Traffic Impact Analysis

for:

Gas Station and Car Wash Project

In the City of Victorville

Prepared for:

A & S Engineering, Inc.

June 2024

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TRAFFIC IMPACT ANALYSIS
FOR THE GAS STATION AND CAR WASH PROJECT
IN THE CITY OF VICTORVILLE

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TRAFFIC IMPACT ANALYSIS
FOR THE PROPOSED GAS STATION AND CAR WASH PROJECT
IN THE CITY OF VICTORVILLE

INTRODUCTION

This Traffic Impact Analysis (TIA) has been prepared to evaluate the project-related traffic impacts associated with the proposed gas station and car wash project located at the southwest corner of Green Tree Boulevard and Hesperia Boulevard in the City of Victorville, California. The analysis assesses the project impact by providing an analysis of existing and future conditions, with and without the addition of project traffic. This TIA follows the assumptions established during discussions with the City of Victorville staff and within the approved Scope of Work. The approved Scope of Work is provided in *Appendix A*.

This report has been prepared in accordance with the City of Victorville *General Guidelines for Conducting Traffic Studies and the Determination of Intersection Level of Service and Improvement Needs (2005)* and with the *San Bernardino County Congestion Management Program (CMP)*.

PROJECT DESCRIPTION

The project will involve the development of a gas station with 16 fueling positions, a 5,785-square-foot convenience market, a 1,733-square-foot drive-through car wash. The project site location is currently vacant and is shown in its regional setting on Figure 1. The project site plan is shown on Figure 2. The project is anticipated to be open in the year 2024.

The site is bounded by Green Tree Boulevard to the north, Hesperia Road to the east, and residential land uses to the south and west. Ingress and egress to the site will be provided via three unsignalized driveways: one right-in right-out (RIRO) only driveway along Green Tree Boulevard, one RIRO only driveway along Hesperia Road, and one left-turn and right-turn in and right-turn out only driveway along Hesperia Road. There is an adjacent development located on the east side of Hesperia Road that will install a raised median along the project frontage. This raised median will restrict access to the northern project driveway on Hesperia Road to right-in right-out only.

NOT TO SCALE

FIGURE 1
VICINITY MAP
SOURCE: NEARMAP

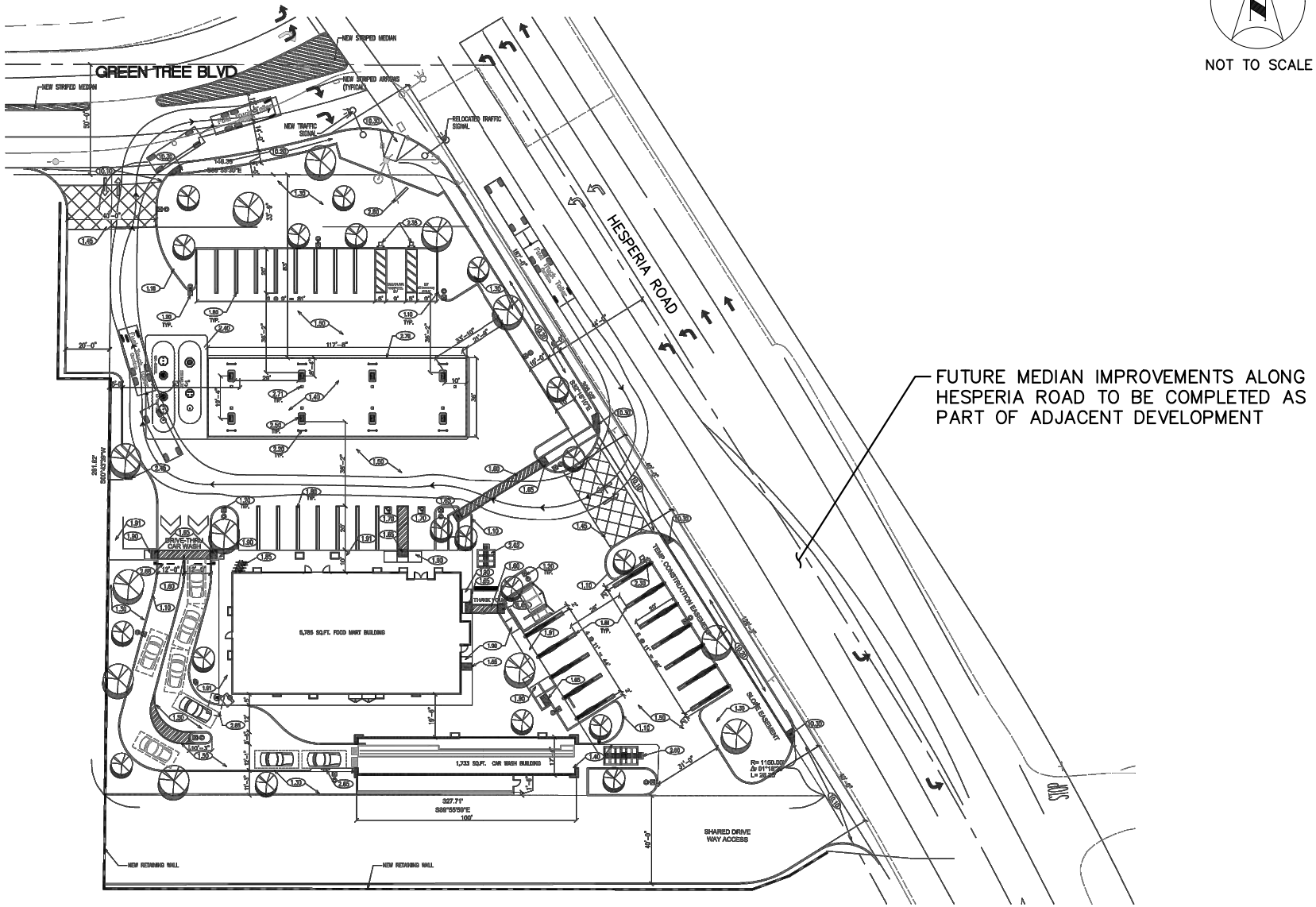


FIGURE 2
SITE PLAN

ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

Based on the City's guidelines and per the approved Scope of Study, this traffic analysis provides an evaluation of morning and evening peak hour operations for the following scenarios:

- Existing Conditions
- Opening Year 2024 (Existing + Ambient Growth + Cumulative Projects)
- Opening Year 2024 Plus Project (Existing + Ambient Growth + Cumulative Projects + Project)
- Future Year 2034 Without Project
- Future Year 2034 With Project

The study area was determined with input from City Staff through the scoping process. A copy of the approved Scope of Study Form, as previously mentioned, is provided in *Appendix A*. The following study intersections were identified for evaluation:

Study Intersections:

1. Green Tree Boulevard and Hesperia Boulevard
2. Green Tree Boulevard and 3rd Avenue
3. Green Tree Boulevard and Ridgecrest Road
4. Hesperia Road and Nisqualli Road

Additionally, each project driveway will be analyzed in the "with project" scenarios.

ANALYSIS METHODOLOGY

Synchro 11 software was used to analyze the peak hour operations of both signalized and unsignalized intersections. Synchro uses the methodologies outlined in the latest Highway Capacity Manual.

The Highway Capacity Manual, 6th Edition (HCM 6), published by the Transportation Research Board (TRB), establishes a system whereby highway facilities are rated for their ability to accommodate traffic volumes. The terminology "Level of Service" is used to provide a qualitative evaluation based on certain quantitative calculations, which are related to empirical values.

Level of Service (LOS) for signalized and unsignalized intersections is defined in terms of average vehicle delay, which is a measure of driver discomfort, frustration, fuel consumption, and loss of travel time. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time, in addition to the stop delay. The Level of Service criteria for the various LOS designations are summarized on the following chart.

All analysis parameters were consistent with guidelines established by the City of Victorville and by the San Bernardino County Congestion Management Program (CMP).

LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized	Unsignalized	
A	< 10.0	< 10.0	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	> 10.0 - 20.0	> 10.0 - 15.0	LOS B represents stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	> 20.0 - 35.0	> 15.0 - 25.0	LOS C is in the range of stable flow, but marks the beginning of operation in which individual users become affected by interaction with others in the traffic stream.
D	> 35.0 - 55.0	> 25.0 - 35.0	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are restricted, and the driver experiences a generally poor level of comfort and convenience.
E	> 55.0 - 80.0	> 35.0 - 50.0	LOS E represents operating conditions at or near the capacity of the intersection. All speeds are reduced to a low, but relatively uniform level. Small increases in flow will cause breakdowns in traffic movement.
F	> 80.0	> 50.0	LOS F represents forced, or breakdown flow. This condition occurs when the amount of traffic approaching the intersection exceeds the volume which can pass through the intersection, resulting in queues and congestion.

Significant Impact Criteria

The City of Victorville has established LOS "D" as the threshold for acceptable service level for peak hour intersection volumes.

AREA CONDITIONS

This section summarizes the existing roadway circulation network, peak-hour traffic volumes, and existing operating conditions and Level of Service at the study intersections.

Existing Street System

Regional access to the site is provided by the I-15 Barstow Freeway. The I-15 Freeway is located approximately 2 miles west of the project site. The I-15 Freeway runs in the north-south direction and can be accessed via I-215 and I-40 Freeways.

Local access to the project vicinity is provided by several roadways. Roadway classifications were taken from the City of Victorville Circulation Map. These roadway classifications are shown on Figure 3.

Green Tree Boulevard is a four-lane undivided roadway west of Hesperia Road, and a three-lane undivided roadway east of Hesperia Road. Parking is prohibited on both sides of the street. The posted speed limit is 50 miles per hour in the project vicinity and the street is oriented in the east-west direction. Green Tree Boulevard is classified as a Super Arterial roadway in the City of Victorville Circulation Map.

Hesperia Road is a four-lane undivided roadway with two lanes in each direction . Parking is prohibited on both sides of the roadway. The posted speed limit is 50 miles per hour. The street is oriented in the north-south direction. Hesperia Road is classified as a Super Arterial roadway in the City of Victorville Circulation Map.

3rd Avenue/Rodeo Drive is a two-lane undivided roadway with one lane in each direction. Parking is prohibited on both sides of the roadway. The posted speed limit is 40 miles per hour. The street is oriented in the north-south direction. 3rd Avenue is classified as an Arterial roadway in the City of Victorville Circulation Map.

Ridgecrest Road is a three-lane undivided roadway with two lanes in the northbound direction, and one lane in the southbound direction. Parking is prohibited on both sides of the roadway. The posted speed limit is 35 miles per hour. The street is oriented in the north-south direction. Ridgecrest Road is classified as an Arterial roadway in the City of Victorville Circulation Map.

Nisqualli Road is a four-lane undivided roadway with two lanes in each direction. Parking is prohibited on both sides of the roadway. The posted speed limit is 45 miles per hour. The street is oriented in the east-west direction. Nisqualli Road is classified as an Arterial roadway in the City of Victorville Circulation Map.

Existing Transit Services

Public transit within the City of Victorville is provided by Victor Valley Transit Authority (VVTA). Bus line 50, 50X, and 55 all operate within the vicinity of the Project site.

VVTA Line 50 is a bus route that travels along Green Tree Boulevard within the vicinity of the project. Line 50 operates seven days a week and its closest stop to the Project is at the southwest corner of Green Tree Boulevard and Hesperia Road.

VVTA Line 50X is a bus route that travels along Hesperia Road within the vicinity of the project. Line 50X operates seven days a week; however, there are no stops in the vicinity of the Project.

VVTA Line 55 is a bus route that travels along Rodeo Drive/3rd Avenue and Nisqualli Road within the vicinity of the project. Line 55 operates seven days a week and its closest stop to the Project is located at the northwest corner of Green Tree Boulevard and Rodeo Drive.

A map of Public Transportation Services in the City is shown on Figure 4.

Existing Traffic Volumes

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts were collected for all study intersections. The existing lane configurations and traffic control at the study intersections are shown in Figure 5. Existing peak hour turning movement volumes at the study intersections are shown in Figure 6. Peak hour intersection traffic count worksheets are provided in *Appendix B*.

Intersection Analysis – Existing Conditions

The study intersections were analyzed for Existing Conditions. Intersection Level of Service worksheets are provided in *Appendix D*. The Existing Conditions analysis results and Level of Service for the study intersections are presented in Table 1. Review of this table indicates that all study intersections currently operate at an acceptable Level of Service.

Table **1** – Summary of Intersection Operations – Existing Conditions

Int. #	Intersection	Intersection Control	Peak Hour	Delay (sec/veh)	LOS
1	Green Tree Boulevard at Hesperia Road	Signal	AM	52.5	D
			PM	49.7	D
2	Green Tree Boulevard at 3rd Avenue	Signal	AM	25.2	C
			PM	28.7	C
3	Green Tree Boulevard at Ridgecrest Road	Signal	AM	19.1	B
			PM	36.1	D
4	Hesperia Road at Nisqualli Road	Signal	AM	28.4	C
			PM	28.1	C

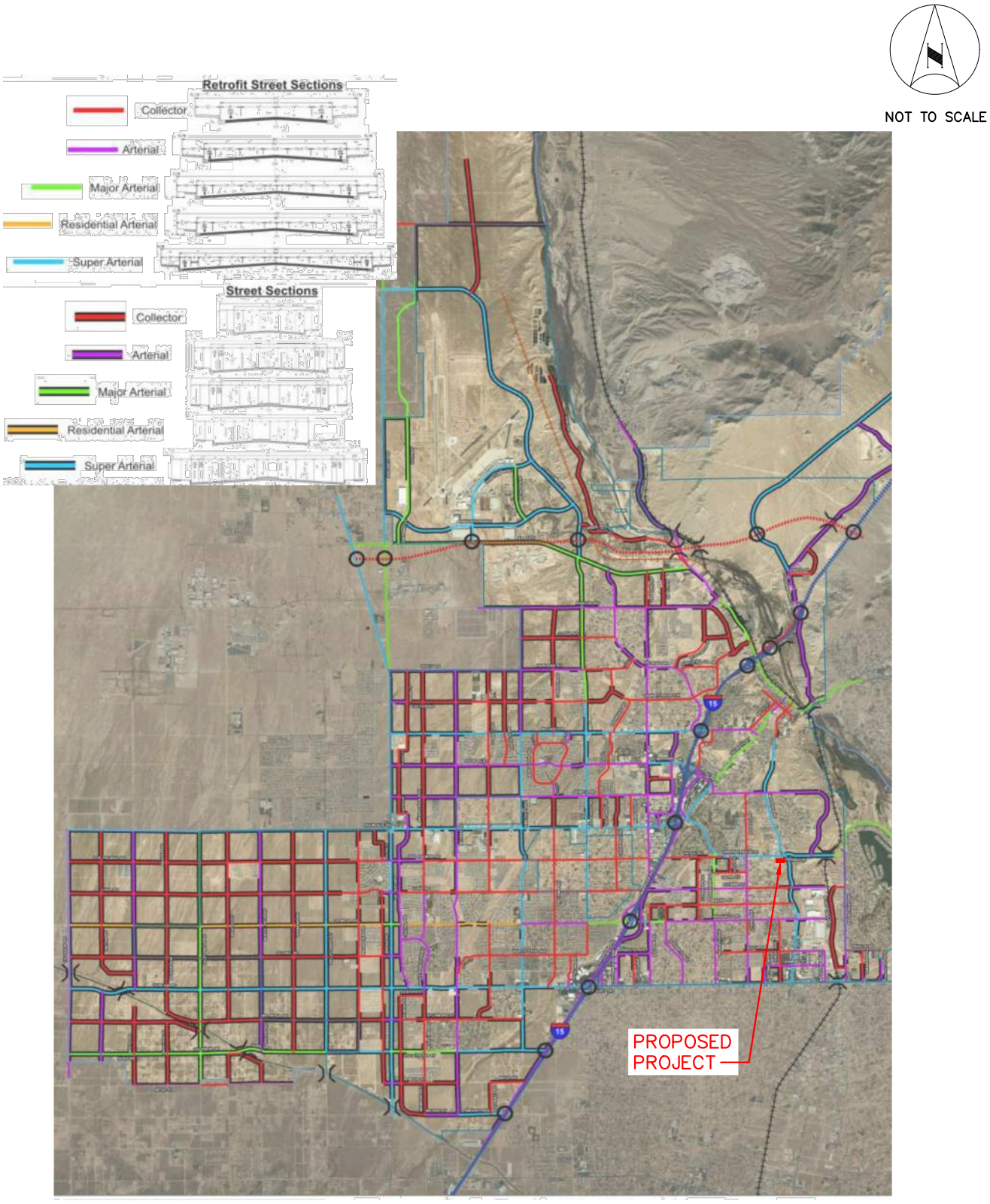


FIGURE 3
CITY OF VICTORVILLE CIRCULATION MAP
SOURCE: CITY OF VICTORVILLE

NOT TO SCALE

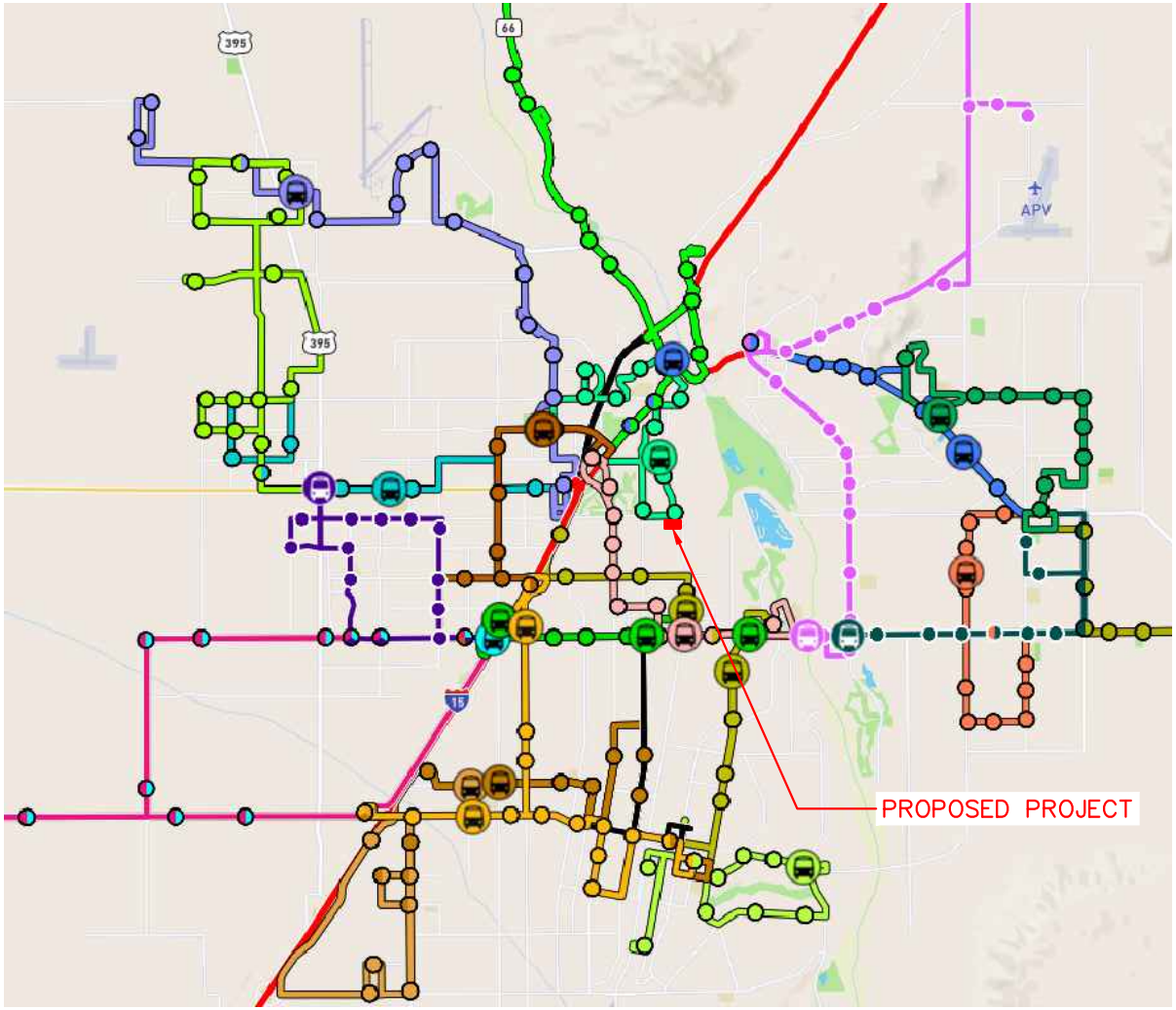
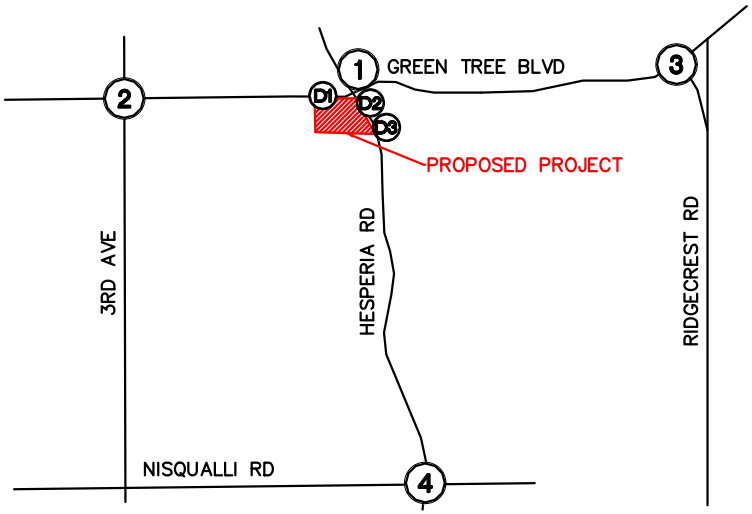
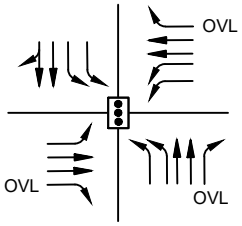
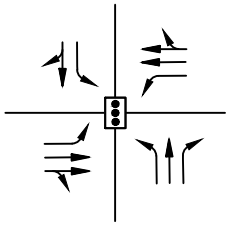
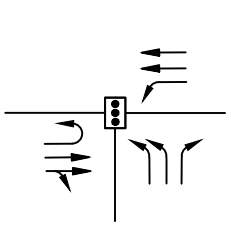
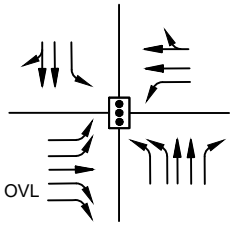


FIGURE 4
PUBLIC TRANSPORTATION SERVICES
SOURCE: CITY OF VICTORVILLE CIRCULATION ELEMENT



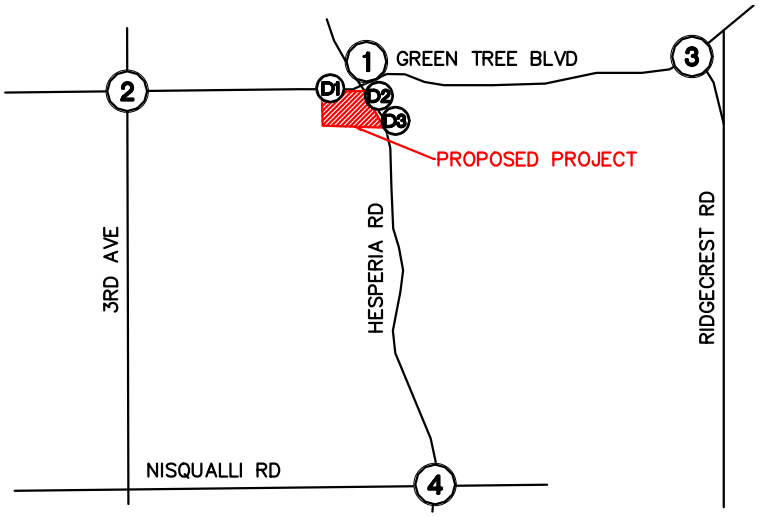
NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
			
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3	
Future Intersection	Future Intersection	Future Intersection	

LEGEND:

- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- D = Defacto Right Turn
- OVL = Right Turn Overlap

FIGURE 5
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
81/85 ← 545/584 ← 171/269 → 248/156 ← 495/415 ← 208/119 97/84 → 281/590 → 160/202 ↘ 117/206 ↑ 440/585 ↑ 97/255 ↗	52/68 ← 115/141 ← 37/38 → 26/50 ← 640/632 ← 34/36 49/69 → 479/845 → 93/87 ↘ 77/70 ↑ 130/124 ↑ 23/24 ↗	← 615/434 ← 286/251 270/752 → 281/363 ↘ 331/276 ↑ 148/260 ↗	90/107 ← 791/804 ← 22/16 → 20/31 ← 39/63 ← 31/48 138/186 → 51/49 → 373/303 ↘ 165/359 ↑ 590/808 ↑ 24/29 ↗
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3	
Future Intersection	Future Intersection	Future Intersection	

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 6
EXISTING TRAFFIC VOLUMES

PROJECT TRAFFIC

Project Trip Generation

Daily and peak hour trips for the proposed project were determined based on data provided by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Trip generation rates for the Convenience Store/Gasoline Station – GFA (5.5-10k) (Land Use 945) and Automated Car Wash (Land Use 948) were used in determining project trips.

It is recognized that not all inbound and outbound trips to the proposed project will be "new" trips on the roadway system in the vicinity of the proposed project. Some trips to the project site will consist of "pass-by" trips -- motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips for retail uses would be individuals who stop at the project site on the way to work or school.

Based on the direction of City of Victorville Staff, pass-by percentages were applied to the proposed land uses as follows:

- Convenience Store/Gasoline Station: 50% AM, 45% PM

Morning and evening peak hour trip generation estimates are summarized on Table 2. The project is estimated to generate 506 morning peak hour trips and 430 evening peak hour trips. After applying pass-by reductions, the development is projected to generate a net of 252 morning peak hour trips, and 260 evening peak hour trips.

Project Trip Distribution and Assignment

Project trip distribution and assignment assumptions for the proposed project were developed based on likely origins and destinations of drivers. Assumptions were reviewed and approved by City Traffic Engineering staff. Trip distribution assumptions are shown on Figure 7.

