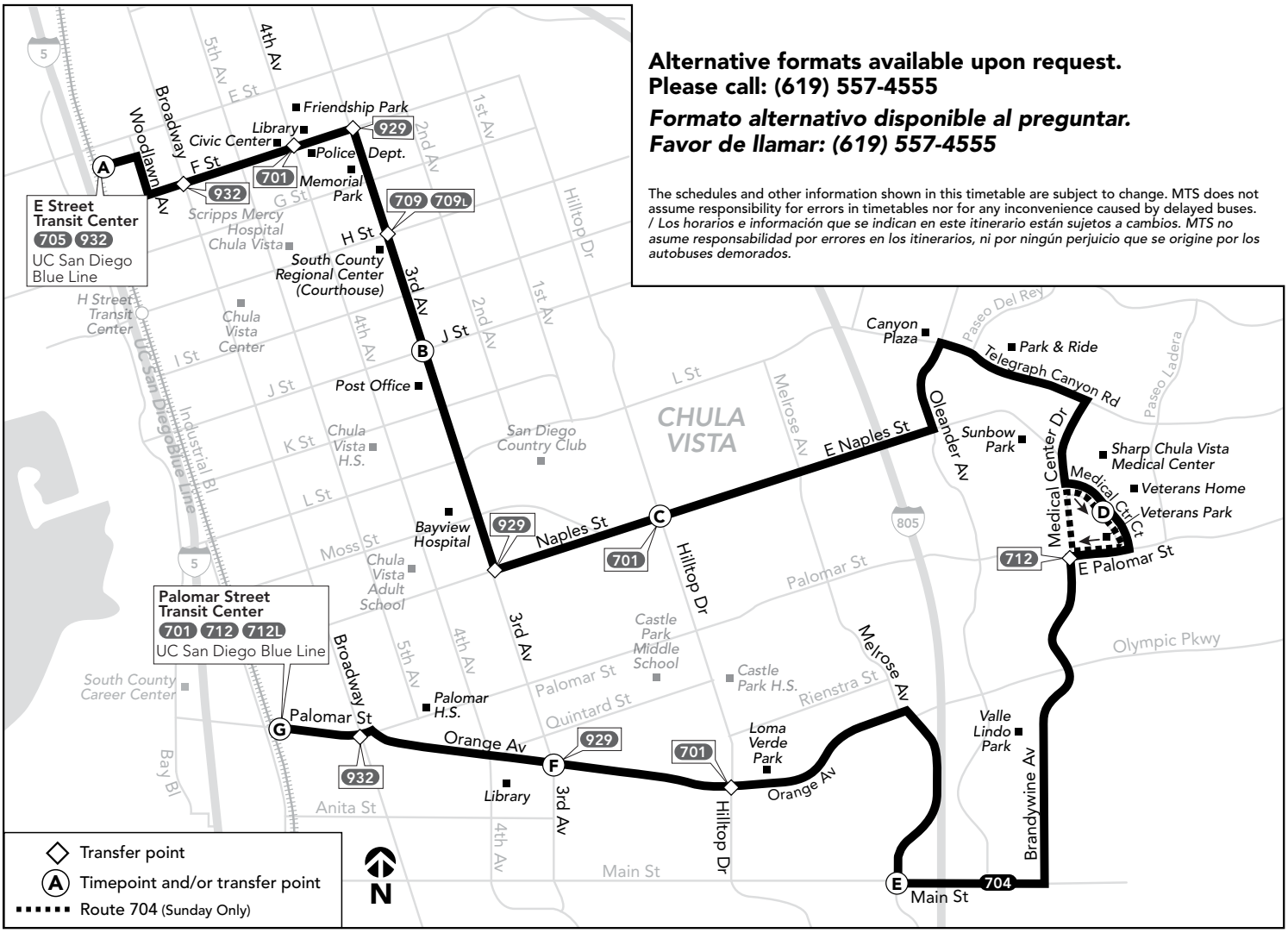
Palomar St. Transit Center ➡ Sharp Medical Center

Ⓖ Palomar St. Transit Center **DEPART**	Ⓕ Orange Av. & 3rd Av.	Ⓔ Melrose Av. & Main St.	Ⓓ Sharp Chula Vista Medical Center	Ⓒ Naples St. & Hilltop Dr.	Ⓑ 3rd Av. & J St.	Ⓐ E St. Transit Center **ARRIVE**
7:30a	7:34a	7:42a	7:53a	—	—	—
8:30	8:35	8:43	8:54	—	—	—
9:30	9:35	9:43	9:54	—	—	—
10:30	10:36	10:44	10:55	—	—	—
11:30	11:36	11:44	11:55	—	—	—
12:30p	**12:36p**	**12:44p**	**12:55p**	—	—	—
1:30	**1:36**	**1:44**	**1:55**	—	—	—
2:30	**2:36**	**2:44**	**2:55**	—	—	—
3:30	**3:36**	**3:44**	**3:55**	—	—	—
4:30	**4:36**	**4:44**	**4:55**	—	—	—
5:30	**5:36**	**5:44**	**5:55**	—	—	—
6:30	**6:35**	**6:43**	**6:54**	—	—	—

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados

>>>

New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas



Alternative formats available upon request.
Please call: (619) 557-4555

Formato alternativo disponible al preguntar.
Favor de llamar: (619) 557-4555

The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses. / *Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses demorados.*