Based on the proposed project trip distribution, project trips were assigned through the study intersections. Figure 8 shows new project trips that would be added to the study intersections. However, these trips do not include pass-by trips, which would typically be added to project driveways but not to non-adjacent study intersections; pass-by trips are assumed to be part of the existing flow of traffic until reaching the project site. Pass-by trips are shown on Figure 9 and should be added to the volumes shown on Figure 8 to determine the total net project trips at each study intersection. The total project trips are shown on Figure 10.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION

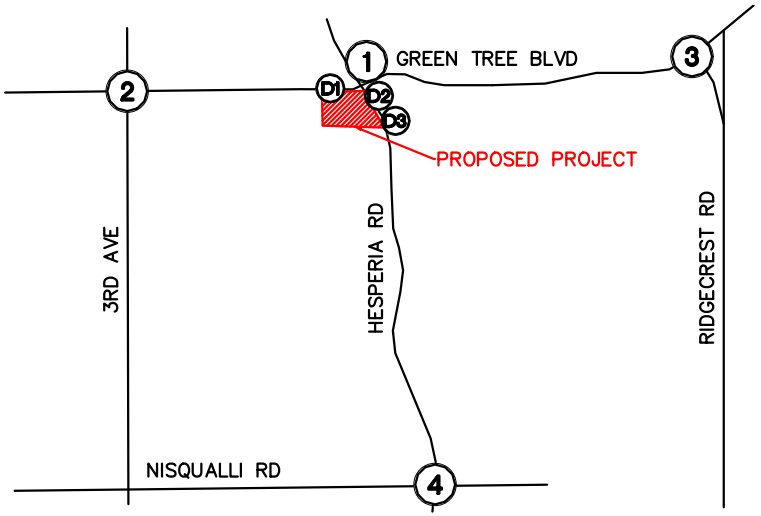
Land Use	ITE Code	Unit	Trip Generation Rates[1]					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Convenience Store/Gasoline Station - GFA (5.5-10k)	945	Fueling Position	15.80	15.80	31.60	13.45	13.45	26.90
Automated Car Wash	948	KSF	*	*	*	7.10	7.10	14.20

Land Use	Quantity	Unit	Trip Generation Estimates					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Convenience Store/Gasoline Station - GFA (5.5-10k)	16	Fueling Position	253	253	506	215	215	430
Pass-by Trips (50% AM, 45% PM) [2]			*-127*	*-127*	*-254*	*-97*	*-97*	*-194*
Automated Car Wash	1.733	KSF	*	*	*	12	12	24
Total Proposed Trips			***126***	***126***	***252***	***130***	***130***	***260***

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

[2] Source: City of Victorville Staff

FIGURE 7
TRIP DISTRIBUTION ASSUMPTIONS
SOURCE: NEARMAP



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
19/20 ↓ ; 25/26 ↓ ; 63/65 → ; 25/26 →	13/13 ↓ ; 13/13 ↓ ; 25/26 ↓ ; 6/7 ↓ ; 25/26 → ; 6/7 ↑	19/20 ← ; 19/20 → ; 6/7 ↘ ; 6/7 ↑	13/13 ↓ ; 13/13 ↓ ; 13/13 ↓ ; 13/13 ↓ ; 13/13 → ; 13/13 →

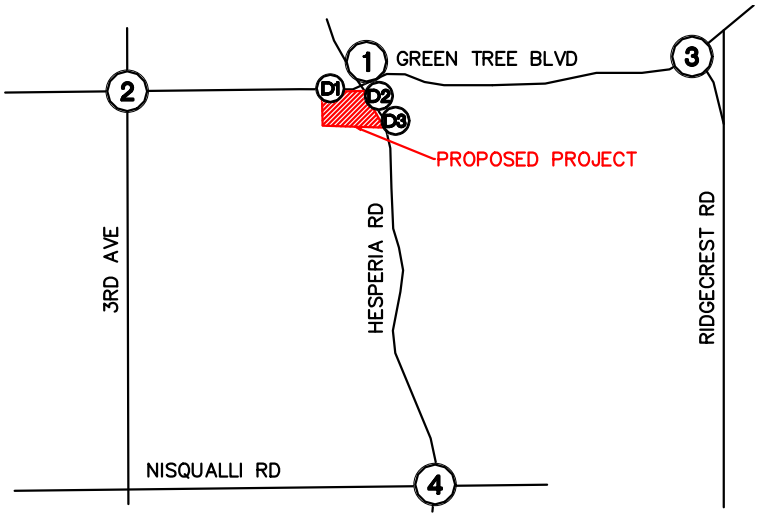
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3
44/46 ← ; 44/46 ↘ ; 88/91 ↑	19/20 ↓ ; 25/26 ↓	25/26 ↓ ; 38/39 ↘ ; 38/39 ↑

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 8
PROJECT–RELATED TRAFFIC VOLUMES



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road

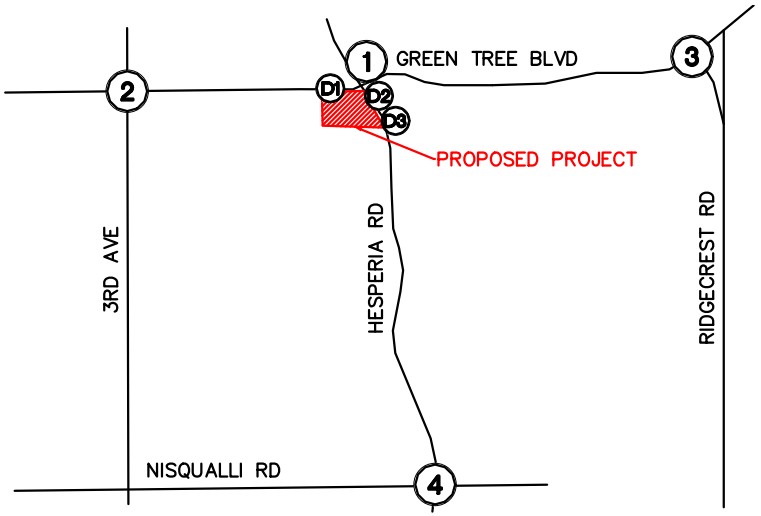
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3
-44/-34 → 44/34 ↘	44/34 ↖ -44/-34 ↙	38/29 ↗ -38/-29 →
107/82 ↗	19/15 ↘	

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 9
PASS-BY TRAFFIC VOLUMES



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
19/20 ← → 25/26 63/65 → 25/26 →	13/13 ↘ 13/13 ↖ ← 25/26 6/7 ↖ 25/26 → 6/7 ↘	← 19/20 19/20 → 6/7 ↘ 6/7 ↓	13/13 ↘ 13/13 ← 13/13 ↙ 13/13 ↖ 13/13 → 13/13 ↓

D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3
← 44/46 -44/-34 → 88/80 ↘ 195/173 ↑	63/54 ↙ ← 19/-8 19/15 ↘	25/26 ↙ 38/39 ↘ 76/68 ↑ -38/-29 →

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 10
TOTAL PROJECT TRAFFIC VOLUMES

PROJECTED OPENING YEAR TRAFFIC

Opening Year Cumulative 2024 Conditions

Opening Year Cumulative 2024 traffic forecasts were developed using the following "build-up" forecasting method:

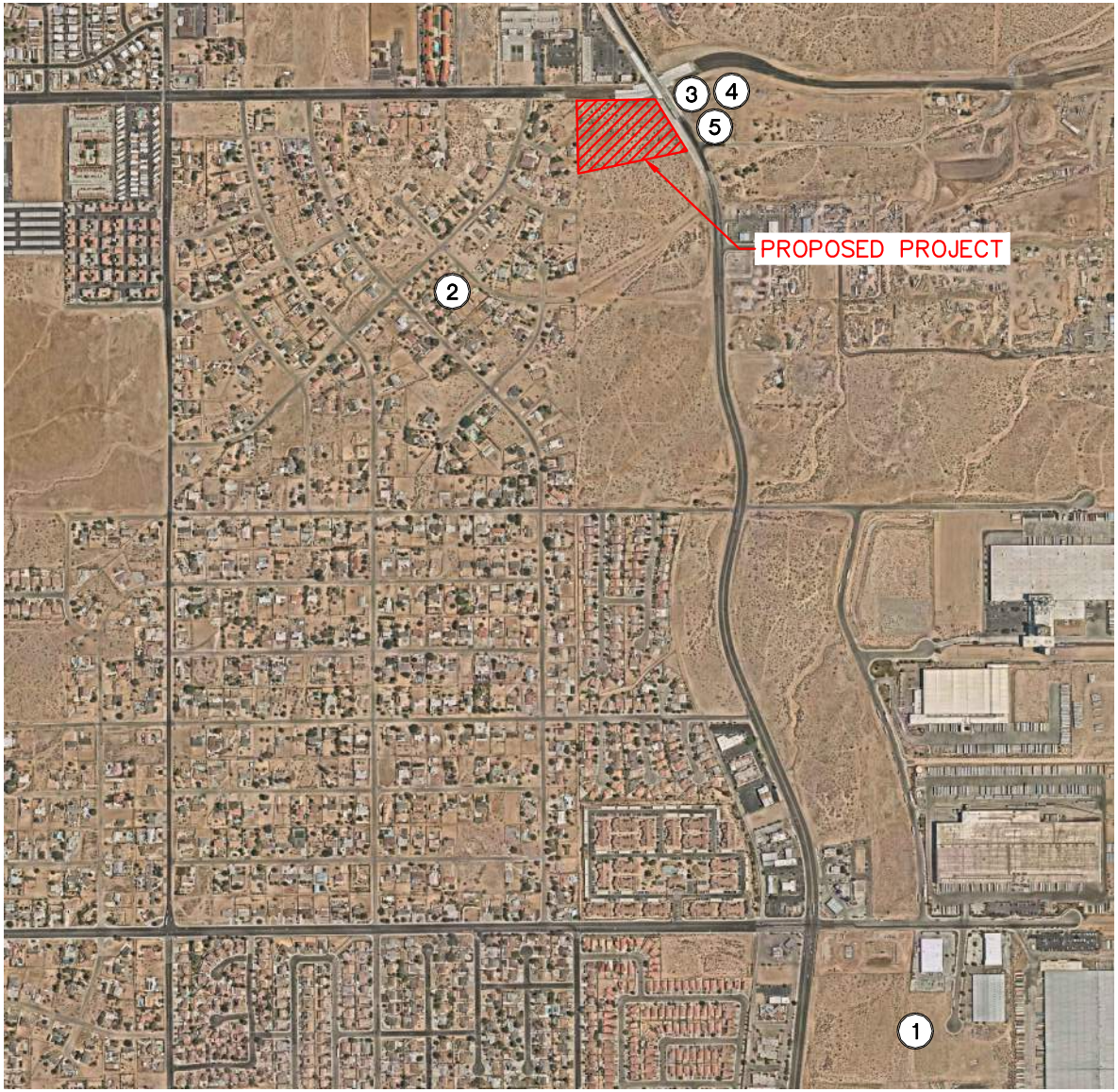
- Existing traffic volumes, plus
- An annual ambient growth rate of 2.0% per year to the Existing traffic volumes, plus
- Cumulative projects traffic
    - Cumulative projects consist of projects that have been approved but are not yet built and fully occupied, as well as projects that are in various stages of the application and approval process but have not yet been approved. These projects are considered to be "reasonably foreseeable," and must therefore be included in the Cumulative Projects analysis.

Cumulative Project information was obtained from City of Victorville Staff. The complete list of cumulative projects is provided in *Appendix C*. For the purpose of this traffic study, the projects were assessed for their proximity to the project site and for their potential to contribute traffic through the study intersections based on their approved or pending land uses. Therefore, not all cumulative projects are anticipated to affect the study area. A summary of the Cumulative Projects is provided on Table 3. The location of the Cumulative Projects in relation to the project site is shown on Figure 11. Cumulative project-related trips at study intersections are shown on Figure 12.

TABLE 3
SUMMARY OF CUMULATIVE PROJECTS

Project #	Location	Land Use	Quantity	Unit	Trip Generation Estimates						
					Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
1	South of Nisqualli Road, West of Production Place	Industrial Park	28.000	KSF	94	8	2	10	2	7	9
2	Approx. 240' SE of Dean Ave and Grant St	Single-Family Detached Housing	1	DU	9	0	1	1	1	0	1
3	13689 Hesperia Rd	Strip Retail Plaza (<40k)	27.000	KSF	1,470	38	25	63	89	89	178
4	13689 Hesperia Rd	Convenience Store/Gasoline Station	6.250	KSF	4,378	177	176	353	170	171	341
5	13690 Hesperia Rd	Fast-Food Restaurant w/ Drive-thru	3.000	KSF	1,402	68	66	134	52	48	100
Total Project Trips					7,353	291	270	561	314	315	629

KSF = Thousand Square Feet, DU = Dwelling Units
ADT = Average Daily Traffic

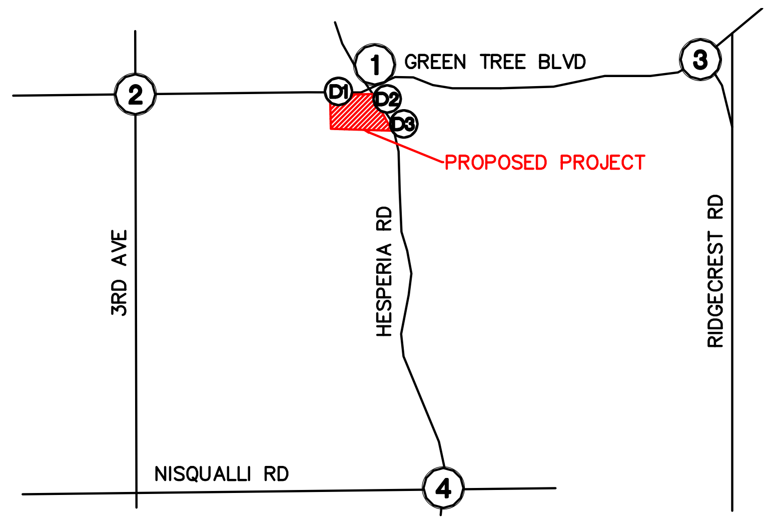


NOT TO SCALE

LEGEND:

(X) = Cumulative Project Location

FIGURE 11
CUMULATIVE PROJECT LOCATIONS
SOURCE: NEARMAP



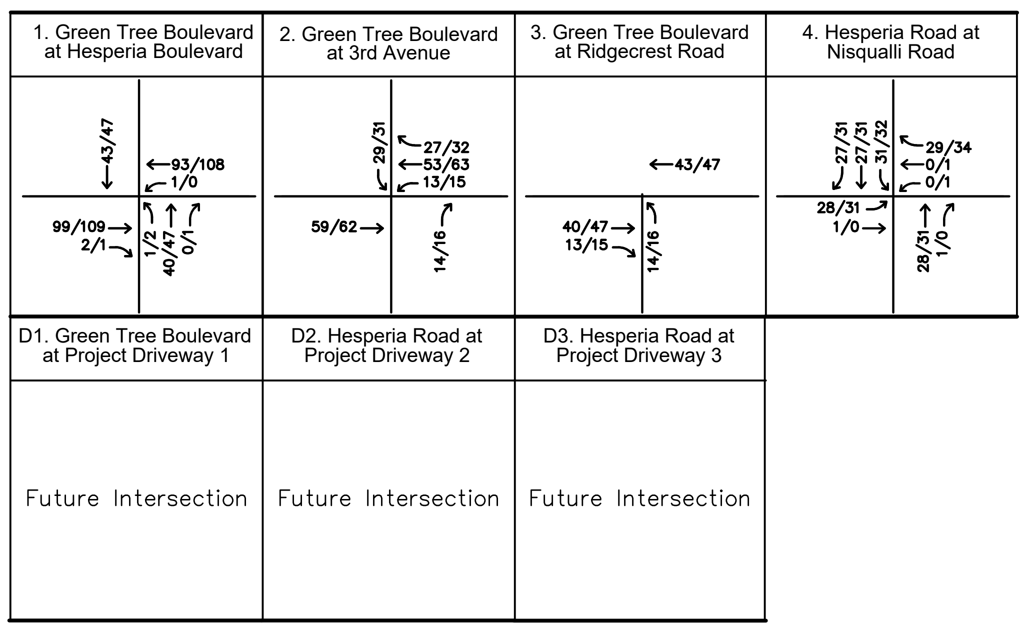


FIGURE 12
CUMULATIVE PROJECT
TRAFFIC VOLUMES

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

Kimley»Horn

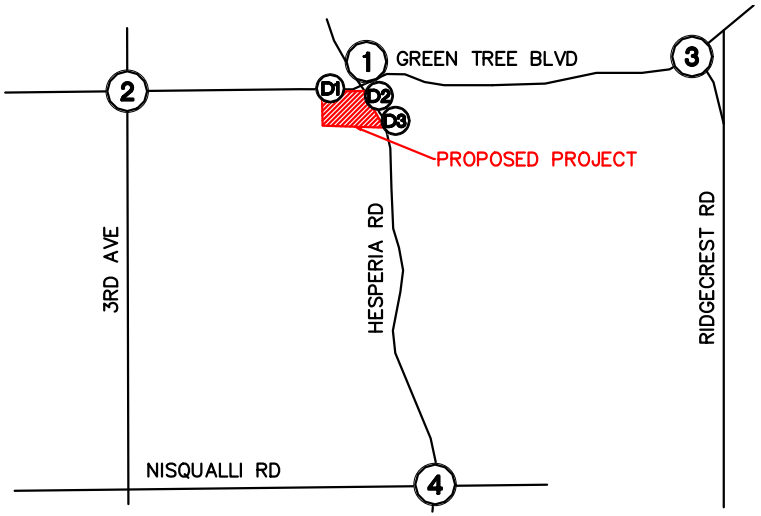
Intersection Analysis – Opening Year Cumulative 2024 Conditions

The study intersections were analyzed for the Opening Year Cumulative 2024 Conditions. Intersection Level of Service worksheets are provided in *Appendix D*. The Opening Year Cumulative 2024 Conditions analysis results and Level of Service for the study intersections are presented in Table 4. Opening Year 2024 Cumulative peak hour traffic volumes are shown on Figure 13. Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service with the exception of the following intersection:

- #1 Green Tree Boulevard at Hesperia Road: PM – LOS E

Table 4 – Summary of Intersection Operations – Opening Year Cumulative 2024 Conditions

Int. #	Intersection	Intersection Control	Peak Hour	Delay (sec/veh)	LOS
1	Green Tree Boulevard at Hesperia Road	Signal	AM	51.2	D
			PM	55.1	**E**
2	Green Tree Boulevard at 3rd Avenue	Signal	AM	24.4	C
			PM	30.2	C
3	Green Tree Boulevard at Ridgecrest Road	Signal	AM	18.2	B
			PM	36.1	D
4	Hesperia Road at Nisqualli Road	Signal	AM	27.3	C
			PM	31.3	C



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
83/87 ← 599/643 ← 174/274 → 253/159 ← 598/531 ← 213/121 99/86 → 386/711 → 165/207 ↘ 120/212 ↑ 489/644 ↑ 99/261	53/69 ← 117/144 ← 67/70 → 54/83 ← 706/708 ← 48/52 50/70 → 548/924 → 95/89 ↘ 79/71 ↑ 133/126 ↑ 37/40	← 670/490 ← 292/256 315/814 → 300/385 ↘ 352/298 ↑ 151/265	119/140 ← 834/851 ← 53/48 → 49/66 ← 40/65 ← 32/50 169/221 → 53/50 → 380/309 ↘ 168/366 ↑ 630/855 ↑ 25/30
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3	
Future Intersection	Future Intersection	Future Intersection	

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 13
OPENING YEAR 2024 WITHOUT PROJECT
TRAFFIC VOLUMES

Opening Year Cumulative 2024 Plus Project Conditions

Project-related traffic was added to the Opening Year Cumulative 2024 traffic volumes to develop the Opening Year Cumulative 2024 Plus Project peak hour forecasts, which are shown on Figure 14.

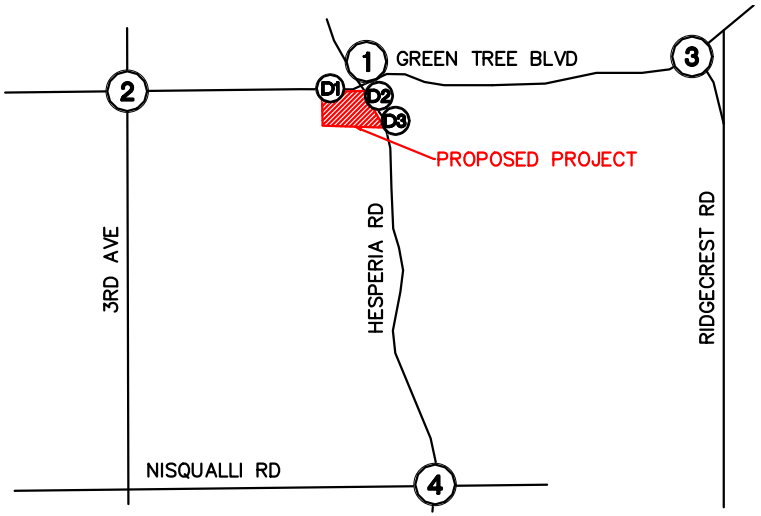
Intersection Analysis – Opening Year Cumulative 2024 Plus Project Conditions

The study intersections were analyzed for the Opening Year Cumulative 2024 Plus Project Conditions in accordance with the analysis methodology described earlier in this report. Intersection Level of Service worksheets are provided in *Appendix D*. The Opening Year Cumulative 2024 Plus Project Conditions analysis results and Level of Service for the study intersections are presented in Table 5. Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service except the following:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS E; PM – LOS E

Table 5 – Summary of Intersection Operations – Opening Year Cumulative 2024 Plus Project Conditions

				Without Project		With Project	
Int. #	Intersection	Intersection Control	Peak Hour	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Green Tree Boulevard at Hesperia Road	Signal	AM	51.2	D	65.1	**E**
			PM	55.1	E	64.8	**E**
2	Green Tree Boulevard at 3rd Avenue	Signal	AM	24.4	C	24.7	C
			PM	30.2	C	31.3	C
3	Green Tree Boulevard at Ridgecrest Road	Signal	AM	18.2	B	18.3	B
			PM	36.1	D	36.4	C
4	Hesperia Road at Nisqualli Road	Signal	AM	27.3	C	28.2	C
			PM	31.3	C	33.4	D
5	Project Driveway at Green Tree Boulevard	Unsignalized	AM	-	-	14.9	C
			PM	-	-	19.7	C
6	Project Driveway at Hesperia Road	Unsignalized	AM	-	-	12.7	B
			PM	-	-	12.6	B
7	Project Driveway at Hesperia Road	Unsignalized	AM	-	-	12.7	B
			PM	-	-	12.8	B



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
83/87 ← 618/663 ← 174/274 → 253/159 ← 598/531 ← 238/147 162/151 → 411/737 → 165/207 ↘ 120/212 ↑ 489/644 ↑ 99/261 ↑	53/69 ← 117/144 ← 80/83 → 67/96 ← 731/734 ← 54/59 50/70 → 573/950 → 95/89 ↘ 79/71 ↑ 133/126 ↑ 43/47 ↑	← 689/510 ← 292/256 334/834 → 306/392 ↘ 358/305 ↑ 151/265 ↑	132/153 ← 847/864 ← 66/61 → 62/79 ← 40/65 ← 32/50 182/234 → 53/50 → 380/309 ↘ 168/366 ↑ 643/868 ↑ 25/30 ↑

D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3
← 801/830 543/922 → 88/80 ↘ 195/173 ↑	63/54 ← 958/963 19/15 ↘ 708/1117 ↑	25/26 ← 952/952 38/39 ↘ 76/68 ↑ 708/1117 ↑

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 14
OPENING YEAR 2024 PLUS PROJECT
TRAFFIC VOLUMES

PROJECTED FUTURE YEAR TRAFFIC

Future Year 2034 Conditions

To derive the Future Year 2034 intersection turning movement forecasts, the San Bernardino Transportation Analysis Model (SBTAM) Base Year 2016 and Build-out Year 2040 future traffic projections were used. The raw volumes obtained from the model output were post-processed by determining the annual growth between the base model year and the future model year and applying the growth increment to existing count volumes. This was accomplished using the B-Turns methodology, developed by the Federal Highway Administration (FHWA). As a conservative approach, if a turning movement volume produced by this process was less than the Opening Year 2024 Plus Cumulative Projects forecast volume for that movement, manual adjustments were made to assure that all forecast build-out year volumes would not be less than the Opening Year 2024 forecast volumes. The SBTAM Model plots and B-Turns worksheets are provided in *Appendix E.* The resulting traffic volumes for Future Year 2034 condition are shown on Figure 15.

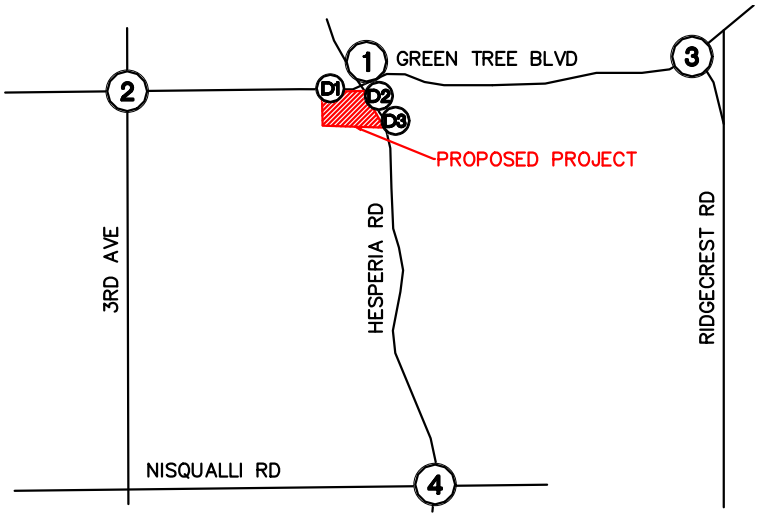
Intersection Analysis – Future Year 2034 Conditions

The study intersections were analyzed for the Future Year 2034 Conditions. Intersection Level of Service worksheets are provided in *Appendix D*. The Future Year 2034 Conditions analysis results and Level of Service for the study intersections are presented in Table 6. Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service with the exception of the following intersections:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS E; PM – LOS F
- #3 Green Tree Boulevard at Ridgecrest Boulevard: AM – LOS E; PM – LOS E

Table 6 – Summary of Intersection Operations – Future Year 2034 Conditions

Int. #	Intersection	Intersection Control	Peak Hour	Delay (sec/veh)	LOS
1	Green Tree Boulevard at Hesperia Road	Signal	AM	61.3	**E**
			PM	95.9	**F**
2	Green Tree Boulevard at 3rd Avenue	Signal	AM	23.4	C
			PM	27.8	C
3	Green Tree Boulevard at Ridgecrest Road	Signal	AM	55.4	**E**
			PM	79.0	**E**
4	Hesperia Road at Nisqualli Road	Signal	AM	29.2	C
			PM	27.0	C



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
88/87 ← 599/643 ← 427/565 ↖ 520/392 ← 745/672 ← 219/134 ↖ 100/97 ↗ 480/910 → 165/207 ↘ 120/212 ↑ 489/644 ↑ 106/270 ↑	55/76 ← 117/144 ← 67/70 ↖ 54/83 ← 806/765 ← 48/52 ↖ 53/70 ↗ 584/1044 → 95/89 ↘ 79/74 ↑ 142/130 ↑ 37/40 ↑	← 749/526 ← 292/256 ↖ 335/854 → 683/827 ↘ 732/695 ↑ 151/265 ↑	148/140 ← 834/851 ← 53/48 ↖ 49/66 ← 57/89 ← 32/50 ↖ 169/221 ↘ 53/59 → 380/331 ↘ 389/374 ↑ 630/855 ↑ 38/30 ↑
D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3	
Future Intersection	Future Intersection	Future Intersection	

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 15
FUTURE YEAR 2034 WITHOUT PROJECT
TRAFFIC VOLUMES

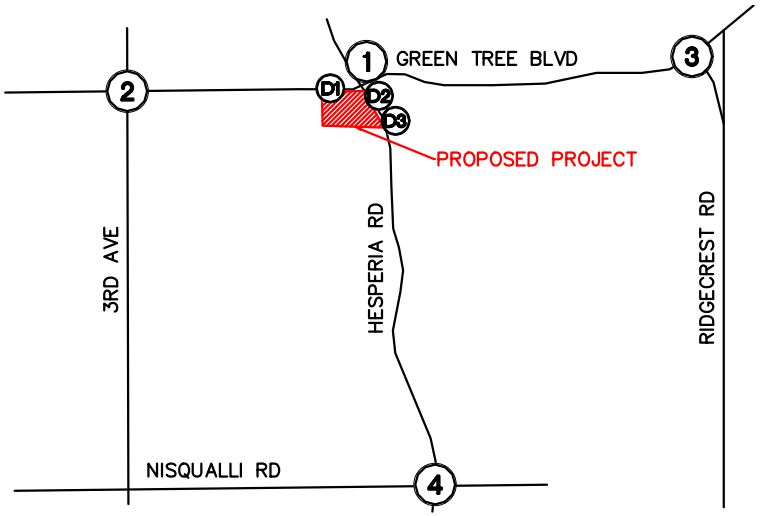
Intersection Analysis – Future Year 2034 Plus Project Conditions

The study intersections were analyzed for the Future Year 2034 Plus Project Conditions in accordance with the analysis methodology described earlier in this report. Intersection Level of Service worksheets are provided in *Appendix D*. The resulting traffic volumes for Future Year 2034 condition are shown on Figure 16. The Future Year 2034 Plus Project Conditions analysis results and Level of Service for the study intersections are presented in Table 7. Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service with the exception of the following intersections:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS F; PM – LOS F
- #3 Green Tree Boulevard at Ridgecrest Boulevard: AM – LOS E; PM – LOS F

Table 7 – Summary of Intersection Operations – Future Year 2034 Plus Project Conditions

				Without Project		With Project	
Int. #	Intersection	Intersection Control	Peak Hour	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
1	Green Tree Boulevard at Hesperia Road	Signal	AM	61.3	E	85.1	**F**
			PM	95.9	F	131.1	**F**
2	Green Tree Boulevard at 3rd Avenue	Signal	AM	23.4	C	23.6	C
			PM	27.8	C	28.5	C
3	Green Tree Boulevard at Ridgecrest Road	Signal	AM	55.4	E	56.8	**E**
			PM	79.0	E	80.5	**F**
4	Hesperia Road at Nisqualli Road	Signal	AM	29.2	C	29.7	C
			PM	27.0	C	28.2	C
5	Project Driveway at Green Tree Boulevard	Unsignalized	AM	-	-	15.4	C
			PM	-	-	22.4	C
6	Project Driveway at Hesperia Road	Unsignalized	AM	-	-	12.4	B
			PM	-	-	12.3	B
7	Project Driveway at Hesperia Road	Unsignalized	AM	-	-	12.4	B
			PM	-	-	12.5	B



NOT TO SCALE

1. Green Tree Boulevard at Hesperia Boulevard	2. Green Tree Boulevard at 3rd Avenue	3. Green Tree Boulevard at Ridgecrest Road	4. Hesperia Road at Nisqualli Road
88/87 ← 618/663 ← 427/565 → 520/392 ← 745/672 ← 244/160 →	55/76 ← 117/144 ← 80/83 → 67/96 ← 831/791 ← 54/59 →	768/546 ← 292/256 →	161/153 ← 847/864 ← 66/61 → 62/79 ← 57/89 ← 32/50 →
163/162 → 505/936 → 165/207 ↘ 120/212 ↑ 489/644 ↑ 106/270 ↑	53/70 → 609/1070 → 95/89 ↘ 79/74 ↑ 142/130 ↑ 43/47 ↑	354/874 → 689/834 ↘ 738/702 ↑ 151/265 ↑	182/234 → 53/59 → 380/331 ↘ 389/374 ↑ 643/868 ↑ 38/30 ↑

D1. Green Tree Boulevard at Project Driveway 1	D2. Hesperia Road at Project Driveway 2	D3. Hesperia Road at Project Driveway 3
←953/971	63/54 ← 964/976 ←	25/26 ← 958/965 ←
638/1132 → 88/80 ↘ 195/173 ↑	19/15 ↘ 715/1126 →	38/39 ↘ 76/68 ↑ 715/1126 →

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour Volumes

FIGURE 16
FUTURE YEAR 2034 WITH PROJECT
TRAFFIC VOLUMES

POTENTIAL IMPROVEMENTS

Based on City of Victorville Standards and criteria noted earlier in the report, the following intersections operate at a deficient LOS:

- #1 Green Tree Boulevard at Hesperia Road
- #3 Green Tree Boulevard at Ridgecrest Boulevard

Intersection #1 operates at a deficient LOS in both Opening Year 2024 Cumulative Plus Project and Future Year 2034 Plus Project scenarios. Intersection #3 operates at a deficient LOS in the Future Year 2034 Plus Project scenario only. Implementation of the following mitigation strategies would alleviate deficiencies at the identified study intersections. As impacts are cumulative, improvements would be paid for through fair share or by Transportation Uniform Mitigation Fee (TUMF), if applicable.