APPENDIX H

EXISTING + PROJECT WITH RECOMMENDATIONS PEAK HOUR INTERSECTION ANALYSIS AND QUEUING WORKSHEETS

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	33	88	187	265	21
Future Vol, veh/h	8	33	88	187	265	21
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	9	37	99	210	298	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	633	181	332	0	-	0
Stage 1	320	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	405	821	1203	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	706	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	364	805	1192	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1192	-	469	805	-	-
HCM Lane V/C Ratio	0.083	-	0.019	0.046	-	-
HCM Control Delay (s)	8.3	-	12.8	9.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	745	62	11	669	95	14	8	7	97	16	458
Future Volume (veh/h)	326	745	62	11	669	95	14	8	7	97	16	458
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	388	887	74	13	796	113	17	10	8	115	0	558
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	302	2887	865	21	1836	259	50	146	117	117	0	631
Arrive On Green	0.17	0.58	0.58	0.02	0.83	0.83	0.01	0.16	0.16	0.07	0.00	0.21
Sat Flow, veh/h	1739	4985	1494	1739	4399	620	3374	919	735	1739	0	2983
Grp Volume(v), veh/h	388	887	74	13	600	309	17	0	18	115	0	558
Grp Sat Flow(s),veh/h/ln	1739	1662	1494	1739	1662	1696	1687	0	1654	1739	0	1491
Q Serve(g_s), s	19.1	10.0	2.4	0.8	5.1	5.2	0.5	0.0	1.0	7.3	0.0	20.0
Cycle Q Clear(g_c), s	19.1	10.0	2.4	0.8	5.1	5.2	0.5	0.0	1.0	7.3	0.0	20.0
Prop In Lane	1.00		1.00	1.00		0.37	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	302	2887	865	21	1387	708	50	0	263	117	0	631
V/C Ratio(X)	1.29	0.31	0.09	0.63	0.43	0.44	0.34	0.00	0.07	0.98	0.00	0.88
Avail Cap(c_a), veh/h	302	2887	865	63	1387	708	123	0	556	117	0	1096
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	11.9	10.3	53.4	5.7	5.7	53.7	0.0	39.3	51.2	0.0	42.1
Incr Delay (d2), s/veh	151.1	0.3	0.2	10.8	1.0	1.9	1.5	0.0	0.0	77.5	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.6	3.4	0.8	0.4	1.4	1.7	0.2	0.0	0.4	5.6	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.5	12.1	10.4	64.2	6.7	7.6	55.2	0.0	39.4	128.7	0.0	44.1
LnGrp LOS	F	B	B	E	A	A	E	A	D	F	A	D
Approach Vol, veh/h		1349			922			35			673	
Approach Delay, s/veh		65.1			7.8			47.0			58.6	
Approach LOS		E			A			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	70.1	5.8	28.6	23.3	52.3	11.6	22.8
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 4	* 42	* 4	40.4	* 19	* 26	* 7.4	37.0
Max Q Clear Time (g_c+I1), s	2.8	12.0	2.5	22.0	21.1	7.2	9.3	3.0
Green Ext Time (p_c), s	0.0	13.9	0.0	1.3	0.0	10.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	91	49	400	342	12
Future Vol, veh/h	22	91	49	400	342	12
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	200	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	5	5	5	5	5	5
Mvmt Flow	23	94	51	412	353	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	687	203	375	0	-	0
Stage 1	369	-	-	-	-	-
Stage 2	318	-	-	-	-	-
Critical Hdwy	6.9	7	4.2	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.35	2.25	-	-	-
Pot Cap-1 Maneuver	374	795	1159	-	-	-
Stage 1	661	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	350	780	1148	-	-	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1148	-	459	780	-	-
HCM Lane V/C Ratio	0.044	-	0.049	0.12	-	-
HCM Control Delay (s)	8.3	-	13.3	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.4	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	373	783	75	16	955	74	92	19	19	97	6	545
Future Volume (veh/h)	373	783	75	16	955	74	92	19	19	97	6	545
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	389	816	78	17	995	77	96	20	20	101	0	572
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	329	2706	810	26	1735	134	148	170	170	92	0	644
Arrive On Green	0.19	0.54	0.54	0.03	0.74	0.74	0.04	0.21	0.21	0.05	0.00	0.22
Sat Flow, veh/h	1739	4985	1492	1739	4709	364	3374	821	821	1739	0	2984
Grp Volume(v), veh/h	389	816	78	17	702	370	96	0	40	101	0	572
Grp Sat Flow(s),veh/h/ln	1739	1662	1492	1739	1662	1749	1687	0	1641	1739	0	1492
Q Serve(g_s), s	20.8	9.8	2.8	1.1	10.6	10.6	3.1	0.0	2.2	5.8	0.0	20.5
Cycle Q Clear(g_c), s	20.8	9.8	2.8	1.1	10.6	10.6	3.1	0.0	2.2	5.8	0.0	20.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	329	2706	810	26	1225	645	148	0	340	92	0	644
V/C Ratio(X)	1.18	0.30	0.10	0.66	0.57	0.57	0.65	0.00	0.12	1.10	0.00	0.89
Avail Cap(c_a), veh/h	329	2706	810	84	1225	645	159	0	552	92	0	1020
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	13.7	12.1	53.1	10.5	10.5	51.8	0.0	35.5	52.1	0.0	41.8
Incr Delay (d2), s/veh	109.1	0.3	0.2	9.9	1.9	3.5	5.9	0.0	0.1	124.1	0.0	3.9
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	18.6	3.4	1.0	0.5	2.8	3.3	1.4	0.0	0.9	5.7	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.7	14.0	12.4	63.0	12.4	14.0	57.6	0.0	35.5	176.2	0.0	45.8
LnGrp LOS	F	B	B	E	B	B	E	A	D	F	A	D
Approach Vol, veh/h		1283			1089			136			673	
Approach Delay, s/veh		56.3			13.7			51.1			65.3	
Approach LOS		E			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	66.1	9.0	29.0	25.0	46.9	10.0	28.1
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.3	* 42	* 5.2	37.6	* 21	* 26	* 5.8	37.0
Max Q Clear Time (g_c+I1), s	13.1	11.8	5.1	22.5	22.8	12.6	7.8	4.2
Green Ext Time (p_c), s	0.0	12.9	0.0	1.3	0.0	9.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	41	164	105	187	265	25
Future Volume (veh/h)	41	164	105	187	265	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	46	184	118	210	298	28
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	302	269	185	1772	786	73
Arrive On Green	0.17	0.17	0.11	0.51	0.25	0.25
Sat Flow, veh/h	1739	1547	1739	3561	3281	297
Grp Volume(v), veh/h	46	184	118	210	161	165
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1752
Q Serve(g_s), s	0.6	3.2	1.9	0.9	2.2	2.2
Cycle Q Clear(g_c), s	0.6	3.2	1.9	0.9	2.2	2.2
Prop In Lane	1.00	1.00	1.00			0.17
Lane Grp Cap(c), veh/h	302	269	185	1772	427	432
V/C Ratio(X)	0.15	0.68	0.64	0.12	0.38	0.38
Avail Cap(c_a), veh/h	1921	1709	1433	7238	1916	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.0	11.0	12.2	3.6	8.9	8.9
Incr Delay (d2), s/veh	0.2	3.1	3.6	0.0	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.7	0.1	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.2	14.1	15.8	3.7	9.5	9.5
LnGrp LOS	B	B	B	A	A	A
Approach Vol, veh/h	230			328	326	
Approach Delay, s/veh	13.3			8.0	9.5	
Approach LOS	B			A	A	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	19.1		9.5	7.5	11.5
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	59.5		31.5	23.5	31.5
Max Q Clear Time (g_c+I1), s	2.9		5.2	3.9	4.2
Green Ext Time (p_c), s	1.4		0.7	0.3	1.9

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	339	745	62	11	669	99	14	8	7	121	16	565
Future Volume (veh/h)	339	745	62	11	669	99	14	8	7	121	16	565
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	404	887	74	13	796	118	17	10	8	144	0	686
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	467	2675	800	21	1792	264	50	186	149	117	0	761
Arrive On Green	0.14	0.54	0.54	0.02	0.82	0.82	0.01	0.20	0.20	0.07	0.00	0.25
Sat Flow, veh/h	3374	4985	1492	1739	4371	643	3374	922	738	1739	0	2995
Grp Volume(v), veh/h	404	887	74	13	604	310	17	0	18	144	0	686
Grp Sat Flow(s),veh/h/ln	1687	1662	1492	1739	1662	1691	1687	0	1659	1739	0	1498
Q Serve(g_s), s	12.9	11.0	2.7	0.8	5.6	5.7	0.5	0.0	1.0	7.4	0.0	24.4
Cycle Q Clear(g_c), s	12.9	11.0	2.7	0.8	5.6	5.7	0.5	0.0	1.0	7.4	0.0	24.4
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	467	2675	800	21	1362	693	50	0	334	117	0	761
V/C Ratio(X)	0.86	0.33	0.09	0.63	0.44	0.45	0.34	0.00	0.05	1.23	0.00	0.90
Avail Cap(c_a), veh/h	586	2675	800	63	1362	693	123	0	558	117	0	1100
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	46.4	14.4	12.4	53.4	6.3	6.4	53.7	0.0	35.5	51.3	0.0	39.7
Incr Delay (d2), s/veh	9.2	0.3	0.2	10.8	1.0	2.0	1.5	0.0	0.0	155.5	0.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	3.9	0.9	0.4	1.6	1.8	0.2	0.0	0.4	8.2	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.5	14.7	12.7	64.2	7.4	8.4	55.2	0.0	35.5	206.8	0.0	45.3
LnGrp LOS	E	B	B	E	A	A	E	A	D	F	A	D
Approach Vol, veh/h		1365			927			35			830	
Approach Delay, s/veh		26.7			8.5			45.0			73.3	
Approach LOS		C			A			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	65.4	5.8	33.2	19.4	51.5	11.6	27.5
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 4	* 42	* 4	40.4	* 19	* 26	* 7.4	37.0
Max Q Clear Time (g_c+I1), s	2.8	13.0	2.5	26.4	14.9	7.7	9.4	3.0
Green Ext Time (p_c), s	0.0	13.7	0.0	1.6	0.3	10.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	159	348	400	342	87
Future Volume (veh/h)	39	159	348	400	342	87
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	40	164	359	412	353	90
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	256	228	459	2175	679	170
Arrive On Green	0.15	0.15	0.26	0.63	0.25	0.25
Sat Flow, veh/h	1739	1547	1739	3561	2804	680
Grp Volume(v), veh/h	40	164	359	412	223	220
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1658
Q Serve(g_s), s	0.8	4.0	7.6	2.0	4.4	4.6
Cycle Q Clear(g_c), s	0.8	4.0	7.6	2.0	4.4	4.6
Prop In Lane	1.00	1.00	1.00			0.41
Lane Grp Cap(c), veh/h	256	228	459	2175	434	415
V/C Ratio(X)	0.16	0.72	0.78	0.19	0.52	0.53
Avail Cap(c_a), veh/h	937	834	1721	6041	1108	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	16.2	13.6	3.2	12.9	12.9
Incr Delay (d2), s/veh	0.3	4.2	2.9	0.0	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	2.7	0.2	1.4	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.1	20.4	16.6	3.2	13.8	14.0
LnGrp LOS	B	C	B	A	B	B
Approach Vol, veh/h	204			771	443	
Approach Delay, s/veh	19.4			9.4	13.9	
Approach LOS	B			A	B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	29.5		10.4	15.0	14.5
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	69.5		21.5	39.5	25.5
Max Q Clear Time (g_c+I1), s	4.0		6.0	9.6	6.6
Green Ext Time (p_c), s	3.0		0.5	1.1	2.5