<u>#1– Green Tree Boulevard at Hesperia Road</u>

- Opening Year 2024: Adjust signal timing to provide longer left-turn phases for all left-turns to accommodate demand.
- Future Year 2034: Adjust signal timing to provide longer left-turn phases for all left-turns to accommodate demand.

<u>#3– Green Tree Boulevard at Ridgecrest Boulevard</u>

- Future Year 2034: Add dedicated eastbound right-turn lane and implement right-turn overlap phasing for the same approach.

A summary of intersection operation before and after implementation of the improvement is presented in Table 8. Intersection Level of Service worksheets are provided in *Appendix D*.

Table **8** – Summary of Intersection Operations – Mitigation Measures

			Without Mitigation		With Mitigation	
Scenario	Intersection	Peak Hour	Int. Delay (sec/veh)	Int. LOS	Int. Delay (sec/veh)	Int. LOS
Opening Year 2024 Plus Project	#1 Green Tree Boulevard at Hesperia Road	AM	65.1	**E**	33.8	C
		PM	64.8	**E**	37.6	D
Future Year 2034 Plus Project		AM	85.1	**F**	38.7	D
		PM	131.1	**F**	49.1	D
Future Year 2034 Plus Project	#3 Green Tree Boulevard at Ridgecrest Road	AM	56.8	**E**	21.6	C
		PM	80.5	**F**	25.1	C

SIGHT DISTANCE ASSESSMENT

Due to the presence of an existing large earth mound just south of the project along Hesperia Road, a sight distance assessment was conducted at the southernmost driveway.

Sight distance was evaluated for the eastbound left-turn movement out of the southerly project driveway on Hesperia Road to determine whether visibility of oncoming vehicles on northbound Hesperia Road is adequate to safely complete the maneuver. The sight distance standard used in this analysis is from the American Association of State Highway and Transportation Officials (AASHTO) – Geometric Design of Highways and Streets, Chapter 9 – Intersections (Intersection Sight Distance). Case B1 is used for left-turns at stop-controlled intersections. The required sight distance is shown on Figure 17. A potential improvement to driver line of sight, in this situation, would be the removal of earthwork within the area if feasible. It is noted, per City staff, that a previous study had indicated that this intersection warrants the installation of a traffic signal in the future. With the implementation of a traffic signal, the minor street approach would no longer yield to vehicles along Hesperia Road to make a left-turn maneuver. Therefore, the sight distance requirement would be resolved.

QUEUEING ANALYSIS

A drive-through queueing analysis was conducted at similar existing car wash sites located within gas stations, to evaluate average and 95th percentile queues, where the 95th percentile queue indicates the queue length at which 95% of queues will be shorter. The goal of the analysis is to demonstrate that the 95th percentile queue can be contained within the project site without disrupting the flow of traffic along Green Tree Boulevard or Hesperia Road.

The opening to the drive-through lane is located south of the fuel pumps, along the west side of the convenience store building. The drive-through lane would wrap around the south side of the building in a counter-clockwise direction. The drive-through lane would begin as a double lane, continuing to the two order/pay boards, and would merge into a single drive-through immediately after the order/pay boards, continuing for the remainder of the drive through. The drive-through lane would provide a queuing capacity for approximately 13 vehicles prior to the car wash tunnel.

Queueing data was collected at two existing car wash sites:

- Shell Gas Station Car Wash – 12870 Mariposa Road, Victorville, CA 92395
- Circle K Car Wash – 15825 Mojave Drive, Victorville, CA 92394

Each site was observed between 2:00 PM and 6:00 PM on a Friday and between 10:00 AM and 2:00 PM on a Saturday to coincide with the peak periods of car wash operation during a typical week. Drive through queue observation worksheets are provided in *Appendix F*. The results of the observations are summarized on Table 9 and Table 10 for a typical Friday and Saturday, respectively.

TABLE 9

SUMMARY OF CAR WASH DRIVE-THROUGH QUEUING DATA COLLECTION
FRIDAY

Time Period	Number of Drive-through Vehicles in the Queue			
	Average Queue		95th %-ile [1] Queue	
	Shell	Circle K	Shell	Circle K
Lunch				
2:00-2:15 PM	0	1	0	1
2:15-2:30 PM	0	0	0	0
2:30-2:45 PM	0	0	1	0
2:45-3:00 PM	0	0	1	1
3:00-3:15 PM	1	1	2	1
3:15-3:30 PM	0	0	1	0
3:30-3:45 PM	1	0	1	1
3:45-4:00 PM	0	0	1	0
4:00-4:15 PM	0	0	0	0
4:15-4:30 PM	0	0	1	0
4:30-4:45 PM	0	0	0	0
4:45-5:00 PM	0	0	0	0
5:00-5:15 PM	0	0	0	1
5:15-5:30 PM	0	0	1	0
5:30-5:45 PM	0	0	0	1
5:45-6:00 PM	0	0	0	1
Highest Value	1	1	2	1

Notes: [1] 95th percentile = The queue will be less than the queue shown 95% of the time.

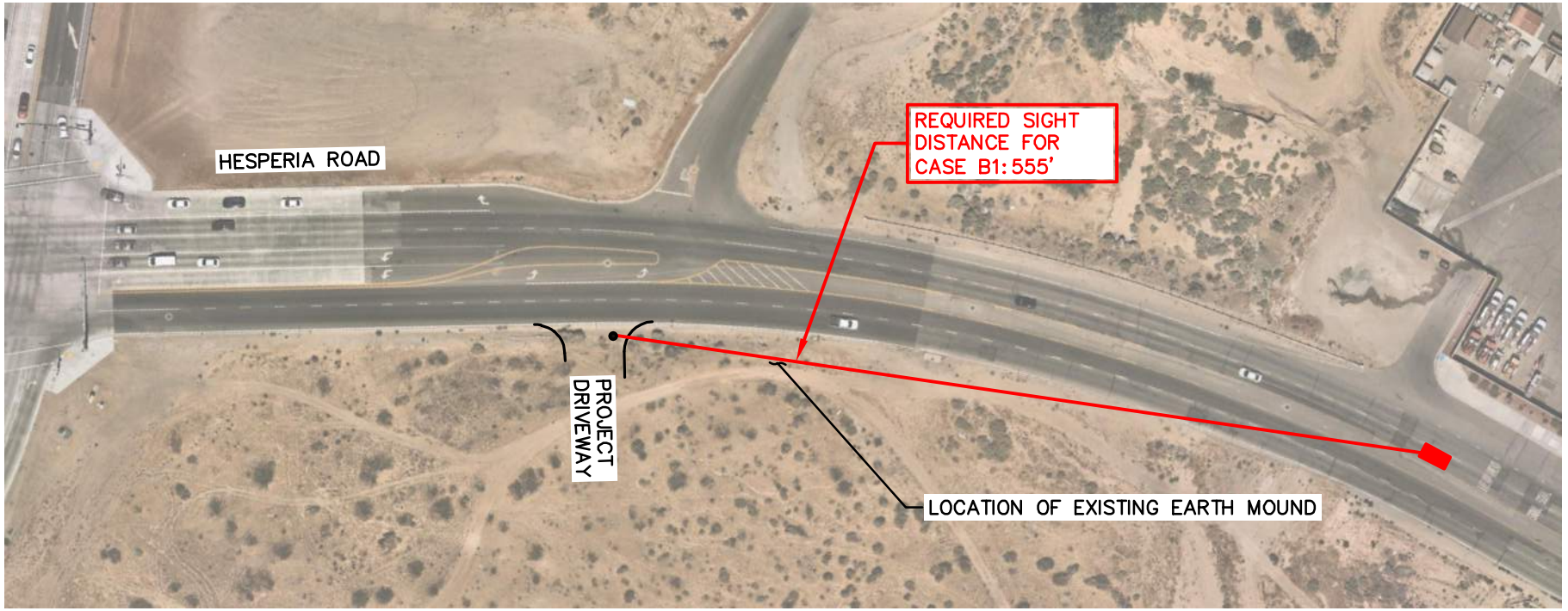
TABLE 10

SUMMARY OF CAR WASH DRIVE-THROUGH QUEUING DATA COLLECTION
SATURDAY

Time Period	Number of Drive-through Vehicles in the Queue			
	Average Queue		95th %-ile [1] Queue	
	Shell	Circle K	Shell	Circle K
Lunch				
10:00-10:15 AM	0	1	0	2
10:15-10:30 AM	0	0	1	0
10:30-10:45 AM	0	0	0	1
10:45-11:00 AM	0	1	0	1
11:00-11:15 AM	0	0	0	0
11:15-11:30 AM	0	1	1	1
11:30-11:45 AM	0	1	1	2
11:45 AM-12:00 PM	0	0	1	1
12:00-12:15 PM	0	0	1	1
12:15-12:30 PM	0	0	0	1
12:30-12:45 PM	1	0	1	1
12:45-1:00 PM	0	0	0	1
1:00-1:15 PM	1	0	1	1
1:15-1:30 PM	0	0	1	1
1:30-1:45 PM	0	0	0	0
1:45-2:00 PM	0	0	1	1
Highest Value	1	1	1	2

Notes: [1] 95th percentile = The queue will be less than the queue shown 95% of the time.

NOT TO SCALE



LEGEND:
● = DRIVER'S EYE POSITION
= SIGHT LINE

FIGURE 17
EASTBOUND LEFT-TURN SIGHT DISTANCE
SOURCE: NEARMAP

Kimley»Horn

The queuing activity was observed to vary with an ebb and flow pattern throughout the data collection periods. The following vehicle movement and queuing observations of the drive-through operations at the study locations were made:

- Observed peak queues were consistent between the two car wash sites, ranging from 1 to 2 vehicles during Friday and Saturday analysis periods.
- Peak queues occurred at different times during the analysis period at the three car wash sites, on both Friday and Saturday.
- At both car wash sites, the largest observed 95th percentile queue was 2 vehicles.
- The highest average observed queues were 1 vehicle during both the Friday and Saturday analysis periods, at both car washes.
- In all cases, vehicles queues did not extend to the drive-through opening.

Based on the existing data, with the proposed drive-through lane queueing capacity of 13 vehicles, the proposed drive-through queue will adequately accommodate 95th percentile queues and will not disrupt traffic on-site, nor on Green Tree Boulevard or Hesperia Road.

VEHICLE MILES TRAVELED (VMT) SCREENING

With the passage of Senate Bill (SB) 743 by the California Legislature in September 2013, VMT has become an important indicator for determining if a new development will result in a "significant transportation impact" as required by the California Environmental Quality Act (CEQA). Under SB 743, the state Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA in order to replace methods measuring automobile delay and Level of Service. In response to this mandate, the Office of Planning and Research proposed, and the California Natural Resources Agency adopted CEQA Guidelines Section 15064.3, which indicates that VMT exceeding an applicable threshold of significance is the most appropriate measure for evaluating a project's transportation impacts. Section 15064.3 goes on to clarify that except for projects regarding roadway capacity, "…a project's effect on automobile delay does not constitute a significant environmental impact." The OPR further elaborates on VMT metrics within the Technical Advisory on Evaluating Transportation Impacts in CEQA document, published in December 2018. Subsequently, the City of Victorville, via Resolution No. 20-031 in June 2020, has established VMT screening thresholds of significance for projects within the City.

The Technical Advisory establishes that, for commercial uses, impact should be established based on the net increase in VMT. However, the document further establishes that local-serving commercial uses can be determined to result in an overall VMT reduction.

This methodology is consistent with the City of Victorville VMT Analysis Guidelines, published in July 2021. Local-serving commercial uses, particularly in urban areas, primarily serve pre-existing needs and do not generate new trips because there are existing demands. As a result, local-serving commercial uses less than 122,000 square feet can be presumed to reduce trip lengths when a new site is proposed and would therefore have a less-than-significant impact. For instance, a customer may travel to the new development because of a closer proximity compared to other gas stations or car washes in the area and is therefore not a new trip. These customers will access the proposed site because it is closer to their origin, or because the site is more convenient than similar sites in the vicinity. This results in an existing trip on the roadway network becoming shorter, rather than a new trip being added to the roadway network. In accordance with the City of Victorville VMT Analysis Guidelines, it is appropriate that the proposed project be presumed to result in a less-than-significant VMT impact and support the goals of SB 743. No further VMT assessment is anticipated.

FINDINGS AND CONCLUSIONS

This traffic impact analysis has been prepared to evaluate the project-related traffic impacts associated with the proposed gas station and car wash located at the southwest corner of the Green Tree Boulevard and Hesperia Road intersection in the City of Victorville, California. The project is estimated to generate 506 morning peak hour trips and 430 evening peak hour trips. After applying pass-by reductions, the development is projected to generate a net of 252 morning peak hour trips, and 260 evening peak hour trips.

Existing morning peak period (7:00 to 9:00 AM) and evening peak period (4:00 to 6:00 PM) turning movement counts were collected for all study intersections. The counts were completed in June 2023.

Existing lane geometrics and traffic control at each intersection were used in conducting peak hour Level of Service (LOS) analyses. Under Existing Conditions, all study intersections would operate at an acceptable Level of Service.

An ambient growth factor of 2.0% and cumulative project traffic were added to the Existing scenario to develop the Opening Year Cumulative 2024 scenario volumes. In the Opening Year Cumulative 2024 scenario, all study intersections would continue to operate at an acceptable Level of Service except the following intersection:

- #1 Green Tree Boulevard at Hesperia Road: PM – LOS E

Proposed project trips were added to the Opening Year Cumulative 2024 traffic volumes to determine the traffic volumes for the Opening Year Cumulative 2024 Plus Project scenario. In the Opening Year Cumulative 2024 Plus Project scenario, all study intersections would continue to operate at an acceptable Level of Service except the following intersection:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS E; PM – LOS E

Future Year 2034 trips were determined based on the SBTAM and B-Turns methodology to predict traffic conditions under general plan build-out conditions. Analysis of the Future Year 2034 scenario shows that all study intersections would continue to operate at an acceptable Level of Service except the following intersections:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS E; PM – LOS F
- #3 Green Tree Boulevard at Ridgecrest Boulevard: AM – LOS E; PM – LOS E

Project trips were added to Future Year 2034 conditions to determine the future impact of project traffic conditions. Analysis of the Future Year 2034 scenario shows that all study intersections would continue to operate at an acceptable Level of Service except the following intersections:

- #1 Green Tree Boulevard at Hesperia Road: AM – LOS F; PM – LOS F
- #3 Green Tree Boulevard at Ridgecrest Boulevard: AM – LOS E; PM – LOS E

Based on City of Victorville Standards and criteria noted earlier in the report, the following intersections operate at a deficient LOS:

- #1 Green Tree Boulevard at Hesperia Road
- #3 Green Tree Boulevard at Ridgecrest Boulevard

Implementation of the following mitigation strategies would alleviate deficiencies:

#1– Green Tree Boulevard at Hesperia Road

- Opening Year 2024: Adjust signal timing to provide longer left-turn phases for all left-turns to accommodate demand.
- Future Year 2034: Adjust signal timing to provide longer left-turn phases for all left-turns to accommodate demand.

#3– Green Tree Boulevard at Ridgecrest Boulevard

- Future Year 2034: Add dedicated eastbound right-turn lane and implement right-turn overlap phasing for the same approach.

With the identified mitigation applied, both study intersections operate at an acceptable LOS for all identified scenarios.

A drive-through queueing analysis was conducted at similar existing car wash sites located within gas stations to demonstrate that the 95th percentile queue can be contained within the project site. Based on the existing data, with the proposed drive-through lane queueing capacity of 13 vehicles, the proposed drive-through queue will adequately accommodate 95th percentile queues and will not disrupt traffic on-site, nor on Green Tree Boulevard or Hesperia Road.

In accordance with the City of Victorville VMT Analysis Guidelines, it is appropriate that the proposed project be presumed to result in a less-than-significant VMT impact and support the goals of SB 743. No further VMT assessment is anticipated.

APPENDIX A

APPROVED SCOPE OF STUDY FORM

Kimley»Horn

May 22, 2023

Anwar Wagdy
City of Victorville
Public Works Department

RE: ***Traffic Study Scope of Work for the Proposed Gas Station Project at the Southwest Corner of Green Tree Boulevard and Hesperia Boulevard***

Kimley-Horn and Associates, Inc. is pleased to submit this Scope of Work for the proposed retail development at the southwest corner of Green Tree Boulevard and Hesperia Boulevard in the City of Victorville. The scope of the traffic analysis is summarized below. This scope of work is based on the review of the City of Victorville *General Guidelines for Conducting Traffic Studies and the Determination of Intersection Level of Service and Improvement Needs (2005*).

Project Description

The applicant proposes to develop a gas station with 16 fueling positions, a 5,785-square-foot convenience market, and a 1,733-square-foot drive-through car wash. The current site is vacant. The following traffic study scope of work has been prepared in accordance with the City of Victorville's guidelines. The project site plan is shown on **Attachment 1**. The project is anticipated to open in 2024.

Study Scenarios

The following study scenarios will be included for analysis:

- Existing
- Opening Year 2024 (Existing + Ambient Growth + Cumulative Projects)
- Opening Year 2024 with Project (Existing + Ambient Growth + Cumulative Projects + Project)
- Future Year 2034 Without Project
- Future Year 2034 With Project

Each study scenario will include morning peak hour and evening peak hour analysis.

Traffic Growth

This project will be assumed to open in 2024. An annual ambient growth rate of 2% will be used to grow existing volumes to the Opening Year scenario. Future Year 2034 volumes will be determined by factoring volumes based on SBTAM model data.

Study Methodology

Intersection Level of Service calculations will be based on the Highway Capacity Manual (HCM), 6th Edition. Analysis parameters will be based on SANBAG CMP guidelines, and on the City of Victorville guidelines.

Project Trip Generation

The trips expected to be generated by the project were calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021). Trip rates are based on the following land use (LU) categories:

- LU 945 – Convenience Store/Gas Station – GFA (5.5-10k)
- LU 948 – Automated Car Wash

The project trip generation takes into consideration pass-by trip reductions. It is recognized that not all inbound and outbound trips to the proposed project will be "new" trips on the roadway system in the vicinity of the proposed project. Some trips to the project site will consist of "pass-by" trips -- motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips would be individuals who stop at the project site on the way to work or school. Pass-by rates are based on rates provided by City of Victorville staff.

The project is estimated to generate a net 252 morning peak hour trips, and 260 evening peak hour trips, after deduction of pass-by trips. A summary of the project trip generation is shown on **Attachment 2**.

Study Intersections

The following study intersections are proposed:

1. Green Tree Boulevard and Hesperia Boulevard
2. Green Tree Boulevard and 3rd Avenue
3. Green Tree Boulevard and Ridgecrest Road
4. Hesperia Road and Nisqualli Road

Additionally, each project driveway will be analyzed.

Existing Traffic Counts

New morning and evening peak hour traffic counts at the study intersections will be collected.

Project Trip Distribution

Project trip distribution assumptions are shown on **Attachment 3**.

Queuing Analysis

Queueing analysis will be conducted to demonstrate that the 95th percentile queue can be contained within the project site. Queueing data will be collected at the two existing car wash sites located within gas stations:

- Shell Gas Station Car Wash - 12870 Mariposa Rd, Victorville, CA 92395
- Circle K Car Wash - 15825 Mojave Dr, Victorville, CA 92394

Each site will be observed between 2PM and 6PM on a Friday and between 10AM and 2PM on a Saturday to coincide with the peak periods of car wash operation, for a total of up to 16 hours of data collection. Data collection will include observing and documenting the queuing distance provided, the number of vehicles using the car wash, and the length of queues throughout the data collection period.

VMT Screening

With the passage of Senate Bill (SB) 743 by the California Legislature in September 2013, VMT has become an important indicator for determining if a new development will result in a "significant transportation impact" as required by the California Environmental Quality Act (CEQA). Under SB 743, the state Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA in order to replace methods measuring automobile delay and Level of Service. In response to this mandate, the Office of Planning and Research proposed, and the California Natural Resources Agency adopted CEQA Guidelines Section 15064.3, which indicates that VMT exceeding an applicable threshold of significance is the most appropriate measure for evaluating a project's transportation impacts. Section 15064.3 goes on to clarify that except for projects regarding roadway capacity, "…a project's effect on automobile delay does not constitute a significant environmental impact." The OPR further elaborates on VMT metrics within the *Technical Advisory on Evaluating Transportation Impacts in CEQA* document, published in December 2018. Subsequently, the City of Victorville, via Resolution No. 20-031 in June 2020, has established VMT screening thresholds of significance for projects within the City.

As indicated in the City of Victorville VMT Analysis Guidelines (June 2020), projects will not require a VMT analysis if they are screened using the project's land use type. The guidelines establish that retail land uses, up to 122,000 square feet, are considered to have less-than-significant impacts.

In accordance with the Technical Advisory and with City of Victorville VMT Guidelines, it is appropriate that the proposed project be presumed to result in a less-than-significant VMT impact and support the goals of SB 743 due to its land use and unit count. No further VMT assessment is anticipated.

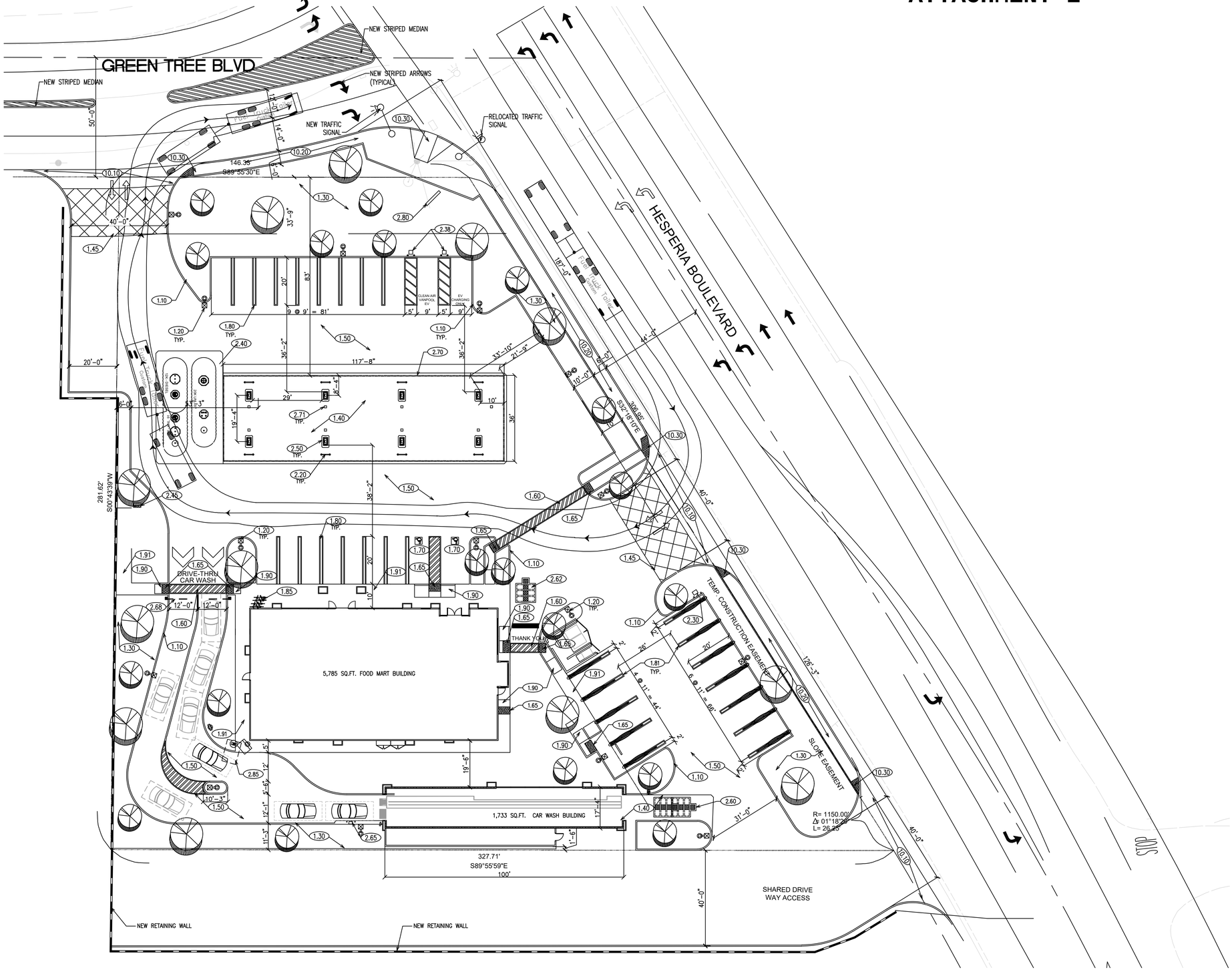
APPROVED:

By:

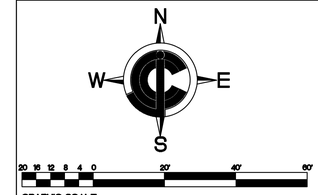
_____.