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	616	783	75	16	955	130	92	19	19	110	6	600
Future Volume (veh/h)	616	783	75	16	955	130	92	19	19	110	6	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	642	816	78	17	995	135	96	20	20	115	0	629
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, %	5	5	5	5	5	5	5	5	5	5	5	5
Cap, veh/h	638	2613	782	26	1547	209	148	185	185	92	0	702
Arrive On Green	0.19	0.52	0.52	0.03	0.70	0.70	0.04	0.23	0.23	0.05	0.00	0.23
Sat Flow, veh/h	3374	4985	1491	1739	4423	599	3374	822	822	1739	0	2990
Grp Volume(v), veh/h	642	816	78	17	747	383	96	0	40	115	0	629
Grp Sat Flow(s),veh/h/ln	1687	1662	1491	1739	1662	1699	1687	0	1643	1739	0	1495
Q Serve(g_s), s	20.8	10.2	2.9	1.1	13.5	13.6	3.1	0.0	2.1	5.8	0.0	22.4
Cycle Q Clear(g_c), s	20.8	10.2	2.9	1.1	13.5	13.6	3.1	0.0	2.1	5.8	0.0	22.4
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.50	1.00		1.00
Lane Grp Cap(c), veh/h	638	2613	782	26	1162	594	148	0	371	92	0	702
V/C Ratio(X)	1.01	0.31	0.10	0.66	0.64	0.64	0.65	0.00	0.11	1.25	0.00	0.90
Avail Cap(c_a), veh/h	638	2613	782	84	1162	594	159	0	553	92	0	1022
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	44.6	14.9	13.1	53.1	12.8	12.8	51.8	0.0	33.8	52.1	0.0	40.8
Incr Delay (d2), s/veh	37.2	0.3	0.3	9.9	2.6	5.1	5.9	0.0	0.0	169.8	0.0	5.0
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	11.6	3.6	1.0	0.5	3.5	4.0	1.4	0.0	0.9	6.8	0.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.8	15.2	13.4	63.0	15.4	17.9	57.6	0.0	33.8	221.9	0.0	45.8
LnGrp LOS	F	B	B	E	B	B	E	A	C	F	A	D
Approach Vol, veh/h		1536			1147			136			744	
Approach Delay, s/veh		43.0			16.9			50.6			73.0	
Approach LOS		D			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	64.1	9.0	31.1	25.0	44.9	10.0	30.1
Change Period (Y+Rc), s	* 4.2	* 6.4	* 4.2	5.3	* 4.2	* 6.4	* 4.2	5.3
Max Green Setting (Gmax), s	* 5.3	* 42	* 5.2	37.6	* 21	* 26	* 5.8	37.0
Max Q Clear Time (g_c+I1), s	3.1	12.2	5.1	24.4	22.8	15.6	7.8	4.1
Green Ext Time (p_c), s	0.0	12.8	0.0	1.4	0.0	7.8	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	31	56	68	72	5	34	54
Average Queue (ft)	6	21	22	4	0	2	3
95th Queue (ft)	26	49	55	32	4	17	23
Link Distance (ft)	326			471	471	818	818
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		200	50				
Storage Blk Time (%)			1	0			
Queuing Penalty (veh)			1	0			

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	38	72	47	68	14	42	48
Average Queue (ft)	16	35	13	4	0	3	3
95th Queue (ft)	42	61	41	30	8	23	22
Link Distance (ft)	326			471	471	818	818
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		200	50				
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			0	0			

Intersection: 4: Brandywine Ave & Shinohara Ln

Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	63	91	74	206	135	122	130
Average Queue (ft)	23	45	53	61	15	43	50
95th Queue (ft)	54	74	84	164	79	92	106
Link Distance (ft)	326			465	465	818	818
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		250	50				
Storage Blk Time (%)			14	2			
Queuing Penalty (veh)			13	3			

Intersection: 4: Brandywine Ave & Shinohara Ln

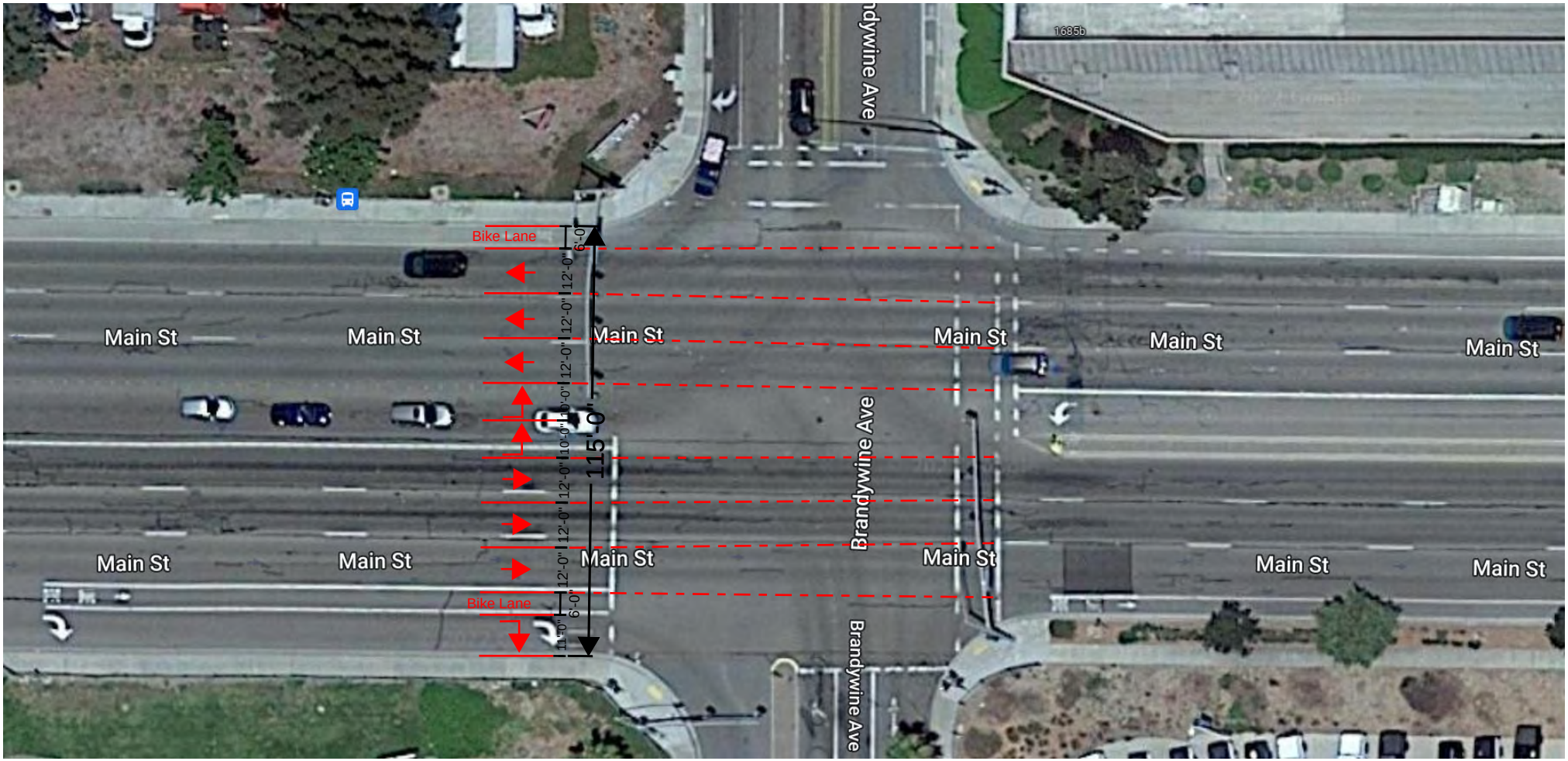
Movement	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	R	L	T	T	T	TR
Maximum Queue (ft)	75	103	75	434	344	164	181
Average Queue (ft)	27	47	68	208	93	66	76
95th Queue (ft)	62	79	86	396	269	128	145
Link Distance (ft)	326			465	465	818	818
Upstream Blk Time (%)				0			
Queuing Penalty (veh)				0			
Storage Bay Dist (ft)		250	50				
Storage Blk Time (%)			35	3			
Queuing Penalty (veh)			71	11			