Anwar Wagdy
City of Victorville

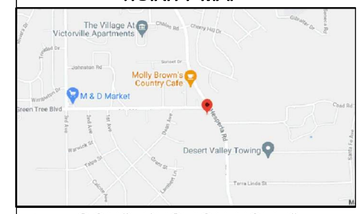
ATTACHMENT 1



NORTH ARROW/GRAPHIC SCALE



VICINITY MAP



CONSTRUCTION NOTES

1.10 NEW 6" CONCRETE CURB
1.20 NEW AREA LIGHT
1.30 NEW LANDSCAPING WITH AUTOMATIC IRRIGATION
1.40 NEW 6" CONCRETE DRIVE SLAB WITH #3 BARS @ 18" O.C. OR AS SPECIFIED IN SOILS REPORT IF AVAILABLE.
1.45 NEW COLORED STAMPED CONCRETE AT DRIVEWAYS
1.50 NEW 6" OVER 4" A.B. ASPHALT PAVING OR AS SPECIFIED IN SOILS REPORT IF AVAILABLE.
1.60 NEW 48" HANDICAP PATH OF TRAVEL (SLOPE NOT TO EXCEED 2% EACH WAY
1.65 NEW TRUNCATED DOME WITH MINIMUM 36" WIDTH TO BE INSTALLED
1.70 NEW 17'X20' HANDICAP PARKING SPACE WITH ALL RELATED SIGNAGE (SLOPE NOT TO EXCEED 2% E.W.)
1.80 NEW 9'X20' STANDARD PARKING SPACES
1.81 NEW 11'X20' VACCUM PARKING SPACES
1.85 NEW BICYCLE RACK
1.90 NEW CONCRETE HANDICAP RAMP (SLOPE 8.33%)
1.91 NEW CONCRETE SIDEWALK (MIN. 48" WHERE HANDICAP PATH OF TRAVEL OCCURS)
2.10 NEW TRASH ENCLOSURE WITH (3) STEEL GATES
2.20 NEW 6" CONCRETE FILLED STEEL GUARD POSTS
2.30 NEW AIR/WATER UNIT
2.35 NEW VACUUM UNITS
2.38 NEW EV CHARGING STATION
2.40 NEW UNDERGROUND STORAGE TANKS UNDER REINFORCED CONCRETE SLAB
2.45 NEW UNDERGROUND TANK VENT RISERS
2.50 NEW CONCRETE ISLAND W/ (1) MULTI PRODUCT DISPENSER (6" MIN. & 8" MAX. HEIGHT)
2.60 NEW 3,000 GALLON UNDERGROUND CLARIFIER
2.62 NEW 750 GALLON GREASE INTERCEPTOR
2.65 NEW PAYPOINT STATION
2.68 NEW CLEARANCE BAR
2.70 NEW FUELING CANOPY (16' CLEARANCE BELOW DECK)
2.71 NEW FUELING CANOPY COLUMNS
2.80 NEW ID SIGNAGE
2.85 FUTURE Q.S.R. MENU BOARD
10.10 NEW CONCRETE DRIVE APPROACH PER SB COUNTY STD 129B
10.20 NEW CONCRETE SIDWALK PER SB COUNTY STD 109C
10.30 NEW CONCRETE CURB AND GUTTER PER SB COUNTY STD 110

REVISIONS		BY
1	10/12/2022	ER
2		
3		
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5		
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13		

PLANS PREPARED BY:
A & S ENGINEERING INC.
PLANNING · ENGINEERING · CONSTRUCTION MANAGEMENT
24645 SUD CANYON ROAD, SUITE B
CANYON COUNTRY, CA 91387 FAX #: (661) 250-9333
PHONE #: (661) 250-9300;

INDEPENDENT STATION

ADDRESS: SW CORNER GREEN TREE BOULEVARD @ HESPERIA ROAD
VICTORVILLE, CA 92395

DRAWN	ER
CHECKED	--
DATE	09/13/2022
SHT. TITLE	SITE PLAN
JOB NUMBER	--
SHEET	S1

H:\INDEPENDENT\GREENTREE BLVD & HESPERIA RD (VICTORVILLE)\DWG'S\PROPOSED SITE PLAN

ATTACHMENT 2
SUMMARY OF PROJECT TRIP GENERATION

Land Use	ITE Code	Unit	Trip Generation Rates[1]					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Convenience Store/Gasoline Station - GFA (5.5-10k)	945	Fueling Position	15.80	15.80	31.60	13.45	13.45	26.90
Automated Car Wash	948	KSF	*	*	*	7.10	7.10	14.20

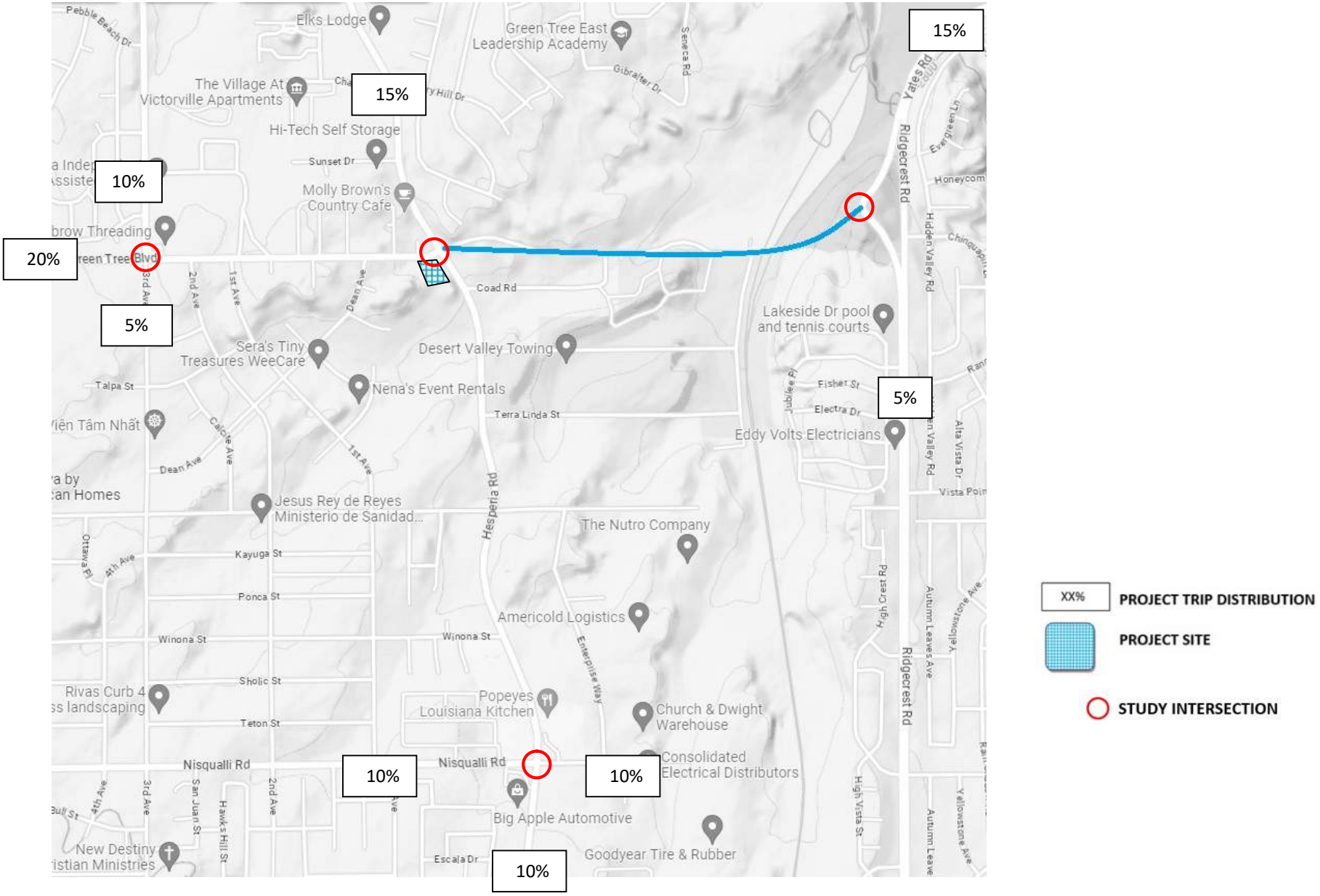
Land Use	Quantity	Unit	Trip Generation Estimates					
			AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Convenience Store/Gasoline Station - GFA (5.5-10k)	16	Fueling Position	253	253	506	215	215	430
Pass-by Trips (50% AM, 45% PM) [2]			*-127*	*-127*	*-254*	*-97*	*-97*	*-194*
Automated Car Wash	1.733	KSF	*	*	*	12	12	24
Total Proposed Trips			***126***	***126***	***252***	***130***	***130***	***260***

[1] Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

[2] Source: City of Victorville Staff

ATTACHMENT 3

GREEN TREE BOULEVARD/HESPERIA ROAD PROJECT – TRIP DISTRIBUTION AND SUGGESTED STUDY AREA



APPENDIX B

TRAFFIC DATA
COLLECTION SHEETS

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

City of Victorville
N/S: Hesperia Road
E/W: Green Tree Boulevard
Weather: Clear

File Name : 01_VIC_Hesp_GT AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Hesperia Road Southbound				Green Tree Boulevard Westbound				Hesperia Road Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	19	81	16	116	26	96	52	174	24	54	16	94	21	30	22	73	457
07:15 AM	28	98	19	145	35	125	54	214	32	103	23	158	13	26	23	62	579
07:30 AM	51	127	21	199	50	160	63	273	31	87	22	140	37	80	48	165	777
07:45 AM	54	186	25	265	71	138	73	282	31	141	25	197	24	75	34	133	877
Total	152	492	81	725	182	519	242	943	118	385	86	589	95	211	127	433	2690
08:00 AM	25	109	17	151	51	90	60	201	20	100	22	142	19	70	42	131	625
08:15 AM	41	123	18	182	36	107	52	195	35	112	28	175	17	56	36	109	661
08:30 AM	29	127	18	174	49	145	58	252	41	111	19	171	14	50	63	127	724
08:45 AM	29	127	18	174	32	93	43	168	42	116	20	178	20	90	47	157	677
Total	124	486	71	681	168	435	213	816	138	439	89	666	70	266	188	524	2687
Grand Total	276	978	152	1406	350	954	455	1759	256	824	175	1255	165	477	315	957	5377
Apprch %	19.6	69.6	10.8		19.9	54.2	25.9		20.4	65.7	13.9		17.2	49.8	32.9		
Total %	5.1	18.2	2.8	26.1	6.5	17.7	8.5	32.7	4.8	15.3	3.3	23.3	3.1	8.9	5.9	17.8	

	Hesperia Road Southbound				Green Tree Boulevard Westbound				Hesperia Road Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	51	127	21	199	50	**160**	63	273	31	87	22	140	**37**	**80**	**48**	**165**	777
07:45 AM	**54**	**186**	**25**	**265**	**71**	138	**73**	**282**	31	**141**	25	**197**	24	75	34	133	**877**
08:00 AM	25	109	17	151	51	90	60	201	20	100	22	142	19	70	42	131	625
08:15 AM	41	123	18	182	36	107	52	195	**35**	112	**28**	175	17	56	36	109	661
Total Volume	171	545	81	797	208	495	248	951	117	440	97	654	97	281	160	538	2940
% App. Total	21.5	68.4	10.2		21.9	52.1	26.1		17.9	67.3	14.8		18	52.2	29.7		
PHF	.792	.733	.810	.752	.732	.773	.849	.843	.836	.780	.866	.830	.655	.878	.833	.815	.838

Counts Unlimited, Inc.
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Corona, CA 92878
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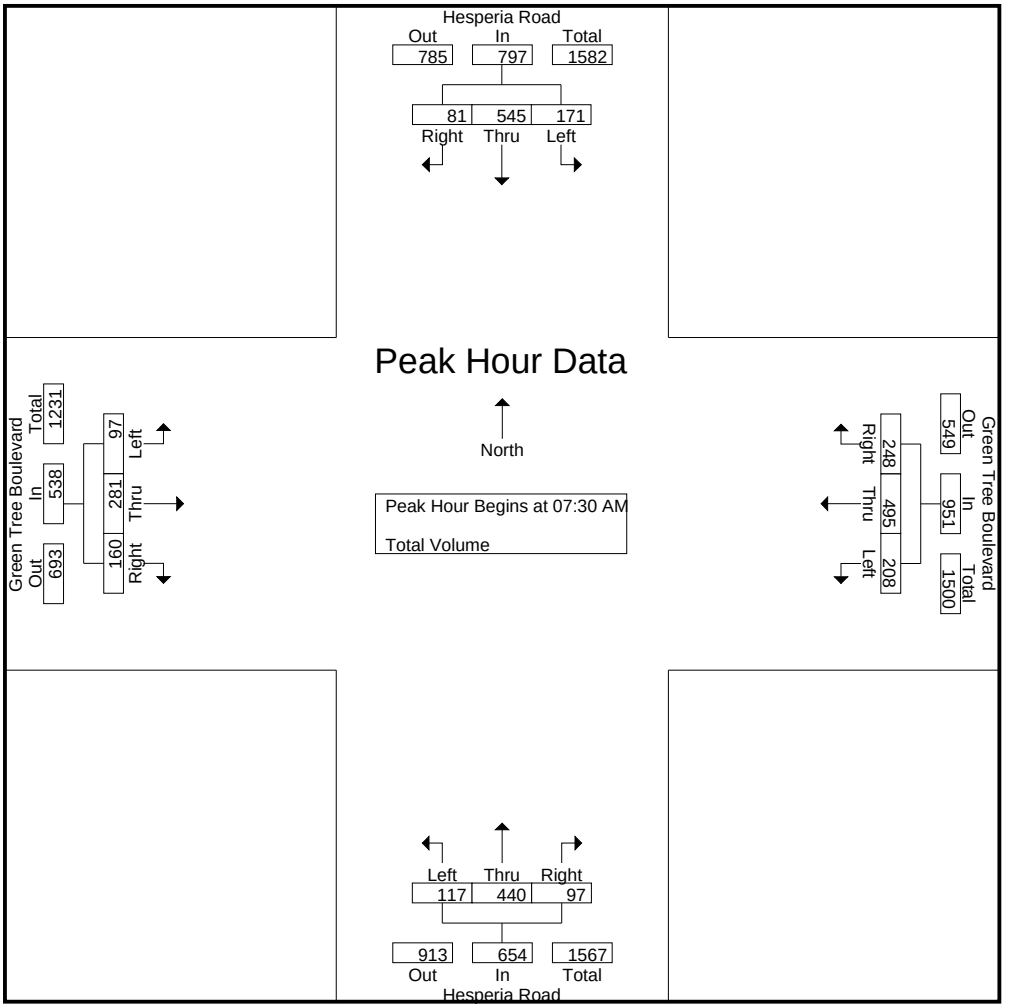
City of Victorville
N/S: Hesperia Road
E/W: Green Tree Boulevard
Weather: Clear

File Name : 01_VIC_Hesp_GT AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 2



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

	07:30 AM				07:15 AM				07:45 AM				07:30 AM			
+0 mins.	51	127	21	199	35	125	54	214	31	**141**	25	**197**	**37**	**80**	**48**	**165**
+15 mins.	**54**	**186**	**25**	**265**	50	**160**	63	273	20	100	22	142	24	75	34	133
+30 mins.	25	109	17	151	**71**	138	**73**	**282**	35	112	**28**	175	19	70	42	131
+45 mins.	41	123	18	182	51	90	60	201	**41**	111	19	171	17	56	36	109
Total Volume	171	545	81	797	207	513	250	970	127	464	94	685	97	281	160	538
% App. Total	21.5	68.4	10.2		21.3	52.9	25.8		18.5	67.7	13.7		18	52.2	29.7	
PHF	.792	.733	.810	.752	.729	.802	.856	.860	.774	.823	.839	.869	.655	.878	.833	.815

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City of Victorville
N/S: Hesperia Road
E/W: Green Tree Boulevard
Weather: Clear

File Name : 01_VIC_Hesp_GT PM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Hesperia Road Southbound				Green Tree Boulevard Westbound				Hesperia Road Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	63	131	23	217	31	88	32	151	63	129	78	270	18	126	47	191	829
04:15 PM	64	124	19	207	42	140	56	238	52	127	75	254	17	118	56	191	890
04:30 PM	50	147	25	222	30	98	41	169	51	131	62	244	17	138	44	199	834
04:45 PM	74	148	13	235	34	119	40	193	46	146	65	257	21	127	51	199	884
Total	251	550	80	881	137	445	169	751	212	533	280	1025	73	509	198	780	3437
05:00 PM	84	147	23	254	23	78	32	133	51	160	85	296	26	166	49	241	924
05:15 PM	61	142	24	227	32	120	43	195	58	148	43	249	20	159	58	237	908
05:30 PM	41	110	23	174	25	104	44	173	36	126	56	218	16	162	48	226	791
05:45 PM	40	91	17	148	25	64	28	117	49	116	54	219	17	107	46	170	654
Total	226	490	87	803	105	366	147	618	194	550	238	982	79	594	201	874	3277
Grand Total	477	1040	167	1684	242	811	316	1369	406	1083	518	2007	152	1103	399	1654	6714
Apprch %	28.3	61.8	9.9		17.7	59.2	23.1		20.2	54	25.8		9.2	66.7	24.1		
Total %	7.1	15.5	2.5	25.1	3.6	12.1	4.7	20.4	6	16.1	7.7	29.9	2.3	16.4	5.9	24.6	

	Hesperia Road Southbound				Green Tree Boulevard Westbound				Hesperia Road Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	50	147	**25**	222	30	98	41	169	51	131	62	244	17	138	44	199	834
04:45 PM	74	**148**	13	235	**34**	119	40	193	46	146	65	257	21	127	51	199	884
05:00 PM	**84**	147	23	**254**	23	78	32	133	51	**160**	**85**	**296**	**26**	**166**	49	**241**	**924**
05:15 PM	61	142	24	227	32	**120**	**43**	**195**	**58**	148	43	249	20	159	**58**	237	908
Total Volume	269	584	85	938	119	415	156	690	206	585	255	1046	84	590	202	876	3550
% App. Total	28.7	62.3	9.1		17.2	60.1	22.6		19.7	55.9	24.4		9.6	67.4	23.1		
PHF	.801	.986	.850	.923	.875	.865	.907	.885	.888	.914	.750	.883	.808	.889	.871	.909	.960

Counts Unlimited, Inc.
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Corona, CA 92878
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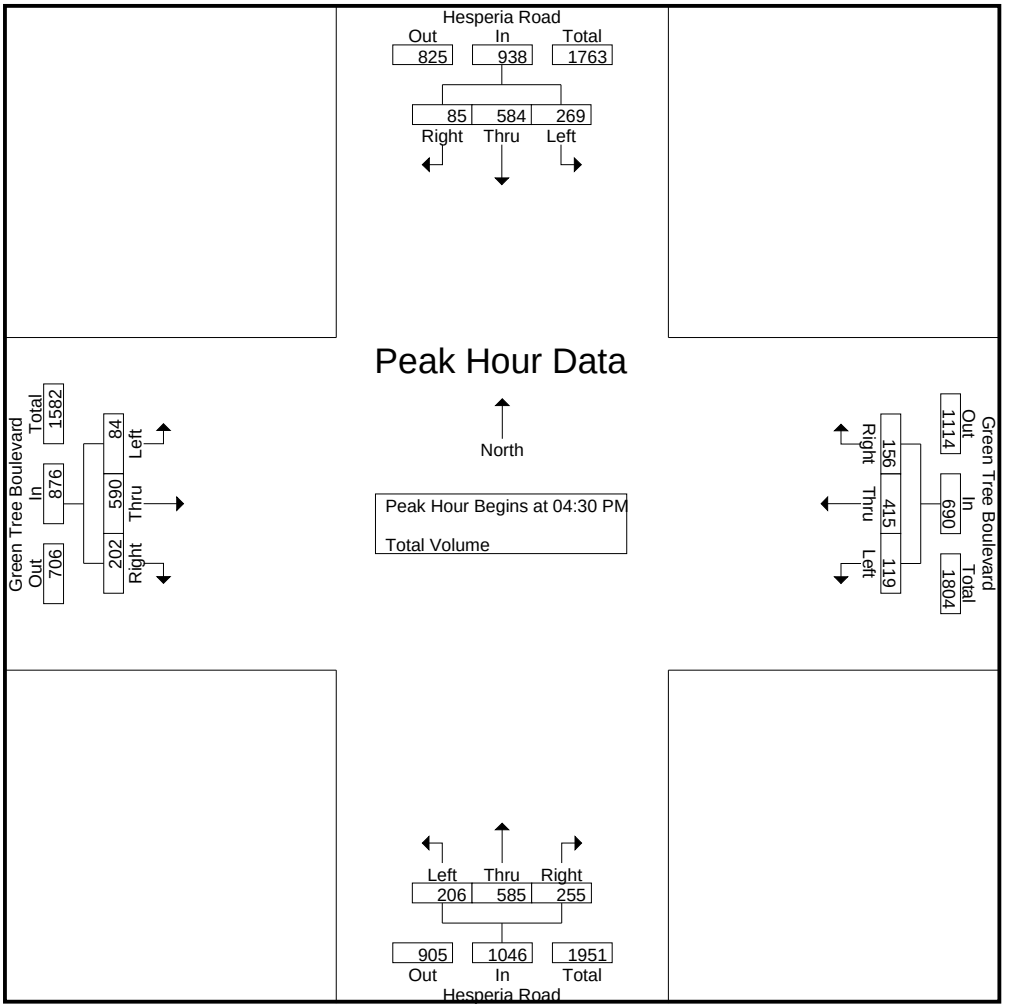
City of Victorville
N/S: Hesperia Road
E/W: Green Tree Boulevard
Weather: Clear

File Name : 01_VIC_Hesp_GT PM
Site Code : 10823587
Start Date : 6/8/2023



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

	04:30 PM				04:00 PM				04:15 PM				04:45 PM			
+0 mins.	50	147	**25**	222	31	88	32	151	**52**	127	75	254	21	127	51	199
+15 mins.	74	**148**	13	235	**42**	**140**	**56**	**238**	51	131	62	244	**26**	**166**	49	**241**
+30 mins.	**84**	147	23	**254**	30	98	41	169	46	146	65	257	20	159	**58**	237
+45 mins.	61	142	24	227	34	119	40	193	51	**160**	**85**	**296**	16	162	48	226
Total Volume	269	584	85	938	137	445	169	751	200	564	287	1051	83	614	206	903
% App. Total	28.7	62.3	9.1		18.2	59.3	22.5		19	53.7	27.3		9.2	68	22.8	
PHF	.801	.986	.850	.923	.815	.795	.754	.789	.962	.881	.844	.888	.798	.925	.888	.937

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

City of Victorville
N/S: Rodeo Drive/3rd Avenue
E/W: Green Tree Boulevard
Weather: Clear

File Name : 02_VIC_3rd_GT AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Rodeo Drive Southbound				Green Tree Boulevard Westbound				3rd Avenue Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	11	10	25	6	138	2	146	11	11	4	26	5	62	14	81	278
07:15 AM	4	21	10	35	4	172	5	181	22	19	3	44	8	65	21	94	354
07:30 AM	7	24	12	43	9	203	6	218	20	25	6	51	10	153	21	184	496
07:45 AM	12	27	11	50	12	183	3	198	20	31	3	54	12	114	33	159	461
Total	27	83	43	153	31	696	16	743	73	86	16	175	35	394	89	518	1589
08:00 AM	11	29	17	57	6	116	7	129	21	33	4	58	11	110	17	138	382
08:15 AM	7	35	12	54	7	138	10	155	16	41	10	67	16	102	22	140	416
08:30 AM	9	40	7	56	2	195	10	207	11	25	3	39	21	123	24	168	470
08:45 AM	11	28	8	47	6	153	7	166	13	21	3	37	11	143	9	163	413
Total	38	132	44	214	21	602	34	657	61	120	20	201	59	478	72	609	1681
Grand Total	65	215	87	367	52	1298	50	1400	134	206	36	376	94	872	161	1127	3270
Apprch %	17.7	58.6	23.7		3.7	92.7	3.6		35.6	54.8	9.6		8.3	77.4	14.3		
Total %	2	6.6	2.7	11.2	1.6	39.7	1.5	42.8	4.1	6.3	1.1	11.5	2.9	26.7	4.9	34.5	

	Rodeo Drive Southbound				Green Tree Boulevard Westbound				3rd Avenue Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	24	12	43	9	**203**	6	**218**	20	25	6	51	10	**153**	21	**184**	**496**
07:45 AM	**12**	27	11	50	**12**	183	3	198	20	31	3	54	12	114	**33**	159	461
08:00 AM	11	29	**17**	**57**	6	116	7	129	**21**	33	4	58	11	110	17	138	382
08:15 AM	7	**35**	12	54	7	138	**10**	155	16	**41**	**10**	**67**	**16**	102	22	140	416
Total Volume	37	115	52	204	34	640	26	700	77	130	23	230	49	479	93	621	1755
% App. Total	18.1	56.4	25.5		4.9	91.4	3.7		33.5	56.5	10		7.9	77.1	15		
PHF	.771	.821	.765	.895	.708	.788	.650	.803	.917	.793	.575	.858	.766	.783	.705	.844	.885

Counts Unlimited, Inc.
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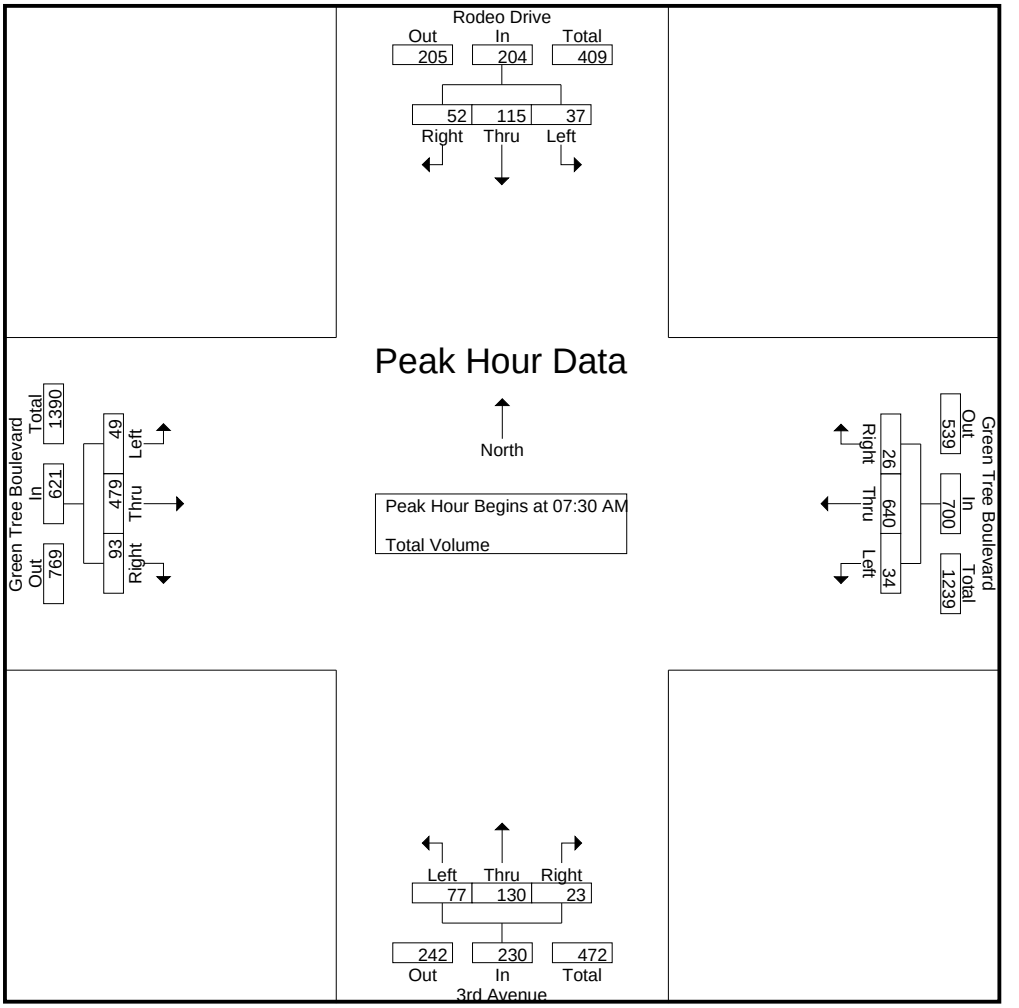
City of Victorville
N/S: Rodeo Drive/3rd Avenue
E/W: Green Tree Boulevard
Weather: Clear

File Name : 02_VIC_3rd_GT AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 2



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

	07:45 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**12**	27	11	50	6	138	2	146	20	25	6	51	10	**153**	21	**184**
+15 mins.	11	29	**17**	**57**	4	172	5	181	20	31	3	54	12	114	**33**	159
+30 mins.	7	35	12	54	9	**203**	**6**	**218**	**21**	33	4	58	11	110	17	138
+45 mins.	9	**40**	7	56	**12**	183	3	198	16	**41**	**10**	**67**	**16**	102	22	140
Total Volume	39	131	47	217	31	696	16	743	77	130	23	230	49	479	93	621
% App. Total	18	60.4	21.7		4.2	93.7	2.2		33.5	56.5	10		7.9	77.1	15	
PHF	.813	.819	.691	.952	.646	.857	.667	.852	.917	.793	.575	.858	.766	.783	.705	.844

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City of Victorville
N/S: Rodeo Drive/3rd Avenue
E/W: Green Tree Boulevard
Weather: Clear

File Name : 02_VIC_3rd_GT PM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Rodeo Drive Southbound				Green Tree Boulevard Westbound				3rd Avenue Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	41	13	66	11	164	8	183	23	17	6	46	14	184	21	219	514
04:15 PM	12	28	17	57	7	192	11	210	18	23	6	47	16	195	32	243	557
04:30 PM	15	42	10	67	3	155	19	177	25	23	6	54	13	191	20	224	522
04:45 PM	6	42	17	65	11	163	11	185	23	35	4	62	12	183	13	208	520
Total	45	153	57	255	32	674	49	755	89	98	22	209	55	753	86	894	2113
05:00 PM	10	34	17	61	11	143	14	168	20	36	7	63	13	228	28	269	561
05:15 PM	10	39	14	63	3	180	12	195	18	27	7	52	24	209	26	259	569
05:30 PM	12	26	20	58	11	146	13	170	9	26	6	41	20	225	20	265	534
05:45 PM	6	38	18	62	3	113	12	128	14	34	6	54	15	155	28	198	442
Total	38	137	69	244	28	582	51	661	61	123	26	210	72	817	102	991	2106
Grand Total	83	290	126	499	60	1256	100	1416	150	221	48	419	127	1570	188	1885	4219
Apprch %	16.6	58.1	25.3		4.2	88.7	7.1		35.8	52.7	11.5		6.7	83.3	10		
Total %	2	6.9	3	11.8	1.4	29.8	2.4	33.6	3.6	5.2	1.1	9.9	3	37.2	4.5	44.7	

	Rodeo Drive Southbound				Green Tree Boulevard Westbound				3rd Avenue Northbound				Green Tree Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	6	**42**	17	**65**	**11**	163	11	185	**23**	35	4	62	12	183	13	208	520
05:00 PM	10	34	17	61	11	143	**14**	168	20	**36**	**7**	**63**	13	**228**	**28**	**269**	561
05:15 PM	10	39	14	63	3	**180**	12	**195**	18	27	7	52	**24**	209	26	259	**569**
05:30 PM	**12**	26	**20**	58	11	146	13	170	9	26	6	41	20	225	20	265	534
Total Volume	38	141	68	247	36	632	50	718	70	124	24	218	69	845	87	1001	2184
% App. Total	15.4	57.1	27.5		5	88	7		32.1	56.9	11		6.9	84.4	8.7		
PHF	.792	.839	.850	.950	.818	.878	.893	.921	.761	.861	.857	.865	.719	.927	.777	.930	.960

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City of Victorville
N/S: Rodeo Drive/3rd Avenue
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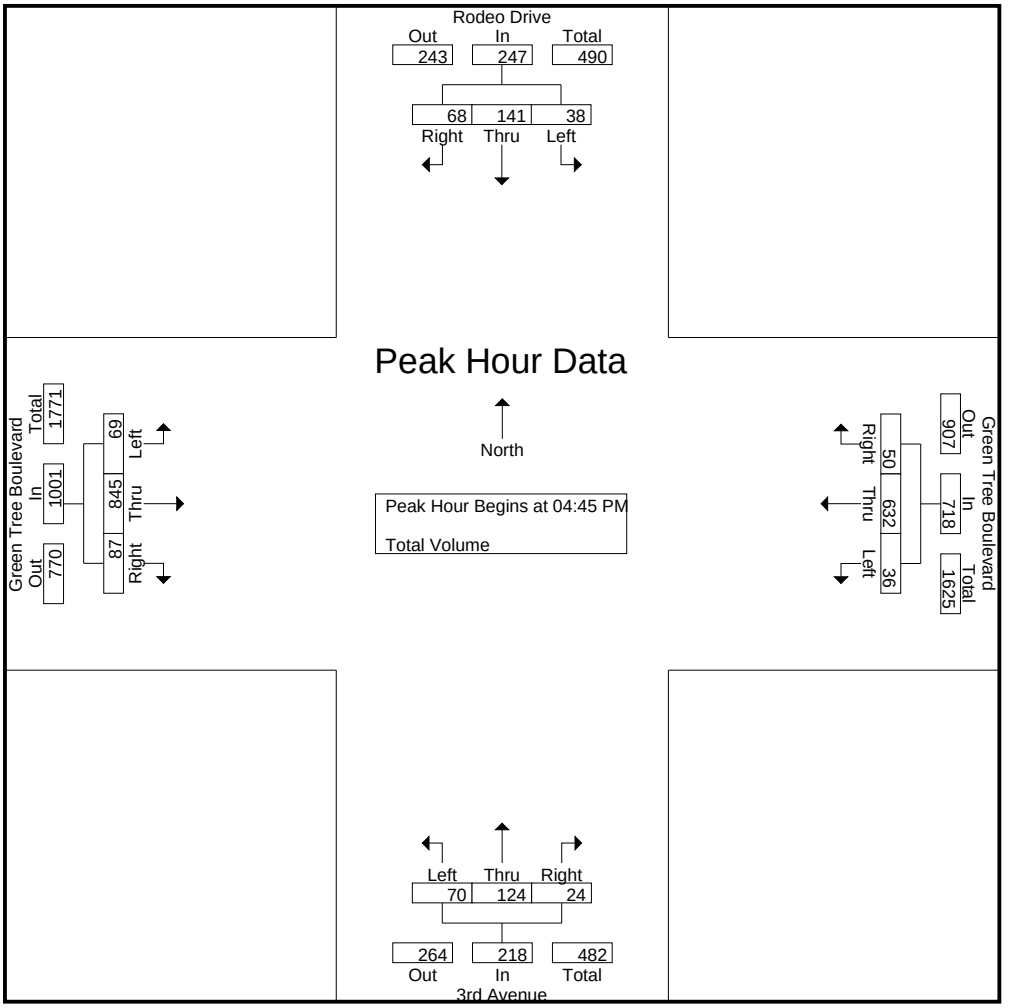
File Name : 02_VIC_3rd_GT PM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 2