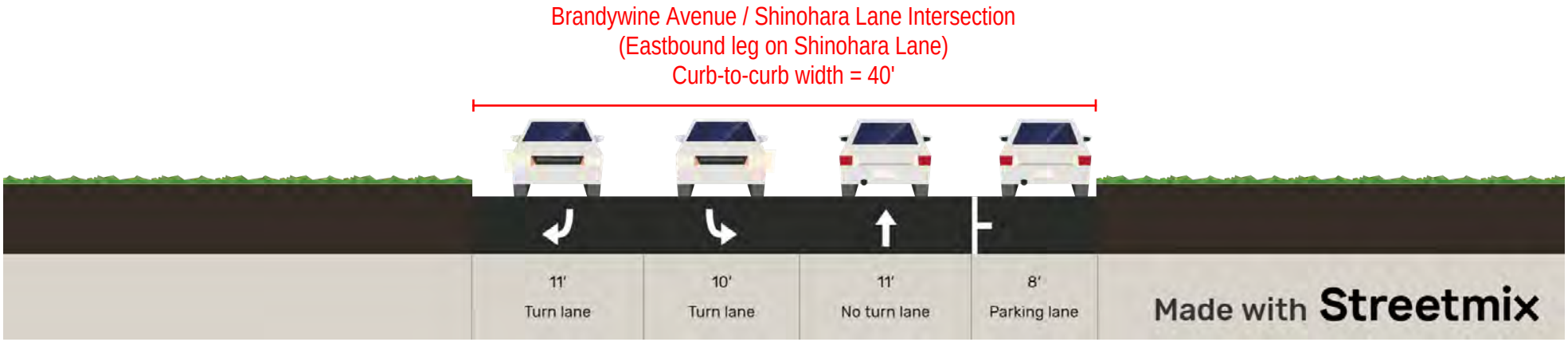
APPENDIX I

MAIN STREET AND SHINOHARA LANE PROPOSED ROADWAY CROSS SECTIONS

Main Street / Brandywine Avenue Intersection
(Eastbound leg on Main Street)
Curb-to-curb width = 115'




Bike Lane
6'-0"
12'-0"
12'-0"
12'-0"
10'-0"
10'-0"
12'-0"
12'-0"
12'-0"
11'-0"
Bike Lane
6'-0"
115'-0"
Main St
Main St
Main St
Main St
Main St
Main St
Main St
Main St
Main St
Main St
Brandywine Ave
Brandywine Ave
Brandywine Ave
1685b


Brandywine Avenue / Shinohara Lane Intersection
(Eastbound leg on Shinohara Lane)
Curb-to-curb width = 40'
11'
Turn lane
10'
Turn lane
11'
No turn lane
8'
Parking lane
Made with Streetmix

Brandywine Ave
Brandywine Ave
Brandywine Ave
Parking
8'-0"
11'-0"
10'-0"
11'-0"
40'-0"
40'-0"