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

	04:30 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	**15**	**42**	10	**67**	**11**	164	8	183	**25**	23	6	54	12	183	13	208
+15 mins.	6	42	**17**	65	7	**192**	11	**210**	23	35	4	62	13	**228**	**28**	**269**
+30 mins.	10	34	17	61	3	155	**19**	177	20	**36**	**7**	**63**	**24**	209	26	259
+45 mins.	10	39	14	63	11	163	11	185	18	27	7	52	20	225	20	265
Total Volume	41	157	58	256	32	674	49	755	86	121	24	231	69	845	87	1001
% App. Total	16	61.3	22.7		4.2	89.3	6.5		37.2	52.4	10.4		6.9	84.4	8.7	
PHF	.683	.935	.853	.955	.727	.878	.645	.899	.860	.840	.857	.917	.719	.927	.777	.930

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City of Victorville
N/S: Ridgecrest Road
E/W: Green Tree Boulevard/Ridgecrest Rd
Weather: Clear

File Name : 03_VIC_RC_GT AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Ridgecrest Road Westbound			Ridgecrest Road Northbound			Green Tree Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	35	104	139	86	20	106	39	21	60	305
07:15 AM	43	122	165	103	33	136	44	39	83	384
07:30 AM	67	167	234	95	35	130	68	75	143	507
07:45 AM	81	187	268	96	40	136	81	81	162	566
Total	226	580	806	380	128	508	232	216	448	1762
08:00 AM	62	121	183	71	39	110	56	56	112	405
08:15 AM	76	140	216	69	34	103	65	69	134	453
08:30 AM	58	138	196	97	36	133	59	40	99	428
08:45 AM	73	119	192	51	35	86	79	53	132	410
Total	269	518	787	288	144	432	259	218	477	1696
Grand Total	495	1098	1593	668	272	940	491	434	925	3458
Apprch %	31.1	68.9		71.1	28.9		53.1	46.9		
Total %	14.3	31.8	46.1	19.3	7.9	27.2	14.2	12.6	26.7	

	Ridgecrest Road Westbound			Ridgecrest Road Northbound			Green Tree Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	67	167	234	95	35	130	68	75	143	507
07:45 AM	**81**	**187**	**268**	**96**	**40**	**136**	**81**	**81**	**162**	**566**
08:00 AM	62	121	183	71	39	110	56	56	112	405
08:15 AM	76	140	216	69	34	103	65	69	134	453
Total Volume	286	615	901	331	148	479	270	281	551	1931
% App. Total	31.7	68.3		69.1	30.9		49	51		
PHF	.883	.822	.840	.862	.925	.881	.833	.867	.850	.853

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City of Victorville
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Weather: Clear

File Name : 03_VIC_RC_GT AM
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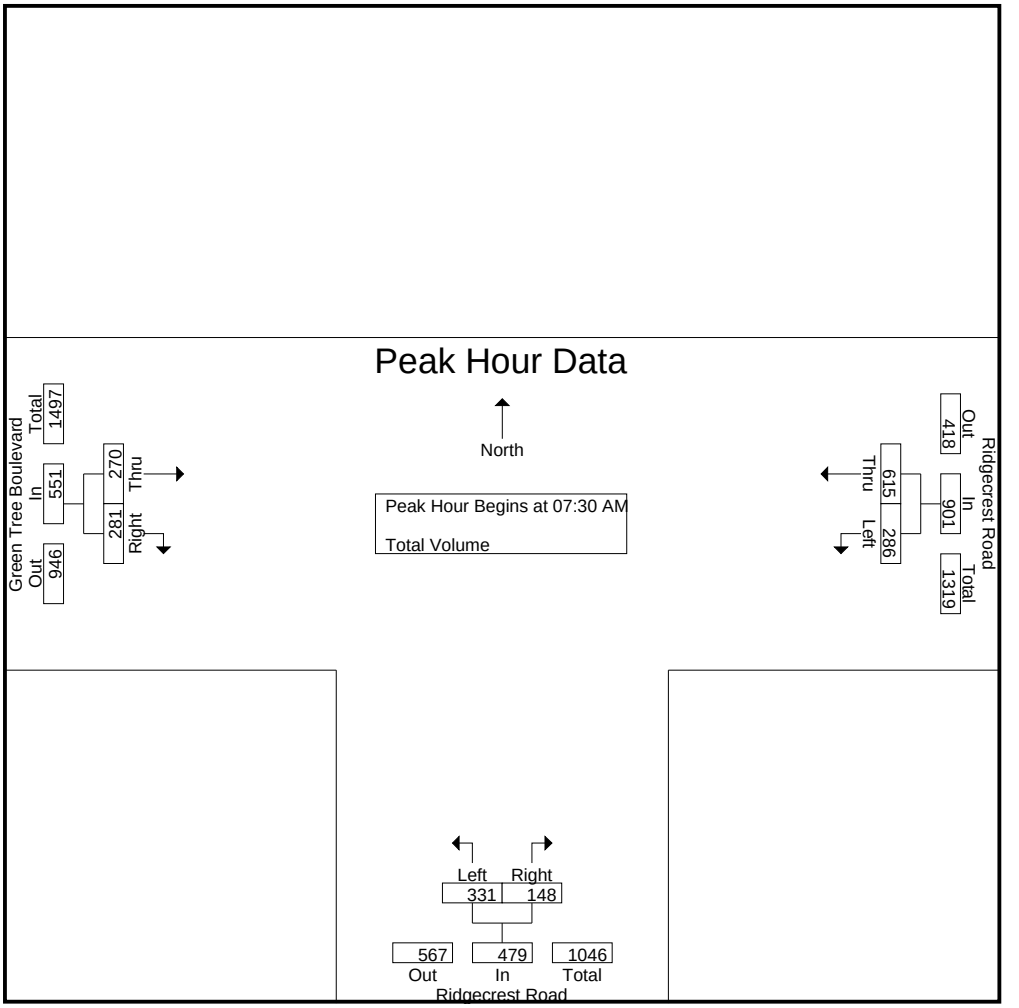

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:30 AM		
+0 mins.	67	167	234	**103**	33	**136**	68	75	143
+15 mins.	**81**	**187**	**268**	95	35	130	**81**	**81**	**162**
+30 mins.	62	121	183	96	**40**	136	56	56	112
+45 mins.	76	140	216	71	39	110	65	69	134
Total Volume	286	615	901	365	147	512	270	281	551
% App. Total	31.7	68.3		71.3	28.7		49	51	
PHF	.883	.822	.840	.886	.919	.941	.833	.867	.850

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City of Victorville
N/S: Ridgecrest Road
E/W: Green Tree Boulevard/Ridgecrest Rd
Weather: Clear

File Name : 03_VIC_RC_GT PM
Site Code : 10823587
Start Date : 6/8/2023
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Groups Printed- Total Volume

	Ridgecrest Road Westbound			Ridgecrest Road Northbound			Green Tree Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	56	108	164	68	59	127	179	83	262	553
04:15 PM	47	126	173	82	59	141	164	95	259	573
04:30 PM	65	110	175	68	68	136	165	92	257	568
04:45 PM	51	124	175	74	54	128	179	89	268	571
Total	219	468	687	292	240	532	687	359	1046	2265
05:00 PM	64	90	154	59	81	140	235	85	320	614
05:15 PM	71	110	181	75	57	132	173	97	270	583
05:30 PM	40	107	147	61	52	113	175	93	268	528
05:45 PM	69	69	138	46	65	111	151	69	220	469
Total	244	376	620	241	255	496	734	344	1078	2194
Grand Total	463	844	1307	533	495	1028	1421	703	2124	4459
Apprch %	35.4	64.6		51.8	48.2		66.9	33.1		
Total %	10.4	18.9	29.3	12	11.1	23.1	31.9	15.8	47.6	

	Ridgecrest Road Westbound			Ridgecrest Road Northbound			Green Tree Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	65	110	175	68	68	136	165	92	257	568
04:45 PM	51	**124**	175	74	54	128	179	89	268	571
05:00 PM	64	90	154	59	**81**	**140**	**235**	85	**320**	**614**
05:15 PM	**71**	110	**181**	**75**	57	132	173	**97**	270	583
Total Volume	251	434	685	276	260	536	752	363	1115	2336
% App. Total	36.6	63.4		51.5	48.5		67.4	32.6		
PHF	.884	.875	.946	.920	.802	.957	.800	.936	.871	.951

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City of Victorville
N/S: Ridgecrest Road
E/W: Green Tree Boulevard/Ridgecrest Rd
Weather: Clear

File Name : 03_VIC_RC_GT PM
Site Code : 10823587
Start Date : 6/8/2023
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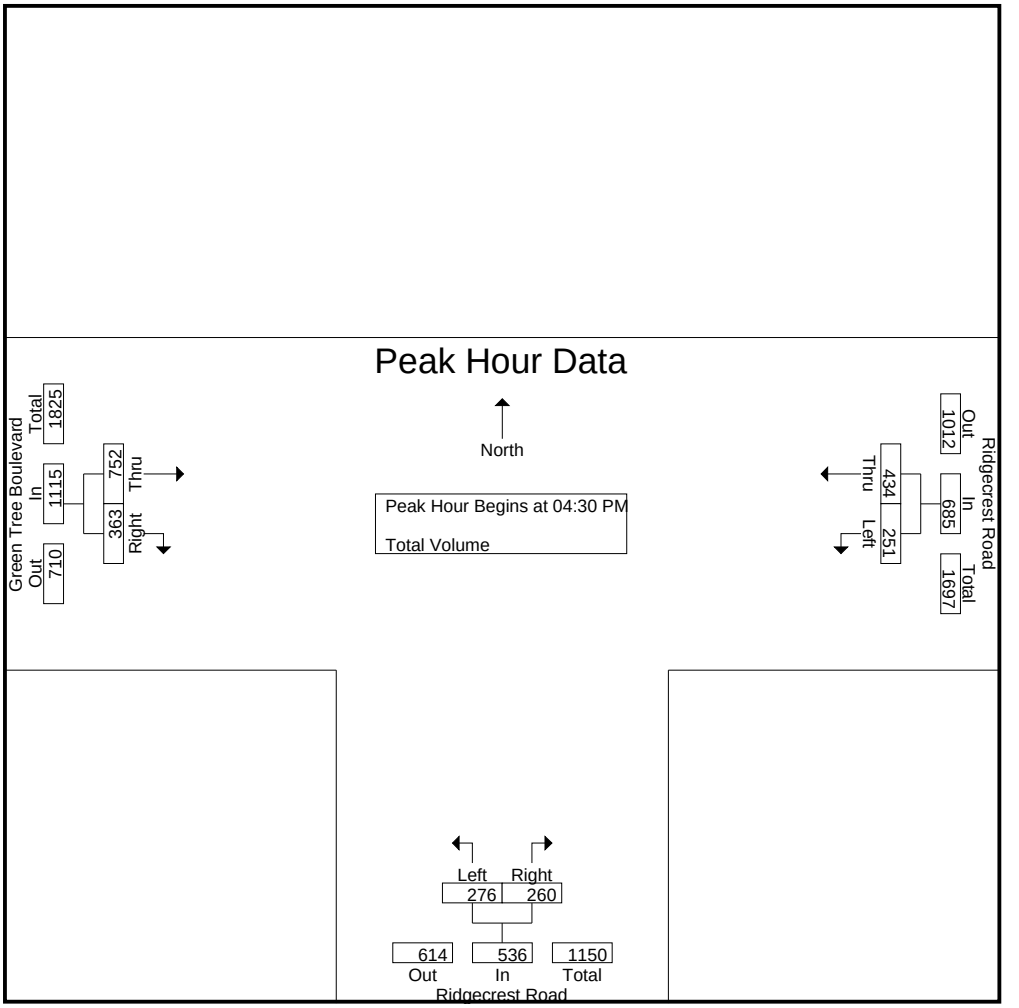

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:45 PM		
+0 mins.	56	108	164	**82**	59	**141**	179	89	268
+15 mins.	47	**126**	173	68	68	136	**235**	85	**320**
+30 mins.	**65**	110	**175**	74	54	128	173	**97**	270
+45 mins.	51	124	175	59	**81**	140	175	93	268
Total Volume	219	468	687	283	262	545	762	364	1126
% App. Total	31.9	68.1		51.9	48.1		67.7	32.3	
PHF	.842	.929	.981	.863	.809	.966	.811	.938	.880

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City of Victorville
N/S: Hesperia Road
E/W: Nisqualli Road
Weather: Clear

File Name : 04_VIC_Hesp_Nis AM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Hesperia Road Southbound				Nisqualli Road Westbound				Hesperia Road Northbound				Nisqualli Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	114	15	136	7	7	2	16	29	82	1	112	19	17	58	94	358
07:15 AM	4	131	14	149	8	8	2	18	31	112	8	151	38	11	64	113	431
07:30 AM	5	193	30	228	15	10	10	35	44	114	20	178	27	28	86	141	582
07:45 AM	10	229	19	258	9	12	10	31	46	145	9	200	52	23	110	185	674
Total	26	667	78	771	39	37	24	100	150	453	38	641	136	79	318	533	2045
08:00 AM	3	177	26	206	11	8	3	22	40	135	6	181	25	12	76	113	522
08:15 AM	2	164	19	185	5	9	6	20	37	158	3	198	38	7	97	142	545
08:30 AM	7	221	26	254	6	10	1	17	42	152	6	200	23	9	90	122	593
08:45 AM	4	193	21	218	3	3	1	7	34	161	6	201	26	17	97	140	566
Total	16	755	92	863	25	30	11	66	153	606	21	780	112	45	360	517	2226
Grand Total	42	1422	170	1634	64	67	35	166	303	1059	59	1421	248	124	678	1050	4271
Apprch %	2.6	87	10.4		38.6	40.4	21.1		21.3	74.5	4.2		23.6	11.8	64.6		
Total %	1	33.3	4	38.3	1.5	1.6	0.8	3.9	7.1	24.8	1.4	33.3	5.8	2.9	15.9	24.6	

	Hesperia Road Southbound				Nisqualli Road Westbound				Hesperia Road Northbound				Nisqualli Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**10**	**229**	19	**258**	9	**12**	**10**	**31**	**46**	145	**9**	**200**	**52**	**23**	**110**	**185**	**674**
08:00 AM	3	177	**26**	206	**11**	8	3	22	40	135	6	181	25	12	76	113	522
08:15 AM	2	164	19	185	5	9	6	20	37	**158**	3	198	38	7	97	142	545
08:30 AM	7	221	26	254	6	10	1	17	42	152	6	200	23	9	90	122	593
Total Volume	22	791	90	903	31	39	20	90	165	590	24	779	138	51	373	562	2334
% App. Total	2.4	87.6	10		34.4	43.3	22.2		21.2	75.7	3.1		24.6	9.1	66.4		
PHF	.550	.864	.865	.875	.705	.813	.500	.726	.897	.934	.667	.974	.663	.554	.848	.759	.866

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Weather: Clear

File Name : 04_VIC_Hesp_Nis AM
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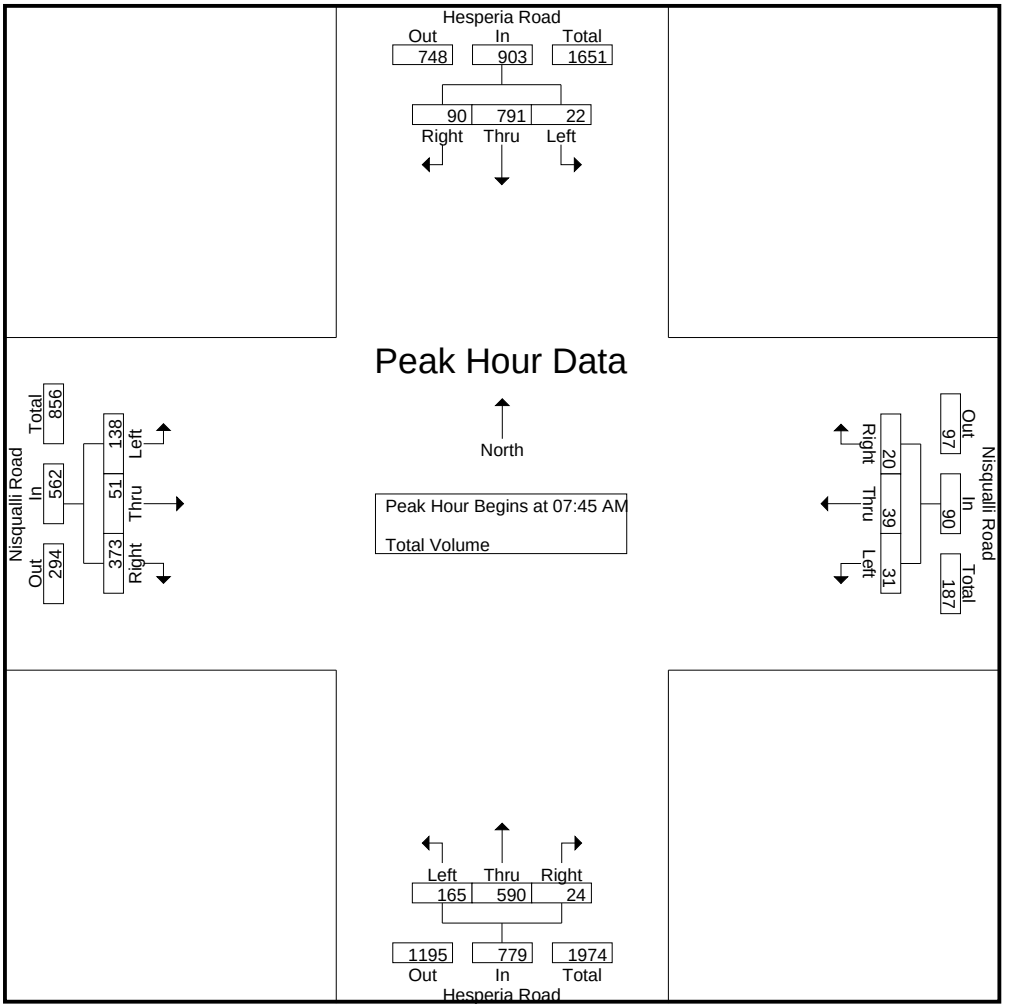

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				08:00 AM				07:30 AM			
+0 mins.	**10**	**229**	19	**258**	**15**	10	**10**	**35**	40	135	**6**	181	27	**28**	86	141
+15 mins.	3	177	**26**	206	9	**12**	10	31	37	158	3	198	**52**	23	**110**	**185**
+30 mins.	2	164	19	185	11	8	3	22	**42**	152	6	200	25	12	76	113
+45 mins.	7	221	26	254	5	9	6	20	34	**161**	6	**201**	38	7	97	142
Total Volume	22	791	90	903	40	39	29	108	153	606	21	780	142	70	369	581
% App. Total	2.4	87.6	10		37	36.1	26.9		19.6	77.7	2.7		24.4	12	63.5	
PHF	.550	.864	.865	.875	.667	.813	.725	.771	.911	.941	.875	.970	.683	.625	.839	.785

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City of Victorville
N/S: Hesperia Road
E/W: Nisqualli Road
Weather: Clear

File Name : 04_VIC_Hesp_Nis PM
Site Code : 10823587
Start Date : 6/8/2023
Page No : 1

Groups Printed- Total Volume

	Hesperia Road Southbound				Nisqualli Road Westbound				Hesperia Road Northbound				Nisqualli Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	184	29	215	19	35	8	62	90	189	2	281	55	8	84	147	705
04:15 PM	3	191	26	220	11	16	10	37	96	188	6	290	50	8	79	137	684
04:30 PM	6	195	29	230	13	13	9	35	70	172	11	253	51	13	62	126	644
04:45 PM	3	207	20	230	13	18	6	37	91	205	7	303	37	14	82	133	703
Total	14	777	104	895	56	82	33	171	347	754	26	1127	193	43	307	543	2736
05:00 PM	3	196	31	230	9	16	7	32	99	224	5	328	58	15	75	148	738
05:15 PM	4	206	27	237	13	16	9	38	99	207	6	312	40	7	84	131	718
05:30 PM	3	157	22	182	11	20	6	37	69	179	2	250	37	4	56	97	566
05:45 PM	5	147	24	176	8	13	4	25	75	166	3	244	47	11	68	126	571
Total	15	706	104	825	41	65	26	132	342	776	16	1134	182	37	283	502	2593
Grand Total	29	1483	208	1720	97	147	59	303	689	1530	42	2261	375	80	590	1045	5329
Apprch %	1.7	86.2	12.1		32	48.5	19.5		30.5	67.7	1.9		35.9	7.7	56.5		
Total %	0.5	27.8	3.9	32.3	1.8	2.8	1.1	5.7	12.9	28.7	0.8	42.4	7	1.5	11.1	19.6	

	Hesperia Road Southbound				Nisqualli Road Westbound				Hesperia Road Northbound				Nisqualli Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**6**	195	29	230	**13**	13	**9**	35	70	172	**11**	253	51	13	62	126	644
04:45 PM	3	**207**	20	230	13	**18**	6	37	91	205	7	303	37	14	82	133	703
05:00 PM	3	196	**31**	230	9	16	7	32	**99**	**224**	5	**328**	**58**	**15**	75	**148**	**738**
05:15 PM	4	206	27	**237**	13	16	9	**38**	99	207	6	312	40	7	**84**	131	718
Total Volume	16	804	107	927	48	63	31	142	359	808	29	1196	186	49	303	538	2803
% App. Total	1.7	86.7	11.5		33.8	44.4	21.8		30	67.6	2.4		34.6	9.1	56.3		
PHF	.667	.971	.863	.978	.923	.875	.861	.934	.907	.902	.659	.912	.802	.817	.902	.909	.950

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City of Victorville
N/S: Hesperia Road
E/W: Nisqualli Road
Weather: Clear

File Name : 04_VIC_Hesp_Nis PM
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Start Date : 6/8/2023
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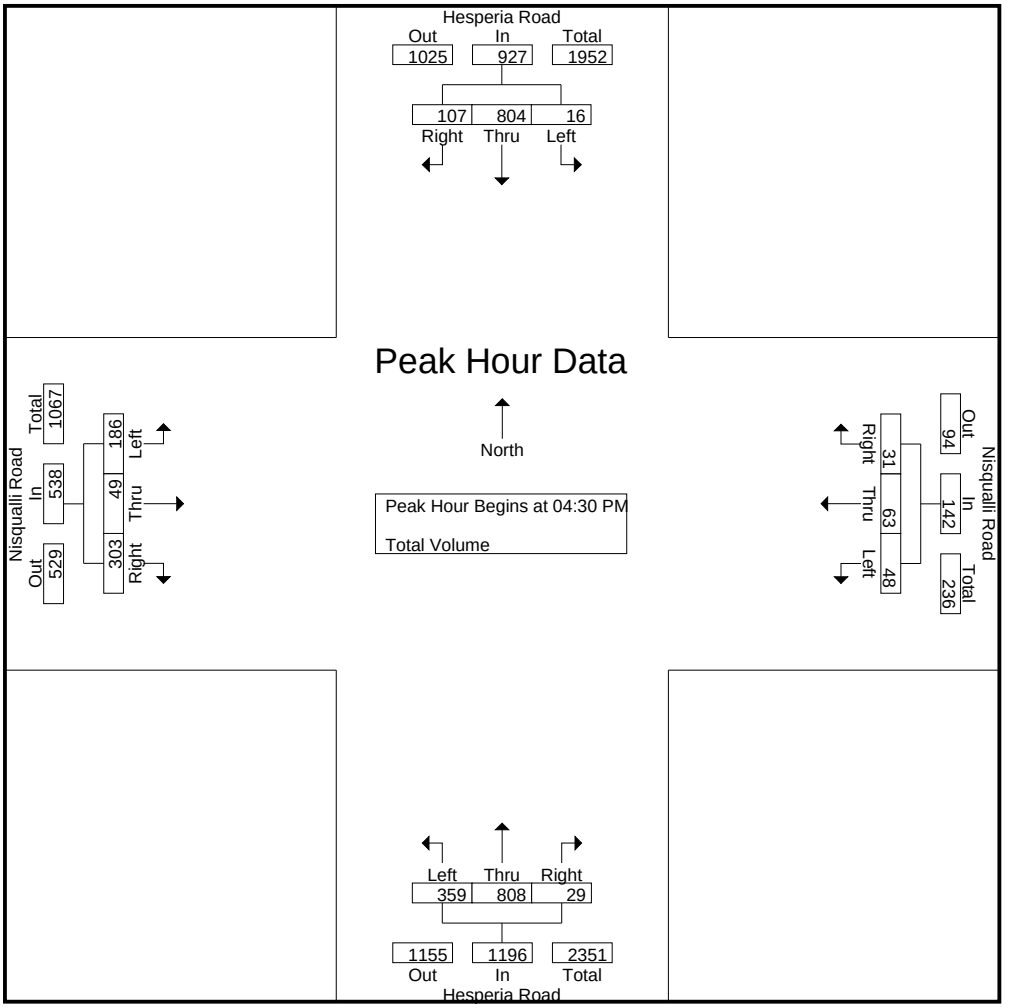


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:30 PM				04:15 PM			
+0 mins.	**6**	195	29	230	**19**	**35**	8	**62**	70	172	**11**	253	50	8	79	137
+15 mins.	3	**207**	20	230	11	16	**10**	37	91	205	7	303	51	13	62	126
+30 mins.	3	196	**31**	230	13	13	9	35	**99**	**224**	5	**328**	37	14	**82**	133
+45 mins.	4	206	27	**237**	13	18	6	37	99	207	6	312	**58**	**15**	75	**148**
Total Volume	16	804	107	927	56	82	33	171	359	808	29	1196	196	50	298	544
% App. Total	1.7	86.7	11.5		32.7	48	19.3		30	67.6	2.4		36	9.2	54.8	
PHF	.667	.971	.863	.978	.737	.586	.825	.690	.907	.902	.659	.912	.845	.833	.909	.919

APPENDIX C

CUMULATIVE PROJECT INFORMATION

SUMMARY OF CUMULATIVE PROJECTS

Project #	Location	Land Use	Quantity	Unit	Trip Generation Estimates						
						AM Peak Hour			PM Peak Hour		
					Daily	In	Out	Total	In	Out	Total
1	South of Nisqualli Road, West of Production Place	Industrial Park	28.000	KSF	94	8	2	10	2	7	9
2	Approx. 240' SE of Dean Ave and Grant St	Single-Family Detached Housing	1	DU	9	0	1	1	1	0	1
3	13689 Hesperia Rd	Strip Retail Plaza (<40k)	27.000	KSF	1,470	38	25	63	89	89	178
4	13689 Hesperia Rd	Convenience Store/Gasoline Station	6.250	KSF	4,378	177	176	353	170	171	341
5	13690 Hesperia Rd	Fast-Food Restaurant w/ Drive-thru	3.000	KSF	1,402	68	66	134	52	48	100
Total Project Trips					7,353	291	270	561	314	315	629

KSF = Thousand Square Feet, DU = Dwelling Units
ADT = Average Daily Traffic

Enter only in blue cells	Yellow cells calculate

Int. #:	1	Green Tree Blvd at Hesperia Rd

Mirror distribution? Y Entire Intersection

Mirror distribution?

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	43	0	0	99	2	1	0	0
AM Out		1	40	0	0	0	0	0	0	0	0	93	0
AM Tot		1	40	0	0	43	0	0	99	2	1	93	0
PM In		0	0	0	0	47	0	0	109	1	0	0	0
PM Out		2	47	1	0	0	0	0	0	0	0	108	0
PM Tot		2	47	1	0	47	0	0	109	1	0	108	0

Zone # 1 South of Nisqualli Rd, West of Production Pl - Industrial Park

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In					15%				30%	15%		
Y	30%	15%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	15%	0%	0%	0%	30%		0%	0%
PM Out	30%	15%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	8	0	0	0	0	1	0	0	0	2	1	0	0
AM Out	2	1	0	0	0	0	0	0	0	0	0	0	0
PM In	2	0	0	0	0	0	0	0	0	1	0	0	0
PM Out	7	2	1	1	0	0	0	0	0	0	0	0	0

Zone # 2 Approx. 240' SE of Dean Ave and Grant St - Single-Family Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	20%					15%					20%	
Y	0%	0%	0%	0%	0%	0%	15%	20%	20%	0%	0%	0%
AM Out												
PM In	20%	0%	0%	0%	0%	15%	0%	0%	0%	0%	20%	0%
PM Out	0%	0%	0%	0%	0%	0%	15%	20%	20%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	1	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone # 3 13689 Hesperia Rd - Multi-Use Development

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In					15%			35%				
Y	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%
AM Out												
PM In	0%	0%	0%	0%	15%	0%	0%	35%	0%	0%	0%	0%
PM Out	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	283	0	0	0	0	42	0	0	99	0	0	0	0
AM Out	267	0	40	0	0	0	0	0	0	0	0	93	0
PM In	311	0	0	0	0	47	0	0	109	0	0	0	0
PM Out	308	0	46	0	0	0	0	0	0	0	0	108	0

Enter only in blue cells	Yellow cells calculate

Int. #:	2	Green Tree Blvd at 3rd Ave

y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	14	29	0	0	0	59	0	0	0	0
AM Out		0	0	0	0	0	0	0	0	0	13	53	27
AM Tot		0	0	14	29	0	0	0	59	0	13	53	27
PM In		0	0	16	31	0	0	0	62	0	0	0	0
PM Out		0	0	0	0	0	0	0	0	0	15	63	32
PM Tot		0	0	16	31	0	0	0	62	0	15	63	32

Zone #	1	South of Nisqualli Rd, West of Production Pl - Industrial Park

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In				10%				20%				
y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	10%
AM Out												
PM In	0%	0%	0%	10%	0%	0%	0%	20%	0%		0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	10%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	8	0	0	0	1	0	0	0	2	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	2	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	0	1	1

Zone #	2	Approx. 240' SE of Dean Ave and Grant St - Single-Family Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	5%		15%	10%				20%				
y	0%	0%	0%	0%	0%	0%	0%	0%	5%	15%	20%	10%
AM Out												
PM In	5%	0%	15%	10%	0%	0%	0%	20%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	5%	15%	20%	10%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	1	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	13689 Hesperia Rd - Multi-Use Development

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In			5%	10%				20%				
y	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	20%	10%
AM Out												
PM In	0%	0%	5%	10%	0%	0%	0%	20%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	20%	10%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	283	0	0	14	28	0	0	0	57	0	0	0	0
AM Out	267	0	0	0	0	0	0	0	0	0	13	53	27
PM In	311	0	0	16	31	0	0	0	62	0	0	0	0
PM Out	308	0	0	0	0	0	0	0	0	0	15	62	31

Int. #:	3	Green Tree Blvd at Ridgecrest Rd

y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		14	0	0	0	0	0	0	0	0	0	43	0
AM Out		0	0	0	0	0	0	0	40	13	0	0	0
AM Tot		14	0	0	0	0	0	0	40	13	0	43	0
PM In		16	0	0	0	0	0	0	0	0	0	47	0
PM Out		0	0	0	0	0	0	0	47	15	0	0	0
PM Tot		16	0	0	0	0	0	0	47	15	0	47	0

Zone #	1	South of Nisqualli Rd, West of Production Pl - Industrial Park

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											15%	
y	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%		15%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	8	0	0	0	0	0	0	0	0	0	0	1	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	0
PM In	2	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	1	0	0	0	0

Zone #	2	Approx. 240' SE of Dean Ave and Grant St - Single-Family Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											15%	
y	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	15%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	1	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	13689 Hesperia Rd - Multi-Use Development

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	5%										15%	
y	0%	0%	0%	0%	0%	0%	0%	15%	5%	0%	0%	0%
AM Out												
PM In	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	15%	5%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	283	14	0	0	0	0	0	0	0	0	0	42	0
AM Out	267	0	0	0	0	0	0	0	40	13	0	0	0
PM In	311	16	0	0	0	0	0	0	0	0	0	47	0
PM Out	308	0	0	0	0	0	0	0	46	15	0	0	0

Enter only in blue cells	Yellow cells calculate

Int. #:	4	Hesperia Rd at Nisqualli Rd

Y

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	28	1	4	0	0	28	1	0	0	0	28
AM Out		0	0	0	27	27	27	0	0	0	0	0	1
AM Tot		0	28	1	31	27	27	28	1	0	0	0	29
PM In		0	31	0	1	0	0	31	0	0	0	0	31
PM Out		0	0	0	31	31	31	0	0	0	1	1	3
PM Tot		0	31	0	32	31	31	31	0	0	1	1	34

Zone #	1	South of Nisqualli Rd, West of Production Pl - Industrial Park

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In			15%	45%				15%				
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	15%	45%
AM Out												
PM In	0%	0%	15%	45%	0%	0%	0%	15%	0%		0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	15%	45%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	8	0	0	1	4	0	0	0	1	0	0	0	0
AM Out	2	0	0	0	0	0	0	0	0	0	0	0	1
PM In	2	0	0	0	1	0	0	0	0	0	0	0	0
PM Out	7	0	0	0	0	0	0	0	0	0	1	1	3

Zone #	2	Approx. 240' SE of Dean Ave and Grant St - Single-Family Detached Housing

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										10%
Y	0%	0%	0%	10%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%
PM Out	0%	0%	0%	10%	10%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	1	0	0	0	0	0	0	0	0	0	0	0	0
PM In	1	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone #	3	13689 Hesperia Rd - Multi-Use Development

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%					10%					10%
Y	0%	0%	0%	10%	10%	10%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	10%	0%	0%	0%	0%	10%
PM Out	0%	0%	0%	10%	10%	10%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	283	0	28	0	0	0	0	28	0	0	0	0	28
AM Out	267	0	0	0	27	27	27	0	0	0	0	0	0
PM In	311	0	31	0	0	0	0	31	0	0	0	0	31
PM Out	308	0	0	0	31	31	31	0	0	0	0	0	0

APPENDIX D

INTERSECTION ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	281	160	208	495	248	117	440	97	171	545	81
Future Volume (veh/h)	97	281	160	208	495	248	117	440	97	171	545	81
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	118	343	195	248	589	295	141	530	117	228	727	108
Peak Hour Factor	0.82	0.82	0.82	0.84	0.84	0.84	0.83	0.83	0.83	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	57	619	420	269	809	564	112	919	635	226	918	136
Arrive On Green	0.04	0.18	0.21	0.09	0.24	0.27	0.04	0.27	0.30	0.08	0.31	0.34
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2940	437
Grp Volume(v), veh/h	118	343	195	248	589	295	141	530	117	228	416	419
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1693
Q Serve(g_s), s	2.5	6.5	7.5	5.9	11.2	10.6	2.7	9.5	3.4	5.4	15.7	15.7
Cycle Q Clear(g_c), s	2.5	6.5	7.5	5.9	11.2	10.6	2.7	9.5	3.4	5.4	15.7	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	57	619	420	269	809	564	112	919	635	226	526	529
V/C Ratio(X)	2.07	0.55	0.46	0.92	0.73	0.52	1.26	0.58	0.18	1.01	0.79	0.79
Avail Cap(c_a), veh/h	126	1333	738	706	1884	1043	188	2077	1151	271	1087	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	25.8	20.8	31.4	24.4	16.9	33.5	21.9	12.6	32.1	21.9	21.6
Incr Delay (d2), s/veh	532.2	0.8	0.8	12.6	1.3	0.8	154.4	0.6	0.1	53.7	2.7	2.7
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	9.4	2.5	2.6	2.5	4.4	3.5	3.3	3.6	1.1	3.5	6.2	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	565.8	26.6	21.6	44.0	25.6	17.7	187.9	22.4	12.7	85.9	24.6	24.4
LnGrp LOS	F	C	C	D	C	B	F	C	B	F	C	C
Approach Vol, veh/h		656			1132			788			1063	
Approach Delay, s/veh		122.1			27.6			50.6			37.7	
Approach LOS		F			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	25.5	12.9	19.3	9.2	28.3	9.0	23.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	45.0	18.9	29.6	6.5	47.0	7.5	41.0
Max Q Clear Time (g_c+I1), s	7.4	11.5	7.9	9.5	4.7	17.7	4.5	13.2
Green Ext Time (p_c), s	0.1	4.4	0.6	2.8	0.1	6.0	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	52.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	479	93	34	640	26	77	130	23	37	115	52
Future Volume (veh/h)	49	479	93	34	640	26	77	130	23	37	115	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	58	570	111	42	800	32	90	151	27	41	128	58
Peak Hour Factor	0.84	0.84	0.84	0.80	0.80	0.80	0.86	0.86	0.86	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	868	168	77	1018	41	214	180	201	242	138	63
Arrive On Green	0.05	0.31	0.34	0.05	0.31	0.34	0.13	0.10	0.13	0.15	0.12	0.15
Sat Flow, veh/h	1594	2811	546	1594	3300	132	1594	1772	1502	1594	1155	523
Grp Volume(v), veh/h	58	341	340	42	408	424	90	151	27	41	0	186
Grp Sat Flow(s),veh/h/ln	1594	1683	1674	1594	1683	1748	1594	1772	1502	1594	0	1678
Q Serve(g_s), s	2.2	10.8	10.8	1.6	13.7	13.6	3.2	5.2	1.0	1.4	0.0	6.8
Cycle Q Clear(g_c), s	2.2	10.8	10.8	1.6	13.7	13.6	3.2	5.2	1.0	1.4	0.0	6.8
Prop In Lane	1.00		0.33	1.00		0.08	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	77	520	517	77	520	540	214	180	201	242	0	201
V/C Ratio(X)	0.75	0.66	0.66	0.54	0.79	0.79	0.42	0.84	0.13	0.17	0.00	0.93
Avail Cap(c_a), veh/h	196	930	925	207	941	977	940	988	886	504	0	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	18.5	18.2	28.7	19.5	19.4	24.5	27.2	23.6	22.8	0.0	26.6
Incr Delay (d2), s/veh	13.4	1.4	1.4	5.8	2.7	2.6	1.3	9.8	0.3	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.0	4.0	0.7	5.2	5.4	1.2	2.6	0.3	0.5	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	19.9	19.6	34.5	22.1	22.0	25.8	37.0	23.9	23.1	0.0	43.0
LnGrp LOS	D	B	B	C	C	C	C	D	C	C	A	D
Approach Vol, veh/h		739			874			268			227	
Approach Delay, s/veh		21.5			22.6			31.9			39.4	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	12.8	9.5	25.5	13.9	9.5	25.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	36.4	10.0	36.1	19.5	9.6	36.5
Max Q Clear Time (g_c+I1), s	7.2	3.6	12.8	8.8	4.2	15.7
Green Ext Time (p_c), s	1.2	0.0	4.4	0.8	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	270	281	286	615	331	148
Future Volume (veh/h)	0	270	281	286	615	331	148
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		318	331	340	732	376	168
Peak Hour Factor		0.85	0.85	0.84	0.84	0.88	0.88
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		460	411	361	2067	462	291
Arrive On Green		0.27	0.31	0.23	0.61	0.16	0.19
Sat Flow, veh/h		1772	1502	1594	3455	2910	1502
Grp Volume(v), veh/h		318	331	340	732	376	168
Grp Sat Flow(s),veh/h/ln		1683	1502	1594	1683	1455	1502
Q Serve(g_s), s		9.7	11.6	12.0	6.1	7.1	5.8
Cycle Q Clear(g_c), s		9.7	11.6	12.0	6.1	7.1	5.8
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		460	411	361	2067	462	291
V/C Ratio(X)		0.69	0.81	0.94	0.35	0.81	0.58
Avail Cap(c_a), veh/h		874	780	1101	3898	1593	875
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		18.6	18.4	21.7	5.4	23.2	20.9
Incr Delay (d2), s/veh		1.9	3.8	11.8	0.1	3.5	1.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.6	3.9	5.2	1.5	2.5	2.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		20.5	22.1	33.6	5.5	26.8	22.7
LnGrp LOS		C	C	C	A	C	C
Approach Vol, veh/h		649			1072	544	
Approach Delay, s/veh		21.3			14.4	25.5	
Approach LOS		C			B	C	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	15.6	19.5	22.1			41.6
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.3	41.5	31.7			68.2
Max Q Clear Time (g_c+I1), s	9.1	14.0	13.6			8.1
Green Ext Time (p_c), s	1.9	1.0	4.0			6.2

Intersection Summary	
HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	51	373	31	39	20	165	590	24	22	791	90
Future Volume (veh/h)	138	51	373	31	39	20	165	590	24	22	791	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	182	67	491	42	53	27	170	608	25	25	899	102
Peak Hour Factor	0.76	0.76	0.76	0.73	0.73	0.73	0.97	0.97	0.97	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	339	804	64	372	177	172	1273	608	64	1095	124
Arrive On Green	0.06	0.19	0.22	0.04	0.17	0.19	0.06	0.38	0.41	0.04	0.36	0.39
Sat Flow, veh/h	2910	1772	2643	1594	2215	1051	2910	3367	1502	1594	3047	346
Grp Volume(v), veh/h	182	67	491	42	39	41	170	608	25	25	497	504
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1583	1455	1683	1502	1594	1683	1710
Q Serve(g_s), s	4.6	2.4	11.8	1.9	1.5	1.6	4.3	10.2	0.7	1.1	19.9	19.9
Cycle Q Clear(g_c), s	4.6	2.4	11.8	1.9	1.5	1.6	4.3	10.2	0.7	1.1	19.9	19.9
Prop In Lane	1.00		1.00	1.00		0.66	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	186	339	804	64	283	266	172	1273	608	64	605	615
V/C Ratio(X)	0.98	0.20	0.61	0.65	0.14	0.15	0.99	0.48	0.04	0.39	0.82	0.82
Avail Cap(c_a), veh/h	407	848	1563	167	747	702	395	1996	931	139	917	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	25.3	22.1	35.2	26.4	25.8	35.0	17.5	13.4	34.8	21.6	21.4
Incr Delay (d2), s/veh	26.0	0.3	0.8	10.7	0.2	0.3	29.6	0.3	0.0	3.8	3.7	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.0	3.5	0.9	0.6	0.6	2.2	3.7	0.2	0.5	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	25.5	22.9	45.8	26.6	26.1	64.6	17.8	13.4	38.6	25.3	25.1
LnGrp LOS	E	C	C	D	C	C	E	B	B	D	C	C
Approach Vol, veh/h		740			122			803			1026	
Approach Delay, s/veh		32.4			33.1			27.6			25.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	34.6	9.5	20.7	10.9	33.2	11.3	19.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	46.1	9.8	37.6	12.1	42.5	12.4	35.0
Max Q Clear Time (g_c+I1), s	3.1	12.2	3.9	13.8	6.3	21.9	6.6	3.6
Green Ext Time (p_c), s	0.0	4.8	0.0	2.4	0.2	6.8	0.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	590	202	119	415	156	206	585	255	269	584	85
Future Volume (veh/h)	84	590	202	119	415	156	206	585	255	269	584	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	92	648	222	134	466	175	234	665	290	292	635	92
Peak Hour Factor	0.91	0.91	0.91	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	838	574	105	857	612	231	894	534	288	842	122
Arrive On Green	0.03	0.25	0.28	0.04	0.25	0.28	0.08	0.27	0.29	0.10	0.29	0.31
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2951	427
Grp Volume(v), veh/h	92	648	222	134	466	175	234	665	290	292	362	365
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1695
Q Serve(g_s), s	2.2	13.3	8.0	2.7	8.9	5.8	5.9	13.4	11.4	7.3	14.5	14.5
Cycle Q Clear(g_c), s	2.2	13.3	8.0	2.7	8.9	5.8	5.9	13.4	11.4	7.3	14.5	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	48	838	574	105	857	612	231	894	534	288	480	484
V/C Ratio(X)	1.90	0.77	0.39	1.27	0.54	0.29	1.01	0.74	0.54	1.01	0.75	0.75
Avail Cap(c_a), veh/h	97	1488	864	420	1769	1019	255	1951	1005	294	998	1005
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	25.9	16.6	35.8	23.9	14.7	34.2	24.9	19.1	33.4	24.1	23.9
Incr Delay (d2), s/veh	469.7	1.6	0.4	138.1	0.5	0.3	59.2	1.2	0.9	56.3	2.4	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	7.2	5.2	2.6	2.9	3.4	1.9	3.9	5.2	3.9	4.8	5.8	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	505.6	27.5	17.1	173.9	24.5	15.0	93.4	26.2	19.9	89.7	26.5	26.3
LnGrp LOS	F	C	B	F	C	B	F	C	B	F	C	C
Approach Vol, veh/h		962			775			1189			1019	
Approach Delay, s/veh		70.8			48.2			37.9			44.6	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	26.2	9.2	25.0	12.4	27.7	8.7	25.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	45.0	12.7	34.8	8.5	46.0	6.5	41.0
Max Q Clear Time (g_c+I1), s	9.3	15.4	4.7	15.3	7.9	16.5	4.2	10.9
Green Ext Time (p_c), s	0.0	6.3	0.2	5.2	0.1	5.1	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	49.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	845	87	36	632	50	70	124	24	38	141	68
Future Volume (veh/h)	69	845	87	36	632	50	70	124	24	38	141	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	74	909	94	39	687	54	80	143	28	40	148	72
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.87	0.87	0.87	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1110	115	67	1123	88	195	167	183	269	158	77
Arrive On Green	0.05	0.36	0.39	0.04	0.36	0.38	0.12	0.09	0.12	0.17	0.14	0.17
Sat Flow, veh/h	1594	3079	318	1594	3162	248	1594	1772	1502	1594	1126	548
Grp Volume(v), veh/h	74	497	506	39	365	376	80	143	28	40	0	220
Grp Sat Flow(s),veh/h/ln	1594	1683	1715	1594	1683	1727	1594	1772	1502	1594	0	1673
Q Serve(g_s), s	3.3	19.2	19.1	1.7	12.8	12.8	3.3	5.7	1.2	1.5	0.0	9.3
Cycle Q Clear(g_c), s	3.3	19.2	19.1	1.7	12.8	12.8	3.3	5.7	1.2	1.5	0.0	9.3
Prop In Lane	1.00		0.19	1.00		0.14	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	75	607	618	67	598	613	195	167	183	269	0	235
V/C Ratio(X)	0.98	0.82	0.82	0.58	0.61	0.61	0.41	0.86	0.15	0.15	0.00	0.94
Avail Cap(c_a), veh/h	196	905	921	100	804	825	790	829	744	434	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	20.8	20.6	33.7	19.0	18.9	29.1	32.0	28.1	25.4	0.0	30.1
Incr Delay (d2), s/veh	44.3	3.8	3.7	7.9	1.0	1.0	1.4	11.8	0.4	0.3	0.0	18.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.6	7.6	0.8	4.8	4.9	1.3	2.9	0.4	0.6	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.4	24.5	24.3	41.6	20.0	19.9	30.5	43.8	28.5	25.7	0.0	48.8
LnGrp LOS	E	C	C	D	C	B	C	D	C	C	A	D
Approach Vol, veh/h		1077			780			251			260	
Approach Delay, s/veh		28.1			21.1			37.8			45.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	13.2	9.5	32.3		16.6	9.9	31.9					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	35.5	6.5	40.5		19.5	10.8	36.2					
Max Q Clear Time (g_c+I1), s	7.7	3.7	21.2		11.3	5.3	14.8					
Green Ext Time (p_c), s	1.1	0.0	6.6		0.8	0.1	4.7					

Intersection Summary	
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	752	363	251	434	276	260
Future Volume (veh/h)	0	752	363	251	434	276	260
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		864	417	264	457	288	271
Peak Hour Factor		0.87	0.87	0.95	0.95	0.96	0.96
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		963	461	269	2265	559	320
Arrive On Green		0.44	0.46	0.17	0.67	0.19	0.21
Sat Flow, veh/h		2297	1057	1594	3455	2910	1502
Grp Volume(v), veh/h		657	624	264	457	288	271
Grp Sat Flow(s),veh/h/ln		1683	1582	1594	1683	1455	1502
Q Serve(g_s), s		34.7	35.2	15.9	4.9	8.5	16.7
Cycle Q Clear(g_c), s		34.7	35.2	15.9	4.9	8.5	16.7
Prop In Lane			0.67	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		734	690	269	2265	559	320
V/C Ratio(X)		0.90	0.90	0.98	0.20	0.52	0.85
Avail Cap(c_a), veh/h		822	772	363	2306	960	527
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		25.1	24.6	39.8	6.0	34.8	36.3
Incr Delay (d2), s/veh		11.5	13.2	36.8	0.0	0.7	6.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		15.5	14.8	8.9	1.6	3.0	6.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		36.6	37.8	76.6	6.0	35.5	43.2
LnGrp LOS		D	D	E	A	D	D
Approach Vol, veh/h		1281			721	559	
Approach Delay, s/veh		37.2			31.8	39.2	
Approach LOS		D			C	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	24.9	22.7	48.4			71.1
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.7	23.9	48.9			67.8
Max Q Clear Time (g_c+I1), s	18.7	17.9	37.2			6.9
Green Ext Time (p_c), s	1.8	0.4	6.7			3.5

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	49	303	48	63	31	359	808	29	16	804	107
Future Volume (veh/h)	186	49	303	48	63	31	359	808	29	16	804	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	204	54	333	52	68	33	395	888	32	16	820	109
Peak Hour Factor	0.91	0.91	0.91	0.93	0.93	0.93	0.91	0.91	0.91	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	214	851	66	204	93	424	1469	697	66	991	132
Arrive On Green	0.07	0.12	0.15	0.04	0.09	0.12	0.15	0.44	0.46	0.04	0.33	0.36
Sat Flow, veh/h	2910	1772	2643	1594	2248	1023	2910	3367	1502	1594	2987	397
Grp Volume(v), veh/h	204	54	333	52	50	51	395	888	32	16	462	467
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1588	1455	1683	1502	1594	1683	1700
Q Serve(g_s), s	5.1	2.0	7.1	2.3	2.0	2.2	9.7	14.6	0.8	0.7	18.3	18.2
Cycle Q Clear(g_c), s	5.1	2.0	7.1	2.3	2.0	2.2	9.7	14.6	0.8	0.7	18.3	18.2
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	208	214	851	66	153	144	424	1469	697	66	559	564
V/C Ratio(X)	0.98	0.25	0.39	0.79	0.33	0.36	0.93	0.60	0.05	0.24	0.83	0.83
Avail Cap(c_a), veh/h	366	866	1823	150	769	725	673	2143	997	130	820	828
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	28.8	19.0	34.3	30.8	30.2	30.5	15.6	10.6	33.5	22.2	22.0
Incr Delay (d2), s/veh	29.7	0.6	0.3	18.2	1.2	1.5	13.9	0.4	0.0	1.9	4.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.9	2.1	1.2	0.8	0.9	4.1	5.2	0.3	0.3	7.4	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	29.4	19.3	52.5	32.0	31.7	44.4	16.0	10.6	35.4	26.8	26.6
LnGrp LOS	E	C	B	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		591			153			1315			945	
Approach Delay, s/veh		35.4			38.9			24.4			26.8	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	38.0	9.5	15.2	17.0	30.5	11.7	13.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.9	48.0	8.8	37.3	18.7	37.2	11.1	35.0
Max Q Clear Time (g_c+I1), s	2.7	16.6	4.3	9.1	11.7	20.3	7.1	4.2
Green Ext Time (p_c), s	0.0	7.5	0.0	1.7	0.9	5.7	0.2	0.5

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	386	165	213	598	253	120	489	99	174	599	83
Future Volume (veh/h)	99	386	165	213	598	253	120	489	99	174	599	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	104	406	174	224	629	266	126	515	104	183	631	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	707	464	240	870	550	111	888	612	137	811	112
Arrive On Green	0.03	0.21	0.24	0.08	0.26	0.29	0.04	0.26	0.29	0.05	0.27	0.30
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2972	409
Grp Volume(v), veh/h	104	406	174	224	629	266	126	515	104	183	357	361
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1698
Q Serve(g_s), s	2.2	7.1	5.9	5.0	11.2	8.9	2.5	8.7	2.9	3.1	12.8	12.8
Cycle Q Clear(g_c), s	2.2	7.1	5.9	5.0	11.2	8.9	2.5	8.7	2.9	3.1	12.8	12.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	55	707	464	240	870	550	111	888	612	137	459	464
V/C Ratio(X)	1.90	0.57	0.38	0.93	0.72	0.48	1.14	0.58	0.17	1.33	0.78	0.78
Avail Cap(c_a), veh/h	134	1489	813	688	2002	1055	200	2259	1223	244	1155	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	23.3	17.7	29.9	22.2	16.0	31.5	21.0	12.4	31.2	22.0	21.8
Incr Delay (d2), s/veh	447.7	0.7	0.5	14.9	1.2	0.7	97.7	0.6	0.1	177.3	2.9	2.9
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	7.6	2.7	2.0	2.2	4.3	2.9	2.3	3.3	0.9	4.4	5.1	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	479.4	24.0	18.2	44.8	23.3	16.7	129.3	21.6	12.5	208.5	24.9	24.7
LnGrp LOS	F	C	B	D	C	B	F	C	B	F	C	C
Approach Vol, veh/h		684			1119			745			901	
Approach Delay, s/veh		91.8			26.0			38.5			62.1	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	23.8	11.9	20.3	9.0	24.4	8.7	23.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	46.0	17.5	31.0	6.5	47.0	7.5	41.0
Max Q Clear Time (g_c+I1), s	5.1	10.7	7.0	9.1	4.5	14.8	4.2	13.2
Green Ext Time (p_c), s	0.1	4.2	0.5	3.3	0.1	5.1	0.1	5.8

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	548	95	48	706	54	79	133	37	67	117	53
Future Volume (veh/h)	50	548	95	48	706	54	79	133	37	67	117	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	53	577	100	51	743	57	83	140	39	71	123	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	864	149	80	954	73	207	171	195	245	139	63
Arrive On Green	0.05	0.30	0.33	0.05	0.30	0.33	0.13	0.10	0.13	0.15	0.12	0.15
Sat Flow, veh/h	1594	2870	496	1594	3169	243	1594	1772	1502	1594	1153	525
Grp Volume(v), veh/h	53	338	339	51	395	405	83	140	39	71	0	179
Grp Sat Flow(s),veh/h/ln	1594	1683	1683	1594	1683	1728	1594	1772	1502	1594	0	1677
Q Serve(g_s), s	2.0	10.6	10.6	1.9	12.9	12.9	2.9	4.7	1.4	2.4	0.0	6.3
Cycle Q Clear(g_c), s	2.0	10.6	10.6	1.9	12.9	12.9	2.9	4.7	1.4	2.4	0.0	6.3
Prop In Lane	1.00		0.29	1.00		0.14	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	80	507	506	80	507	520	207	171	195	245	0	202
V/C Ratio(X)	0.67	0.67	0.67	0.64	0.78	0.78	0.40	0.82	0.20	0.29	0.00	0.89
Avail Cap(c_a), veh/h	204	971	971	199	966	991	936	981	881	543	0	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	18.4	18.1	28.0	19.2	19.1	24.0	26.6	23.4	22.5	0.0	25.7
Incr Delay (d2), s/veh	9.2	1.5	1.5	8.3	2.6	2.6	1.3	9.2	0.5	0.6	0.0	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.9	3.9	0.9	4.9	5.0	1.1	2.3	0.5	0.9	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	19.9	19.7	36.4	21.8	21.6	25.3	35.8	23.9	23.2	0.0	38.0
LnGrp LOS	D	B	B	D	C	C	C	D	C	C	A	D
Approach Vol, veh/h		730			851			262			250	
Approach Delay, s/veh		21.1			22.6			30.7			33.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	12.3	9.5	24.6		13.7	9.5	24.6					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	35.3	9.5	36.7		20.5	9.7	36.5					
Max Q Clear Time (g_c+I1), s	6.7	3.9	12.6		8.3	4.0	14.9					
Green Ext Time (p_c), s	1.1	0.0	4.5		0.9	0.0	5.2					

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	315	300	292	670	352	151
Future Volume (veh/h)	0	315	300	292	670	352	151
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		332	316	307	705	371	159
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		455	406	326	2010	462	295
Arrive On Green		0.27	0.31	0.20	0.60	0.16	0.20
Sat Flow, veh/h		1772	1502	1594	3455	2910	1502
Grp Volume(v), veh/h		332	316	307	705	371	159
Grp Sat Flow(s),veh/h/ln		1683	1502	1594	1683	1455	1502
Q Serve(g_s), s		9.5	10.2	10.1	5.7	6.5	5.1
Cycle Q Clear(g_c), s		9.5	10.2	10.1	5.7	6.5	5.1
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		455	406	326	2010	462	295
V/C Ratio(X)		0.73	0.78	0.94	0.35	0.80	0.54
Avail Cap(c_a), veh/h		965	861	1123	4113	1778	974
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		17.6	17.0	20.8	5.5	21.6	19.2
Incr Delay (d2), s/veh		2.3	3.3	12.9	0.1	3.3	1.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.6	3.3	4.5	1.4	2.2	1.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		19.9	20.2	33.7	5.6	24.9	20.8
LnGrp LOS		B	C	C	A	C	C
Approach Vol, veh/h		648			1012	530	
Approach Delay, s/veh		20.1			14.1	23.7	
Approach LOS		C			B	C	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	14.9	17.4	20.9			38.3
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	34.5	39.5	32.5			67.0
Max Q Clear Time (g_c+I1), s	8.5	12.1	12.2			7.7
Green Ext Time (p_c), s	1.9	0.9	4.2			5.9

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	53	380	32	40	49	168	630	25	53	834	119
Future Volume (veh/h)	169	53	380	32	40	49	168	630	25	53	834	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	178	56	400	34	42	52	177	663	26	56	878	125
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	279	728	68	233	208	178	1303	624	68	1090	155
Arrive On Green	0.06	0.16	0.19	0.04	0.14	0.17	0.06	0.39	0.42	0.04	0.37	0.40
Sat Flow, veh/h	2910	1772	2643	1594	1683	1502	2910	3367	1502	1594	2958	421
Grp Volume(v), veh/h	178	56	400	34	42	52	177	663	26	56	500	503
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1502	1455	1683	1502	1594	1683	1696
Q Serve(g_s), s	4.3	1.9	9.1	1.5	1.5	2.1	4.3	10.6	0.7	2.4	18.7	18.7
Cycle Q Clear(g_c), s	4.3	1.9	9.1	1.5	1.5	2.1	4.3	10.6	0.7	2.4	18.7	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	179	279	728	68	233	208	178	1303	624	68	620	625
V/C Ratio(X)	0.99	0.20	0.55	0.50	0.18	0.25	0.99	0.51	0.04	0.82	0.81	0.81
Avail Cap(c_a), veh/h	394	890	1640	163	791	705	394	1974	923	234	1006	1014
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	25.8	21.7	32.9	26.7	26.1	33.0	16.4	12.2	33.4	19.9	19.7
Incr Delay (d2), s/veh	29.3	0.4	0.6	5.6	0.4	0.6	29.6	0.3	0.0	21.0	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.8	2.7	0.7	0.6	0.8	2.2	3.8	0.2	1.3	7.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.3	26.1	22.4	38.5	27.1	26.7	62.6	16.7	12.2	54.4	22.4	22.2
LnGrp LOS	E	C	C	D	C	C	E	B	B	D	C	C
Approach Vol, veh/h		634			128			866			1059	
Approach Delay, s/veh		33.9			30.0			26.0			24.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	33.7	9.5	17.6	10.8	32.4	10.8	16.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.3	43.2	9.2	37.3	11.5	44.0	11.5	35.0
Max Q Clear Time (g_c+I1), s	4.4	12.6	3.5	11.1	6.3	20.7	6.3	4.1
Green Ext Time (p_c), s	0.1	5.2	0.0	2.0	0.2	7.2	0.2	0.5

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	711	207	121	531	159	212	644	261	274	643	87
Future Volume (veh/h)	86	711	207	121	531	159	212	644	261	274	643	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	91	748	218	127	559	167	223	678	275	288	677	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	47	944	592	99	959	643	185	891	524	271	876	119
Arrive On Green	0.03	0.28	0.31	0.03	0.28	0.31	0.06	0.26	0.29	0.09	0.29	0.32
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2978	404
Grp Volume(v), veh/h	91	748	218	127	559	167	223	678	275	288	382	387
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1699
Q Serve(g_s), s	2.3	16.3	8.2	2.7	11.3	5.7	5.0	14.7	11.6	7.4	16.4	16.4
Cycle Q Clear(g_c), s	2.3	16.3	8.2	2.7	11.3	5.7	5.0	14.7	11.6	7.4	16.4	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	47	944	592	99	959	643	185	891	524	271	495	500
V/C Ratio(X)	1.95	0.79	0.37	1.28	0.58	0.26	1.21	0.76	0.52	1.06	0.77	0.77
Avail Cap(c_a), veh/h	90	1511	845	290	1656	954	202	1825	941	275	955	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	26.4	17.0	38.3	24.3	14.6	37.1	26.8	20.6	36.0	25.6	25.3
Incr Delay (d2), s/veh	494.1	1.5	0.4	143.7	0.6	0.2	132.4	1.4	0.8	72.2	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	6.4	2.7	2.9	4.4	1.9	5.2	5.8	4.0	5.3	6.6	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	532.5	28.0	17.4	182.0	24.9	14.8	169.5	28.2	21.4	108.2	28.1	27.9
LnGrp LOS	F	C	B	F	C	B	F	C	C	F	C	C
Approach Vol, veh/h		1057			853			1176			1057	
Approach Delay, s/veh		69.2			46.3			53.4			49.9	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	27.5	9.2	28.7	11.5	29.8	8.8	29.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	45.0	9.9	37.6	7.5	47.0	6.5	41.0
Max Q Clear Time (g_c+I1), s	9.4	16.7	4.7	18.3	7.0	18.4	4.3	13.3
Green Ext Time (p_c), s	0.0	6.3	0.1	5.9	0.0	5.4	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	55.1
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	924	89	52	708	83	71	126	40	70	144	69
Future Volume (veh/h)	70	924	89	52	708	83	71	126	40	70	144	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	74	973	94	55	745	87	75	133	42	74	152	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1171	113	65	1126	131	183	156	173	272	162	78
Arrive On Green	0.05	0.38	0.40	0.04	0.37	0.40	0.11	0.09	0.11	0.17	0.14	0.17
Sat Flow, veh/h	1594	3102	300	1594	3037	355	1594	1772	1502	1594	1131	543
Grp Volume(v), veh/h	74	528	539	55	413	419	75	133	42	74	0	225
Grp Sat Flow(s),veh/h/ln	1594	1683	1718	1594	1683	1708	1594	1772	1502	1594	0	1674
Q Serve(g_s), s	3.4	21.1	21.1	2.5	15.2	15.1	3.2	5.5	1.9	3.0	0.0	9.9
Cycle Q Clear(g_c), s	3.4	21.1	21.1	2.5	15.2	15.1	3.2	5.5	1.9	3.0	0.0	9.9
Prop In Lane	1.00		0.17	1.00		0.21	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	75	635	648	65	624	633	183	156	173	272	0	240
V/C Ratio(X)	0.98	0.83	0.83	0.85	0.66	0.66	0.41	0.85	0.24	0.27	0.00	0.94
Avail Cap(c_a), veh/h	189	883	902	123	813	825	750	786	707	398	0	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	20.9	20.8	35.3	19.4	19.3	30.5	33.3	29.9	26.7	0.0	31.1
Incr Delay (d2), s/veh	44.6	4.8	4.8	25.3	1.3	1.3	1.5	12.3	0.7	0.5	0.0	23.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	8.5	8.6	1.4	5.7	5.8	1.3	2.8	0.7	1.1	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.8	25.8	25.5	60.6	20.7	20.5	31.9	45.6	30.6	27.3	0.0	54.3
LnGrp LOS	E	C	C	E	C	C	C	D	C	C	A	D
Approach Vol, veh/h		1141			887			250			299	
Approach Delay, s/veh		29.2			23.1			39.0			47.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	13.0	9.5	34.5	17.1	10.0	34.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	34.9	7.7	40.9	18.5	10.8	37.8
Max Q Clear Time (g_c+I1), s	7.5	4.5	23.1	11.9	5.4	17.2
Green Ext Time (p_c), s	1.1	0.0	6.9	0.8	0.1	5.4

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	814	385	256	490	298	265
Future Volume (veh/h)	0	814	385	256	490	298	265
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		857	405	269	516	314	279
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		953	447	275	2249	576	328
Arrive On Green		0.43	0.45	0.17	0.67	0.20	0.22
Sat Flow, veh/h		2312	1044	1594	3455	2910	1502
Grp Volume(v), veh/h		647	615	269	516	314	279
Grp Sat Flow(s),veh/h/ln		1683	1584	1594	1683	1455	1502
Q Serve(g_s), s		34.6	35.0	16.3	5.8	9.4	17.3
Cycle Q Clear(g_c), s		34.6	35.0	16.3	5.8	9.4	17.3
Prop In Lane			0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		722	679	275	2249	576	328
V/C Ratio(X)		0.90	0.91	0.98	0.23	0.55	0.85
Avail Cap(c_a), veh/h		808	760	370	2294	946	519
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		25.7	25.2	39.9	6.3	34.9	36.3
Incr Delay (d2), s/veh		11.9	13.5	36.3	0.1	0.8	7.7
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		15.5	14.9	9.0	1.9	3.4	6.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		37.6	38.7	76.2	6.4	35.7	44.0
LnGrp LOS		D	D	E	A	D	D
Approach Vol, veh/h		1262			785	593	
Approach Delay, s/veh		38.1			30.3	39.6	
Approach LOS		D			C	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	25.7	23.2	48.0			71.2
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.5	24.5	48.5			68.0
Max Q Clear Time (g_c+I1), s	19.3	18.3	37.0			7.8
Green Ext Time (p_c), s	1.9	0.4	6.5			4.0

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	50	309	50	65	66	366	855	30	48	851	140
Future Volume (veh/h)	221	50	309	50	65	66	366	855	30	48	851	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	233	53	325	53	68	69	385	900	32	51	896	147
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	209	821	62	126	112	408	1562	736	62	1051	172
Arrive On Green	0.08	0.12	0.14	0.04	0.07	0.10	0.14	0.46	0.49	0.04	0.36	0.39
Sat Flow, veh/h	2910	1772	2643	1594	1683	1502	2910	3367	1502	1594	2895	475
Grp Volume(v), veh/h	233	53	325	53	68	69	385	900	32	51	521	522
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1502	1455	1683	1502	1594	1683	1686
Q Serve(g_s), s	6.1	2.1	7.4	2.5	3.0	3.4	10.0	15.0	0.8	2.4	21.9	21.8
Cycle Q Clear(g_c), s	6.1	2.1	7.4	2.5	3.0	3.4	10.0	15.0	0.8	2.4	21.9	21.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	240	209	821	62	126	112	408	1562	736	62	611	612
V/C Ratio(X)	0.97	0.25	0.40	0.85	0.54	0.61	0.94	0.58	0.04	0.82	0.85	0.85
Avail Cap(c_a), veh/h	369	829	1745	144	726	647	589	1957	912	142	787	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	30.7	20.7	36.5	34.1	33.4	32.6	15.0	10.2	36.5	22.5	22.2
Incr Delay (d2), s/veh	31.2	0.6	0.3	25.4	3.6	5.4	19.2	0.3	0.0	21.9	7.2	7.2
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	3.1	0.9	2.2	1.4	1.3	1.3	4.5	5.3	0.3	1.3	9.3	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	31.3	21.1	61.9	37.7	38.7	51.8	15.4	10.2	58.4	29.7	29.4
LnGrp LOS	E	C	C	E	D	D	D	B	B	E	C	C
Approach Vol, veh/h		611			190			1317			1094	
Approach Delay, s/veh		39.2			44.8			25.9			30.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	42.0	9.5	15.5	17.2	34.3	12.8	12.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.8	46.5	8.9	37.8	17.5	37.8	11.7	35.0
Max Q Clear Time (g_c+I1), s	4.4	17.0	4.5	9.4	12.0	23.9	8.1	5.4
Green Ext Time (p_c), s	0.0	7.5	0.0	1.6	0.7	5.9	0.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	411	165	238	598	253	120	489	99	174	618	83
Future Volume (veh/h)	162	411	165	238	598	253	120	489	99	174	618	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1772
Adj Flow Rate, veh/h	171	433	174	251	629	266	126	515	104	183	651	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	728	467	273	857	533	108	914	636	124	828	110
Arrive On Green	0.06	0.22	0.25	0.09	0.25	0.28	0.04	0.27	0.30	0.04	0.28	0.31
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2985	398
Grp Volume(v), veh/h	171	433	174	251	629	266	126	515	104	183	367	371
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1700
Q Serve(g_s), s	3.8	8.0	6.2	5.9	11.9	9.6	2.6	9.1	3.0	3.0	13.9	13.9
Cycle Q Clear(g_c), s	3.8	8.0	6.2	5.9	11.9	9.6	2.6	9.1	3.0	3.0	13.9	13.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	88	728	467	273	857	533	108	914	636	124	467	471
V/C Ratio(X)	1.94	0.60	0.37	0.92	0.73	0.50	1.17	0.56	0.16	1.47	0.79	0.79
Avail Cap(c_a), veh/h	150	1387	761	715	1897	997	147	2141	1183	189	1095	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	24.4	18.6	31.1	23.6	17.5	33.3	21.7	12.4	33.1	23.1	22.9
Incr Delay (d2), s/veh	459.5	0.8	0.5	12.1	1.2	0.7	129.5	0.5	0.1	249.4	3.0	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	12.7	3.1	2.1	2.5	4.6	3.2	2.8	3.5	0.9	5.3	5.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	492.2	25.2	19.1	43.2	24.9	18.2	162.8	22.2	12.5	282.5	26.1	25.9
LnGrp LOS	F	C	B	D	C	B	F	C	B	F	C	C
Approach Vol, veh/h		778			1146			745			921	
Approach Delay, s/veh		126.5			27.3			44.6			76.9	
Approach LOS		F			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	25.3	13.0	21.4	9.1	25.7	10.3	24.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	46.0	19.0	30.5	5.5	47.0	8.5	41.0
Max Q Clear Time (g_c+I1), s	5.0	11.1	7.9	10.0	4.6	15.9	5.8	13.9
Green Ext Time (p_c), s	0.1	4.2	0.6	3.4	0.0	5.2	0.1	5.7

Intersection Summary	
HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	573	95	54	731	67	79	133	43	80	117	53
Future Volume (veh/h)	50	573	95	54	731	67	79	133	43	80	117	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	53	603	100	57	769	71	83	140	45	84	123	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	910	151	78	981	91	204	169	192	240	136	62
Arrive On Green	0.05	0.31	0.35	0.05	0.31	0.35	0.13	0.10	0.13	0.15	0.12	0.15
Sat Flow, veh/h	1594	2891	478	1594	3116	288	1594	1772	1502	1594	1153	525
Grp Volume(v), veh/h	53	351	352	57	415	425	83	140	45	84	0	179
Grp Sat Flow(s),veh/h/ln	1594	1683	1686	1594	1683	1720	1594	1772	1502	1594	0	1677
Q Serve(g_s), s	2.0	11.1	11.1	2.2	13.8	13.8	2.9	4.8	1.7	2.9	0.0	6.5
Cycle Q Clear(g_c), s	2.0	11.1	11.1	2.2	13.8	13.8	2.9	4.8	1.7	2.9	0.0	6.5
Prop In Lane	1.00		0.28	1.00		0.17	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	78	530	531	78	530	542	204	169	192	240	0	198
V/C Ratio(X)	0.68	0.66	0.66	0.73	0.78	0.78	0.41	0.83	0.23	0.35	0.00	0.90
Avail Cap(c_a), veh/h	194	961	962	205	972	993	920	965	867	505	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	18.2	18.0	28.9	19.2	19.0	24.7	27.3	24.1	23.4	0.0	26.4
Incr Delay (d2), s/veh	10.0	1.4	1.4	12.4	2.6	2.5	1.3	9.9	0.6	0.9	0.0	13.8
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	0.9	4.1	4.1	1.1	5.2	5.3	1.1	2.4	0.6	1.1	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	19.6	19.4	41.3	21.7	21.5	26.0	37.2	24.7	24.3	0.0	40.3
LnGrp LOS	D	B	B	D	C	C	C	D	C	C	A	D
Approach Vol, veh/h		756			897			268			263	
Approach Delay, s/veh		20.9			22.9			31.7			35.2	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.4	9.5	25.9		13.8	9.5	25.9
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	35.5	9.9	37.1		19.5	9.5	37.5
Max Q Clear Time (g_c+I1), s	6.8	4.2	13.1		8.5	4.0	15.8
Green Ext Time (p_c), s	1.2	0.0	4.6		0.9	0.0	5.6

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

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	315	306	292	689	358	151
Future Volume (veh/h)	0	315	306	292	689	358	151
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		332	322	307	725	377	159
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		460	411	326	2015	467	297
Arrive On Green		0.27	0.31	0.20	0.60	0.16	0.20
Sat Flow, veh/h		1772	1502	1594	3455	2910	1502
Grp Volume(v), veh/h		332	322	307	725	377	159
Grp Sat Flow(s),veh/h/ln		1683	1502	1594	1683	1455	1502
Q Serve(g_s), s		9.6	10.5	10.2	5.9	6.7	5.1
Cycle Q Clear(g_c), s		9.6	10.5	10.2	5.9	6.7	5.1
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		460	411	326	2015	467	297
V/C Ratio(X)		0.72	0.78	0.94	0.36	0.81	0.54
Avail Cap(c_a), veh/h		952	849	1108	4056	1753	960
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		17.7	17.1	21.1	5.5	21.8	19.4
Incr Delay (d2), s/veh		2.1	3.3	12.9	0.1	3.4	1.5
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.6	3.4	4.6	1.5	2.3	1.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		19.9	20.5	34.1	5.7	25.2	20.9
LnGrp LOS		B	C	C	A	C	C
Approach Vol, veh/h		654			1032	536	
Approach Delay, s/veh		20.2			14.1	23.9	
Approach LOS		C			B	C	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	15.2	17.5	21.3			38.8
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	34.5	39.5	32.5			67.0
Max Q Clear Time (g_c+I1), s	8.7	12.2	12.5			7.9
Green Ext Time (p_c), s	1.9	0.9	4.2			6.1

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	53	380	32	40	62	168	643	25	66	847	132
Future Volume (veh/h)	182	53	380	32	40	62	168	643	25	66	847	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	192	56	400	34	42	65	177	677	26	69	892	139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	278	725	67	222	198	179	1326	633	71	1099	171
Arrive On Green	0.07	0.16	0.18	0.04	0.13	0.16	0.06	0.39	0.42	0.04	0.38	0.40
Sat Flow, veh/h	2910	1772	2643	1594	1683	1502	2910	3367	1502	1594	2919	455
Grp Volume(v), veh/h	192	56	400	34	42	65	177	677	26	69	514	517
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1502	1455	1683	1502	1594	1683	1690
Q Serve(g_s), s	4.7	2.0	9.3	1.5	1.6	2.7	4.4	10.9	0.7	3.1	19.6	19.6
Cycle Q Clear(g_c), s	4.7	2.0	9.3	1.5	1.6	2.7	4.4	10.9	0.7	3.1	19.6	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.27
Lane Grp Cap(c), veh/h	196	278	725	67	222	198	179	1326	633	71	634	637
V/C Ratio(X)	0.98	0.20	0.55	0.51	0.19	0.33	0.99	0.51	0.04	0.98	0.81	0.81
Avail Cap(c_a), veh/h	386	873	1612	160	776	692	386	1890	885	251	987	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	26.3	22.2	33.6	27.7	27.3	33.6	16.5	12.2	34.2	20.0	19.8
Incr Delay (d2), s/veh	25.7	0.4	0.7	5.9	0.4	1.0	29.3	0.3	0.0	44.6	2.9	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.8	2.8	0.7	0.6	1.0	2.2	3.9	0.2	2.0	7.6	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.1	26.6	22.9	39.5	28.1	28.2	62.9	16.8	12.2	78.8	23.0	22.7
LnGrp LOS	E	C	C	D	C	C	E	B	B	E	C	C
Approach Vol, veh/h		648			141			880			1100	
Approach Delay, s/veh		33.9			30.9			25.9			26.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	34.7	9.5	17.7	10.9	33.5	11.3	15.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.3	42.2	9.2	37.3	11.5	44.0	11.5	35.0
Max Q Clear Time (g_c+I1), s	6.1	12.9	3.5	11.3	6.4	21.6	6.7	4.7
Green Ext Time (p_c), s	0.1	5.3	0.0	2.0	0.2	7.3	0.2	0.6

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

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	543	88	0	801	0	195
Future Vol, veh/h	543	88	0	801	0	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	572	93	0	843	0	205

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	333
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	566
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	566
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	566	-	-	-
HCM Lane V/C Ratio	0.363	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	1.6	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	19	0	708	958	63
Future Vol, veh/h	0	19	0	708	958	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	20	0	745	1008	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	537	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	488	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	488	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	488	-	-
HCM Lane V/C Ratio	-	0.041	-	-
HCM Control Delay (s)	-	12.7	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	38	76	708	952	25
Future Vol, veh/h	0	38	76	708	952	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	40	80	745	1002	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	514	1028	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	505	671	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	505	671	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	671	-	505	-	-
HCM Lane V/C Ratio	0.119	-	0.079	-	-
HCM Control Delay (s)	11.1	-	12.7	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	737	207	147	531	159	212	644	261	274	663	87
Future Volume (veh/h)	151	737	207	147	531	159	212	644	261	274	663	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	159	776	218	155	559	167	223	678	275	288	698	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	966	596	155	968	621	180	901	555	226	848	112
Arrive On Green	0.05	0.29	0.31	0.05	0.29	0.31	0.06	0.27	0.29	0.08	0.28	0.31
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2991	394
Grp Volume(v), veh/h	159	776	218	155	559	167	223	678	275	288	393	397
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1701
Q Serve(g_s), s	4.4	17.7	8.5	4.4	11.7	6.1	5.1	15.3	11.7	6.4	18.0	18.0
Cycle Q Clear(g_c), s	4.4	17.7	8.5	4.4	11.7	6.1	5.1	15.3	11.7	6.4	18.0	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	84	966	596	155	968	621	180	901	555	226	477	482
V/C Ratio(X)	1.89	0.80	0.37	1.00	0.58	0.27	1.24	0.75	0.50	1.27	0.82	0.82
Avail Cap(c_a), veh/h	125	1474	823	327	1588	898	194	1710	915	229	875	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	27.3	17.6	39.1	25.2	16.0	38.8	27.8	20.1	38.1	27.7	27.5
Incr Delay (d2), s/veh	443.7	1.9	0.4	33.5	0.5	0.2	144.7	1.3	0.7	153.3	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	7.1	2.9	2.3	4.6	2.0	5.4	6.1	4.0	7.1	7.4	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	482.8	29.2	17.9	72.7	25.7	16.2	183.5	29.1	20.8	191.4	31.3	31.1
LnGrp LOS	F	C	B	E	C	B	F	C	C	F	C	C
Approach Vol, veh/h		1153			881			1176			1078	
Approach Delay, s/veh		89.7			32.2			56.4			74.0	
Approach LOS		F			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	28.6	10.9	30.2	11.6	29.9	10.8	30.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	44.0	11.3	38.2	7.5	45.0	8.5	41.0
Max Q Clear Time (g_c+I1), s	8.4	17.3	6.4	19.7	7.1	20.0	6.4	13.7
Green Ext Time (p_c), s	0.0	6.2	0.2	6.0	0.0	5.4	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	64.8
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	950	89	59	734	96	71	126	47	83	144	69
Future Volume (veh/h)	70	950	89	59	734	96	71	126	47	83	144	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	74	1000	94	62	773	101	75	133	49	87	152	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	1197	113	63	1130	148	182	156	172	270	162	78
Arrive On Green	0.05	0.38	0.41	0.04	0.38	0.40	0.11	0.09	0.11	0.17	0.14	0.17
Sat Flow, veh/h	1594	3110	292	1594	2994	391	1594	1772	1502	1594	1131	543
Grp Volume(v), veh/h	74	541	553	62	435	439	75	133	49	87	0	225
Grp Sat Flow(s),veh/h/ln	1594	1683	1719	1594	1683	1702	1594	1772	1502	1594	0	1674
Q Serve(g_s), s	3.5	22.0	22.0	2.9	16.4	16.3	3.3	5.6	2.3	3.6	0.0	10.0
Cycle Q Clear(g_c), s	3.5	22.0	22.0	2.9	16.4	16.3	3.3	5.6	2.3	3.6	0.0	10.0
Prop In Lane	1.00		0.17	1.00		0.23	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	75	648	662	63	636	642	182	156	172	270	0	240
V/C Ratio(X)	0.99	0.83	0.84	0.98	0.68	0.68	0.41	0.85	0.29	0.32	0.00	0.94
Avail Cap(c_a), veh/h	184	885	904	129	827	836	717	751	676	384	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	21.1	20.9	36.2	19.7	19.5	31.1	34.0	30.6	27.5	0.0	31.7
Incr Delay (d2), s/veh	44.7	5.1	5.1	47.7	1.6	1.5	1.5	12.2	0.9	0.7	0.0	25.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.9	9.0	2.0	6.2	6.2	1.3	2.9	0.8	1.4	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.7	26.2	26.0	83.9	21.3	21.1	32.6	46.2	31.5	28.2	0.0	56.7
LnGrp LOS	F	C	C	F	C	C	C	D	C	C	A	E
Approach Vol, veh/h		1168			936			257			312	
Approach Delay, s/veh		29.5			25.3			39.4			48.8	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	13.1	9.5	35.6		17.3	10.1	35.0
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	34.0	8.1	41.7		18.2	10.7	39.1
Max Q Clear Time (g_c+I1), s	7.6	4.9	24.0		12.0	5.5	18.4
Green Ext Time (p_c), s	1.1	0.0	7.1		0.8	0.1	5.8

Intersection Summary	
HCM 6th Ctrl Delay	31.3
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	814	392	256	510	305	265
Future Volume (veh/h)	0	814	392	256	510	305	265
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1772	1772	1673	1772	1575	1772
Adj Flow Rate, veh/h		857	413	269	537	321	279
Peak Hour Factor		0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		949	454	274	2252	576	328
Arrive On Green		0.43	0.45	0.17	0.67	0.20	0.22
Sat Flow, veh/h		2297	1056	1594	3455	2910	1502
Grp Volume(v), veh/h		652	618	269	537	321	279
Grp Sat Flow(s),veh/h/ln		1683	1582	1594	1683	1455	1502
Q Serve(g_s), s		35.1	35.5	16.4	6.1	9.7	17.4
Cycle Q Clear(g_c), s		35.1	35.5	16.4	6.1	9.7	17.4
Prop In Lane			0.67	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		724	680	274	2252	576	328
V/C Ratio(X)		0.90	0.91	0.98	0.24	0.56	0.85
Avail Cap(c_a), veh/h		803	755	368	2280	940	516
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		25.8	25.4	40.2	6.4	35.2	36.6
Incr Delay (d2), s/veh		12.4	14.2	36.7	0.1	0.8	7.8
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		15.8	15.2	9.1	2.0	3.5	7.0
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		38.3	39.5	76.8	6.4	36.1	44.4
LnGrp LOS		D	D	E	A	D	D
Approach Vol, veh/h		1270			806	600	
Approach Delay, s/veh		38.9			29.9	40.0	
Approach LOS		D			C	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	25.8	23.3	48.4			71.7
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.5	24.5	48.5			68.0
Max Q Clear Time (g_c+I1), s	19.4	18.4	37.5			8.1
Green Ext Time (p_c), s	1.9	0.4	6.4			4.2

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	50	309	50	65	79	366	868	30	61	864	153
Future Volume (veh/h)	234	50	309	50	65	79	366	868	30	61	864	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1575	1772	1772	1673	1772	1870	1575	1772	1772	1673	1772	1870
Adj Flow Rate, veh/h	246	53	325	53	68	83	385	914	32	64	909	161
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	209	814	61	117	105	404	1582	744	65	1062	188
Arrive On Green	0.09	0.12	0.14	0.04	0.07	0.10	0.14	0.47	0.50	0.04	0.37	0.40
Sat Flow, veh/h	2910	1772	2643	1594	1683	1502	2910	3367	1502	1594	2858	506
Grp Volume(v), veh/h	246	53	325	53	68	83	385	914	32	64	535	535
Grp Sat Flow(s),veh/h/ln	1455	1772	1321	1594	1683	1502	1455	1683	1502	1594	1683	1681
Q Serve(g_s), s	6.6	2.1	7.6	2.6	3.1	4.2	10.2	15.4	0.9	3.1	22.9	22.8
Cycle Q Clear(g_c), s	6.6	2.1	7.6	2.6	3.1	4.2	10.2	15.4	0.9	3.1	22.9	22.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	253	209	814	61	117	105	404	1582	744	65	626	625
V/C Ratio(X)	0.97	0.25	0.40	0.87	0.58	0.79	0.95	0.58	0.04	0.99	0.86	0.86
Avail Cap(c_a), veh/h	354	808	1708	141	712	635	541	1889	881	157	798	797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	31.3	21.3	37.3	35.2	34.8	33.4	15.1	10.1	37.4	22.6	22.3
Incr Delay (d2), s/veh	34.9	0.6	0.3	27.9	4.5	12.6	23.6	0.3	0.0	49.1	7.4	7.4
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	3.5	0.9	2.3	1.5	1.4	1.8	4.8	5.5	0.3	2.1	9.7	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.5	31.9	21.6	65.2	39.7	47.4	57.0	15.4	10.2	86.5	30.0	29.7
LnGrp LOS	E	C	C	E	D	D	E	B	B	F	C	C
Approach Vol, veh/h		624			204			1331			1134	
Approach Delay, s/veh		41.8			49.5			27.3			33.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	43.2	9.5	15.7	17.3	35.5	13.3	11.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.7	45.8	8.9	37.6	16.5	39.0	11.5	35.0
Max Q Clear Time (g_c+I1), s	5.1	17.4	4.6	9.6	12.2	24.9	8.6	6.2
Green Ext Time (p_c), s	0.0	7.6	0.0	1.6	0.6	6.2	0.2	0.9

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

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	922	80	0	830	0	173
Future Vol, veh/h	922	80	0	830	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	971	84	0	874	0	182

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	528
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	424
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	424
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	424	-	-	-
HCM Lane V/C Ratio	0.429	-	-	-
HCM Control Delay (s)	19.7	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	2.1	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	0	1117	963	54
Future Vol, veh/h	0	15	0	1117	963	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	0	1176	1014	57

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	536	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	489	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	489	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	489	-	-
HCM Lane V/C Ratio	-	0.032	-	-
HCM Control Delay (s)	-	12.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	68	1117	952	26
Future Vol, veh/h	0	39	68	1117	952	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	41	72	1176	1002	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	515	1029	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	505	671	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	505	671	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	671	-	505	-	-
HCM Lane V/C Ratio	0.107	-	0.081	-	-
HCM Control Delay (s)	11	-	12.8	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	480	165	219	745	520	120	489	106	427	599	88
Future Volume (veh/h)	100	480	165	219	745	520	120	489	106	427	599	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	100	480	165	219	745	520	120	489	106	427	599	88
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	1067	614	234	1224	786	106	650	493	305	769	113
Arrive On Green	0.03	0.30	0.33	0.08	0.34	0.37	0.03	0.18	0.21	0.10	0.25	0.27
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3109	456
Grp Volume(v), veh/h	100	480	165	219	745	520	120	489	106	427	342	345
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1788
Q Serve(g_s), s	2.4	8.3	5.4	5.3	13.2	18.7	2.6	9.9	3.7	7.5	13.6	13.6
Cycle Q Clear(g_c), s	2.4	8.3	5.4	5.3	13.2	18.7	2.6	9.9	3.7	7.5	13.6	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	53	1067	614	234	1224	786	106	650	493	305	439	442
V/C Ratio(X)	1.88	0.45	0.27	0.94	0.61	0.66	1.13	0.75	0.21	1.40	0.78	0.78
Avail Cap(c_a), veh/h	100	1363	746	587	1826	1055	232	2014	1102	306	1049	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	21.5	15.9	34.9	20.6	14.4	36.6	29.4	19.3	34.2	26.6	26.4
Incr Delay (d2), s/veh	458.1	0.3	0.2	15.8	0.5	1.0	84.3	1.8	0.2	198.0	3.0	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	7.7	3.3	1.9	2.5	5.2	6.2	2.2	4.2	1.3	11.1	5.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	494.9	21.8	16.1	50.7	21.1	15.3	120.9	31.2	19.5	232.1	29.6	29.4
LnGrp LOS	F	C	B	D	C	B	F	C	B	F	C	C
Approach Vol, veh/h		745			1484			715			1114	
Approach Delay, s/veh		84.0			23.5			44.5			107.2	
Approach LOS		F			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	20.4	12.2	29.3	9.1	25.3	8.9	32.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	45.0	16.4	31.1	7.7	46.8	6.5	41.0
Max Q Clear Time (g_c+I1), s	9.5	11.9	7.3	10.3	4.6	15.6	4.4	20.7
Green Ext Time (p_c), s	0.0	4.0	0.5	3.7	0.1	4.8	0.0	7.4

Intersection Summary	
HCM 6th Ctrl Delay	61.3
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	584	95	48	806	54	79	142	37	67	117	55
Future Volume (veh/h)	53	584	95	48	806	54	79	142	37	67	117	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	53	584	95	48	806	54	79	142	37	67	117	55
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	957	155	85	1057	71	212	172	199	238	129	61
Arrive On Green	0.05	0.31	0.35	0.05	0.31	0.35	0.13	0.09	0.13	0.14	0.11	0.14
Sat Flow, veh/h	1688	3061	497	1688	3380	226	1688	1870	1585	1688	1203	566
Grp Volume(v), veh/h	53	338	341	48	424	436	79	142	37	67	0	172
Grp Sat Flow(s),veh/h/ln	1688	1777	1781	1688	1777	1830	1688	1870	1585	1688	0	1769
Q Serve(g_s), s	1.8	9.6	9.6	1.7	12.8	12.8	2.6	4.4	1.2	2.1	0.0	5.7
Cycle Q Clear(g_c), s	1.8	9.6	9.6	1.7	12.8	12.8	2.6	4.4	1.2	2.1	0.0	5.7
Prop In Lane	1.00		0.28	1.00		0.12	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	85	556	557	85	556	572	212	172	199	238	0	190
V/C Ratio(X)	0.62	0.61	0.61	0.56	0.76	0.76	0.37	0.83	0.19	0.28	0.00	0.90
Avail Cap(c_a), veh/h	213	1007	1009	264	1061	1092	1007	1054	946	553	0	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	17.3	17.1	27.6	18.4	18.3	23.8	26.5	23.3	22.8	0.0	25.9
Incr Delay (d2), s/veh	7.2	1.1	1.1	5.7	2.2	2.1	1.1	9.5	0.4	0.6	0.0	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.7	3.7	0.8	5.0	5.1	1.0	2.3	0.5	0.8	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	18.4	18.2	33.3	20.6	20.5	24.9	36.0	23.7	23.5	0.0	40.3
LnGrp LOS	C	B	B	C	C	C	C	D	C	C	A	D
Approach Vol, veh/h		732			908			258			239	
Approach Delay, s/veh		19.5			21.2			30.9			35.6	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	12.0	9.5	25.1		12.9	9.5	25.1					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	35.5	11.3	35.7		19.5	9.5	37.5					
Max Q Clear Time (g_c+I1), s	6.4	3.7	11.6		7.7	3.8	14.8					
Green Ext Time (p_c), s	1.1	0.0	4.5		0.9	0.0	5.8					

Intersection Summary		
HCM 6th Ctrl Delay		23.4
HCM 6th LOS		C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	335	683	292	749	732	151
Future Volume (veh/h)	0	335	683	292	749	732	151
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		335	683	292	749	732	151
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		636	567	302	2146	808	447
Arrive On Green		0.36	0.38	0.18	0.60	0.26	0.28
Sat Flow, veh/h		1870	1585	1688	3647	3092	1585
Grp Volume(v), veh/h		335	683	292	749	732	151
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		14.4	34.5	16.6	10.2	22.1	7.3
Cycle Q Clear(g_c), s		14.4	34.5	16.6	10.2	22.1	7.3
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		636	567	302	2146	808	447
V/C Ratio(X)		0.53	1.20	0.97	0.35	0.91	0.34
Avail Cap(c_a), veh/h		636	567	499	2211	1202	649
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		24.5	30.0	39.3	9.6	34.5	27.5
Incr Delay (d2), s/veh		0.8	108.0	23.7	0.1	7.1	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		6.1	29.4	8.7	3.7	8.9	2.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		25.3	138.0	63.0	9.7	41.6	27.9
LnGrp LOS		C	F	E	A	D	C
Approach Vol, veh/h		1018			1041	883	
Approach Delay, s/veh		100.9			24.7	39.3	
Approach LOS		F			C	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	31.7	23.7	41.0			64.7
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	39.5	30.5	36.5			62.0
Max Q Clear Time (g_c+I1), s	24.1	18.6	36.5			12.2
Green Ext Time (p_c), s	3.1	0.7	0.0			6.3

Intersection Summary	
HCM 6th Ctrl Delay	55.4
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	53	380	32	57	49	389	630	38	53	834	148
Future Volume (veh/h)	169	53	380	32	57	49	389	630	38	53	834	148
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1870	1870	1772	1870	1870	1673	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	169	53	380	32	57	49	389	630	38	53	834	148
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	247	899	69	231	178	420	1542	731	69	1021	181
Arrive On Green	0.05	0.13	0.16	0.04	0.12	0.15	0.14	0.43	0.46	0.04	0.34	0.37
Sat Flow, veh/h	3092	1870	2790	1688	1911	1471	3092	3554	1585	1688	3016	535
Grp Volume(v), veh/h	169	53	380	32	53	53	389	630	38	53	491	491
Grp Sat Flow(s),veh/h/ln	1546	1870	1395	1688	1777	1606	1546	1777	1585	1688	1777	1774
Q Serve(g_s), s	3.8	1.9	7.9	1.4	2.0	2.2	9.2	9.0	1.0	2.3	18.6	18.6
Cycle Q Clear(g_c), s	3.8	1.9	7.9	1.4	2.0	2.2	9.2	9.0	1.0	2.3	18.6	18.6
Prop In Lane	1.00		1.00	1.00		0.92	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	161	247	899	69	215	194	420	1542	731	69	602	601
V/C Ratio(X)	1.05	0.21	0.42	0.47	0.24	0.28	0.93	0.41	0.05	0.77	0.82	0.82
Avail Cap(c_a), veh/h	323	875	1835	142	795	718	692	2106	982	220	887	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	28.6	19.6	34.6	29.4	28.6	31.5	14.4	11.0	35.0	22.3	22.0
Incr Delay (d2), s/veh	49.9	0.4	0.3	4.9	0.6	0.8	12.2	0.2	0.0	16.5	3.8	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.8	2.5	0.6	0.9	0.9	4.0	3.4	0.3	1.2	7.9	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.9	29.0	19.9	39.4	30.0	29.4	43.7	14.5	11.0	51.6	26.1	25.8
LnGrp LOS	F	C	B	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		602			138			1057			1035	
Approach Delay, s/veh		39.0			31.9			25.2			27.3	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	38.5	9.5	16.3	16.5	31.5	10.3	15.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.6	45.7	8.2	36.5	18.5	38.8	9.7	35.0
Max Q Clear Time (g_c+I1), s	4.3	11.0	3.4	9.9	11.2	20.6	5.8	4.2
Green Ext Time (p_c), s	0.0	5.0	0.0	1.9	0.9	6.3	0.2	0.6

Intersection Summary	
HCM 6th Ctrl Delay	29.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	910	207	134	672	392	212	644	270	565	643	87
Future Volume (veh/h)	97	910	207	134	672	392	212	644	270	565	643	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	97	910	207	134	672	392	212	644	270	565	643	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	1121	653	103	1133	742	151	851	508	314	919	124
Arrive On Green	0.03	0.32	0.34	0.03	0.32	0.34	0.05	0.24	0.26	0.10	0.29	0.32
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3146	425
Grp Volume(v), veh/h	97	910	207	134	672	392	212	644	270	565	363	367
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1794
Q Serve(g_s), s	2.5	19.7	7.4	2.8	13.3	14.6	4.1	14.1	11.7	8.5	15.2	15.2
Cycle Q Clear(g_c), s	2.5	19.7	7.4	2.8	13.3	14.6	4.1	14.1	11.7	8.5	15.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	50	1121	653	103	1133	742	151	851	508	314	519	524
V/C Ratio(X)	1.94	0.81	0.32	1.31	0.59	0.53	1.40	0.76	0.53	1.80	0.70	0.70
Avail Cap(c_a), veh/h	71	1536	838	233	1655	975	166	1825	942	314	997	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	26.4	16.7	40.5	24.0	15.7	39.8	29.6	23.3	37.6	26.4	26.2
Incr Delay (d2), s/veh	489.2	2.4	0.3	159.5	0.5	0.6	215.8	1.4	0.9	372.7	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.4	2.6	3.3	5.4	5.1	6.1	6.0	4.3	19.4	6.4	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	529.9	28.8	16.9	200.0	24.5	16.3	255.7	31.0	24.2	410.3	28.1	27.9
LnGrp LOS	F	C	B	F	C	B	F	C	C	F	C	C
Approach Vol, veh/h		1214			1198			1126			1295	
Approach Delay, s/veh		66.8			41.4			71.6			194.8	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	26.6	9.3	32.9	10.6	31.0	9.0	33.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	45.0	8.3	38.2	6.5	49.0	5.5	41.0
Max Q Clear Time (g_c+I1), s	10.5	16.1	4.8	21.7	6.1	17.2	4.5	16.6
Green Ext Time (p_c), s	0.0	6.0	0.1	6.7	0.0	5.2	0.0	6.6

Intersection Summary	
HCM 6th Ctrl Delay	95.9
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1044	89	52	765	83	74	130	40	70	144	76
Future Volume (veh/h)	70	1044	89	52	765	83	74	130	40	70	144	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	70	1044	89	52	765	83	74	130	40	70	144	76
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	1280	109	69	1246	135	185	154	174	273	155	82
Arrive On Green	0.04	0.39	0.41	0.04	0.39	0.41	0.11	0.08	0.11	0.16	0.13	0.16
Sat Flow, veh/h	1688	3314	282	1688	3233	351	1688	1870	1585	1688	1153	608
Grp Volume(v), veh/h	70	560	573	52	420	428	74	130	40	70	0	220
Grp Sat Flow(s),veh/h/ln	1688	1777	1820	1688	1777	1807	1688	1870	1585	1688	0	1761
Q Serve(g_s), s	3.0	20.6	20.6	2.2	13.9	13.9	3.0	5.0	1.7	2.7	0.0	9.0
Cycle Q Clear(g_c), s	3.0	20.6	20.6	2.2	13.9	13.9	3.0	5.0	1.7	2.7	0.0	9.0
Prop In Lane	1.00		0.16	1.00		0.19	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	71	686	703	69	685	696	185	154	174	273	0	237
V/C Ratio(X)	0.98	0.82	0.82	0.75	0.61	0.61	0.40	0.85	0.23	0.26	0.00	0.93
Avail Cap(c_a), veh/h	187	960	984	118	888	903	806	842	757	427	0	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	20.1	19.9	34.7	18.1	17.9	30.3	33.1	29.7	26.8	0.0	30.9
Incr Delay (d2), s/veh	45.9	3.8	3.8	14.9	0.9	0.9	1.4	11.8	0.7	0.5	0.0	18.7
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	2.1	8.5	8.7	1.2	5.5	5.5	1.2	2.7	0.7	1.1	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	23.9	23.7	49.6	19.0	18.8	31.7	44.9	30.4	27.3	0.0	49.6
LnGrp LOS	F	C	C	D	B	B	C	D	C	C	A	D
Approach Vol, veh/h		1203			900			244			290	
Approach Delay, s/veh		27.1			20.7			38.5			44.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	2	3	4		6	7	8					
Phs Duration (G+Y+Rc), s	12.5	9.5	34.7		16.3	9.6	34.7					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	34.9	7.1	41.5		18.5	10.1	38.5					
Max Q Clear Time (g_c+I1), s	7.0	4.2	22.6		11.0	5.0	15.9					
Green Ext Time (p_c), s	1.1	0.0	7.6		0.8	0.0	5.7					

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	854	827	256	526	695	265
Future Volume (veh/h)	0	854	827	256	526	695	265
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		854	827	256	526	695	265
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		781	695	257	2301	741	407
Arrive On Green		0.44	0.46	0.15	0.65	0.24	0.26
Sat Flow, veh/h		1872	1584	1688	3647	3092	1585
Grp Volume(v), veh/h		853	828	256	526	695	265
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		50.5	50.5	17.4	7.0	25.4	17.2
Cycle Q Clear(g_c), s		50.5	50.5	17.4	7.0	25.4	17.2
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		780	696	257	2301	741	407
V/C Ratio(X)		1.09	1.19	1.00	0.23	0.94	0.65
Avail Cap(c_a), veh/h		780	696	265	2301	857	467
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		32.3	31.3	48.8	8.4	42.9	38.1
Incr Delay (d2), s/veh		60.9	99.4	54.0	0.1	16.3	2.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		34.1	37.6	11.2	2.6	11.3	6.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		93.2	130.7	102.8	8.4	59.3	40.7
LnGrp LOS		F	F	F	A	E	D
Approach Vol, veh/h		1681			782	960	
Approach Delay, s/veh		111.7			39.3	54.1	
Approach LOS		F			D	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	34.1	24.0	57.0			81.0
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.9	20.1	52.5			67.6
Max Q Clear Time (g_c+I1), s	27.4	19.4	52.5			9.0
Green Ext Time (p_c), s	2.2	0.1	0.0			4.1

Intersection Summary	
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	221	59	331	50	89	66	374	855	30	48	851	140
Future Volume (veh/h)	221	59	331	50	89	66	374	855	30	48	851	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1870	1870	1772	1870	1870	1673	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	221	59	331	50	89	66	374	855	30	48	851	140
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	220	851	71	174	118	405	1533	729	71	1047	172
Arrive On Green	0.07	0.12	0.15	0.04	0.09	0.11	0.13	0.43	0.46	0.04	0.34	0.37
Sat Flow, veh/h	3092	1870	2790	1688	2023	1377	3092	3554	1585	1688	3054	502
Grp Volume(v), veh/h	221	59	331	50	77	78	374	855	30	48	495	496
Grp Sat Flow(s),veh/h/ln	1546	1870	1395	1688	1777	1623	1546	1777	1585	1688	1777	1780
Q Serve(g_s), s	5.1	2.0	6.6	2.1	2.9	3.2	8.5	12.8	0.7	2.0	18.0	18.0
Cycle Q Clear(g_c), s	5.1	2.0	6.6	2.1	2.9	3.2	8.5	12.8	0.7	2.0	18.0	18.0
Prop In Lane	1.00		1.00	1.00		0.85	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	229	220	851	71	153	139	405	1533	729	71	609	610
V/C Ratio(X)	0.97	0.27	0.39	0.70	0.51	0.56	0.92	0.56	0.04	0.67	0.81	0.81
Avail Cap(c_a), veh/h	418	954	1945	152	826	754	684	2113	987	219	894	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	28.5	19.5	33.5	31.0	30.3	30.5	15.1	10.6	33.5	21.2	21.0
Incr Delay (d2), s/veh	23.0	0.6	0.3	11.8	2.6	3.5	11.7	0.3	0.0	10.5	3.7	3.7
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	2.6	0.9	0.0	1.1	1.3	1.3	3.7	4.8	0.2	1.0	7.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.8	29.2	19.7	45.3	33.6	33.8	42.2	15.4	10.6	44.0	24.9	24.7
LnGrp LOS	E	C	B	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		611			205			1259			1039	
Approach Delay, s/veh		33.7			36.5			23.2			25.7	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	37.1	9.5	14.8	15.8	30.8	11.8	12.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.2	44.2	8.4	38.2	17.7	37.7	11.6	35.0
Max Q Clear Time (g_c+I1), s	4.0	14.8	4.1	8.6	10.5	20.0	7.1	5.2
Green Ext Time (p_c), s	0.0	7.0	0.0	1.7	0.8	6.3	0.3	0.9

Intersection Summary	
HCM 6th Ctrl Delay	27.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	505	165	244	745	520	120	489	106	427	618	88
Future Volume (veh/h)	163	505	165	244	745	520	120	489	106	427	618	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	163	505	165	244	745	520	120	489	106	427	618	88
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	1090	619	263	1229	758	103	707	530	253	773	110
Arrive On Green	0.05	0.31	0.33	0.09	0.35	0.37	0.03	0.20	0.22	0.08	0.25	0.27
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3123	444
Grp Volume(v), veh/h	163	505	165	244	745	520	120	489	106	427	351	355
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1790
Q Serve(g_s), s	3.6	9.1	5.6	6.2	13.8	20.2	2.6	10.2	3.8	6.5	14.7	14.7
Cycle Q Clear(g_c), s	3.6	9.1	5.6	6.2	13.8	20.2	2.6	10.2	3.8	6.5	14.7	14.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	77	1090	619	263	1229	758	103	707	530	253	440	443
V/C Ratio(X)	2.11	0.46	0.27	0.93	0.61	0.69	1.16	0.69	0.20	1.69	0.80	0.80
Avail Cap(c_a), veh/h	117	1284	705	615	1745	988	214	1924	1073	253	984	992
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	22.2	16.5	36.1	21.5	16.1	38.4	29.5	18.8	36.5	28.0	27.8
Incr Delay (d2), s/veh	539.6	0.3	0.2	13.4	0.5	1.3	101.8	1.2	0.2	326.2	3.4	3.4
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	13.1	3.7	2.0	2.8	5.5	6.9	2.4	4.3	1.4	13.9	6.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	577.5	22.6	16.7	49.5	22.0	17.4	140.1	30.8	19.0	362.7	31.4	31.2
LnGrp LOS	F	C	B	D	C	B	F	C	B	F	C	C
Approach Vol, veh/h		833			1509			715			1133	
Approach Delay, s/veh		130.0			24.9			47.4			156.2	
Approach LOS		F			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	22.3	13.3	30.8	9.1	26.1	10.1	34.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	45.0	17.8	30.7	7.5	46.0	7.5	41.0
Max Q Clear Time (g_c+I1), s	8.5	12.2	8.2	11.1	4.6	16.7	5.6	22.2
Green Ext Time (p_c), s	0.0	4.0	0.6	3.9	0.1	4.9	0.1	7.2

Intersection Summary	
HCM 6th Ctrl Delay	85.1
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	609	95	54	831	67	79	142	43	80	117	55
Future Volume (veh/h)	53	609	95	54	831	67	79	142	43	80	117	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	53	609	95	54	831	67	79	142	43	80	117	55
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	1001	156	83	1082	87	211	172	198	237	130	61
Arrive On Green	0.05	0.33	0.36	0.05	0.33	0.36	0.12	0.09	0.12	0.14	0.11	0.14
Sat Flow, veh/h	1688	3081	480	1688	3330	268	1688	1870	1585	1688	1203	566
Grp Volume(v), veh/h	53	351	353	54	443	455	79	142	43	80	0	172
Grp Sat Flow(s),veh/h/ln	1688	1777	1784	1688	1777	1822	1688	1870	1585	1688	0	1769
Q Serve(g_s), s	1.9	10.1	10.1	1.9	13.7	13.7	2.6	4.6	1.5	2.6	0.0	5.9
Cycle Q Clear(g_c), s	1.9	10.1	10.1	1.9	13.7	13.7	2.6	4.6	1.5	2.6	0.0	5.9
Prop In Lane	1.00		0.27	1.00		0.15	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	83	577	580	83	577	592	211	172	198	237	0	191
V/C Ratio(X)	0.64	0.61	0.61	0.65	0.77	0.77	0.37	0.82	0.22	0.34	0.00	0.90
Avail Cap(c_a), veh/h	207	995	999	271	1062	1089	981	1026	922	511	0	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	17.3	17.1	28.5	18.5	18.4	24.5	27.2	24.0	23.7	0.0	26.6
Incr Delay (d2), s/veh	7.9	1.0	1.0	8.3	2.2	2.1	1.1	9.4	0.5	0.8	0.0	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.9	3.9	0.9	5.4	5.5	1.1	2.4	0.6	1.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.4	18.4	18.1	36.8	20.7	20.5	25.6	36.6	24.6	24.5	0.0	40.8
LnGrp LOS	D	B	B	D	C	C	C	D	C	C	A	D
Approach Vol, veh/h		757			952			264			252	
Approach Delay, s/veh		19.5			21.5			31.4			35.6	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	12.1	9.5	26.3	13.1	9.5	26.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	35.5	11.8	36.2	18.5	9.5	38.5
Max Q Clear Time (g_c+I1), s	6.6	3.9	12.1	7.9	3.9	15.7
Green Ext Time (p_c), s	1.2	0.0	4.7	0.8	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	335	689	292	768	738	151
Future Volume (veh/h)	0	335	689	292	768	738	151
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		335	689	292	768	738	151
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		633	565	302	2141	814	450
Arrive On Green		0.36	0.38	0.18	0.60	0.26	0.28
Sat Flow, veh/h		1870	1585	1688	3647	3092	1585
Grp Volume(v), veh/h		335	689	292	768	738	151
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		14.5	34.5	16.6	10.6	22.4	7.3
Cycle Q Clear(g_c), s		14.5	34.5	16.6	10.6	22.4	7.3
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		633	565	302	2141	814	450
V/C Ratio(X)		0.53	1.22	0.97	0.36	0.91	0.34
Avail Cap(c_a), veh/h		633	565	497	2203	1198	647
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		24.7	30.1	39.5	9.8	34.5	27.4
Incr Delay (d2), s/veh		0.8	114.0	23.9	0.1	7.3	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		6.1	30.3	8.8	3.8	9.0	2.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		25.5	144.1	63.3	9.9	41.8	27.9
LnGrp LOS		C	F	E	A	D	C
Approach Vol, veh/h		1024			1060	889	
Approach Delay, s/veh		105.3			24.6	39.4	
Approach LOS		F			C	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	32.0	23.8	41.0			64.8
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	39.5	30.5	36.5			62.0
Max Q Clear Time (g_c+I1), s	24.4	18.6	36.5			12.6
Green Ext Time (p_c), s	3.1	0.7	0.0			6.5

Intersection Summary	
HCM 6th Ctrl Delay	56.8
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	53	380	32	57	62	389	643	38	66	847	161
Future Volume (veh/h)	182	53	380	32	57	62	389	643	38	66	847	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1870	1870	1772	1870	1870	1673	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	182	53	380	32	57	62	389	643	38	66	847	161
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	247	896	68	200	179	420	1565	740	68	1027	195
Arrive On Green	0.06	0.13	0.16	0.04	0.11	0.14	0.14	0.44	0.47	0.04	0.34	0.37
Sat Flow, veh/h	3092	1870	2790	1688	1777	1585	3092	3554	1585	1688	2979	566
Grp Volume(v), veh/h	182	53	380	32	57	62	389	643	38	66	505	503
Grp Sat Flow(s),veh/h/ln	1546	1870	1395	1688	1777	1585	1546	1777	1585	1688	1777	1768
Q Serve(g_s), s	4.4	1.9	8.0	1.4	2.2	2.6	9.3	9.3	1.0	2.9	19.5	19.4
Cycle Q Clear(g_c), s	4.4	1.9	8.0	1.4	2.2	2.6	9.3	9.3	1.0	2.9	19.5	19.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	183	247	896	68	200	179	420	1565	740	68	613	610
V/C Ratio(X)	0.99	0.21	0.42	0.47	0.28	0.35	0.93	0.41	0.05	0.98	0.82	0.82
Avail Cap(c_a), veh/h	335	860	1810	151	783	699	682	2013	940	237	864	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	29.0	20.0	35.1	30.4	29.7	32.0	14.3	10.9	35.9	22.4	22.1
Incr Delay (d2), s/veh	33.6	0.4	0.3	5.1	0.8	1.2	12.8	0.2	0.0	45.1	4.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.9	2.5	0.7	1.0	1.0	4.1	3.5	0.3	2.0	8.4	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.8	29.4	20.3	40.2	31.2	30.9	44.8	14.5	10.9	80.9	27.0	26.7
LnGrp LOS	E	C	C	D	C	C	D	B	B	F	C	C
Approach Vol, veh/h		615			151			1070			1074	
Approach Delay, s/veh		35.4			33.0			25.4			30.2	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	39.5	9.5	16.4	16.7	32.3	10.9	14.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.5	44.4	8.7	36.4	18.5	38.4	10.1	35.0
Max Q Clear Time (g_c+I1), s	11.9	11.3	3.4	10.0	11.3	21.5	6.4	4.6
Green Ext Time (p_c), s	0.1	5.1	0.0	1.9	0.8	6.3	0.2	0.7

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	638	88	0	953	0	195
Future Vol, veh/h	638	88	0	953	0	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	638	88	0	953	0	195

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	363
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	541
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	541
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	541	-	-	-
HCM Lane V/C Ratio	0.36	-	-	-
HCM Control Delay (s)	15.4	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	1.6	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	19	0	715	964	63
Future Vol, veh/h	0	19	0	715	964	63
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	19	0	715	964	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	514	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	505	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	505	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	505	-	-
HCM Lane V/C Ratio	-	0.038	-	-
HCM Control Delay (s)	-	12.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	38	76	715	958	25
Future Vol, veh/h	0	38	76	715	958	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	76	715	958	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	492	983	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	522	698	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	522	698	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	698	-	522	-	-
HCM Lane V/C Ratio	0.109	-	0.073	-	-
HCM Control Delay (s)	10.8	-	12.4	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	936	207	160	672	392	212	644	270	565	663	87
Future Volume (veh/h)	162	936	207	160	672	392	212	644	270	565	663	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	162	936	207	160	672	392	212	644	270	565	663	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1138	641	156	1187	742	115	847	531	271	912	119
Arrive On Green	0.04	0.32	0.34	0.05	0.33	0.36	0.04	0.24	0.26	0.09	0.29	0.31
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3159	414
Grp Volume(v), veh/h	162	936	207	160	672	392	212	644	270	565	373	377
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1796
Q Serve(g_s), s	3.1	20.8	7.7	4.3	13.3	15.0	3.2	14.4	11.7	7.5	16.2	16.2
Cycle Q Clear(g_c), s	3.1	20.8	7.7	4.3	13.3	15.0	3.2	14.4	11.7	7.5	16.2	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	62	1138	641	156	1187	742	115	847	531	271	513	518
V/C Ratio(X)	2.63	0.82	0.32	1.03	0.57	0.53	1.84	0.76	0.51	2.09	0.73	0.73
Avail Cap(c_a), veh/h	89	1499	801	267	1619	935	126	1785	950	271	976	986
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	26.9	17.5	40.6	23.4	16.1	41.2	30.3	22.8	39.1	27.4	27.2
Incr Delay (d2), s/veh	779.8	2.9	0.3	51.5	0.4	0.6	410.4	1.4	0.8	501.0	2.0	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	14.6	8.9	2.7	2.7	5.4	5.2	7.8	6.2	4.3	21.6	6.9	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	821.1	29.8	17.8	92.1	23.8	16.7	451.6	31.8	23.6	540.1	29.4	29.2
LnGrp LOS	F	C	B	F	C	B	F	C	C	F	C	C
Approach Vol, veh/h		1305			1224			1126			1315	
Approach Delay, s/veh		126.1			30.5			108.8			248.8	
Approach LOS		F			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	26.9	10.8	33.9	9.7	31.2	9.6	35.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	45.0	9.4	38.1	5.5	49.0	6.5	41.0
Max Q Clear Time (g_c+I1), s	9.5	16.4	6.3	22.8	5.2	18.2	5.1	17.0
Green Ext Time (p_c), s	0.0	6.0	0.1	6.6	0.0	5.3	0.1	6.6

Intersection Summary		
HCM 6th Ctrl Delay		131.1
HCM 6th LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1070	89	59	791	96	74	130	47	83	144	76
Future Volume (veh/h)	70	1070	89	59	791	96	74	130	47	83	144	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1772	1870	1870	1772	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	70	1070	89	59	791	96	74	130	47	83	144	76
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	1306	109	68	1248	151	184	154	173	272	155	82
Arrive On Green	0.04	0.39	0.42	0.04	0.39	0.42	0.11	0.08	0.11	0.16	0.13	0.16
Sat Flow, veh/h	1688	3321	276	1688	3190	387	1688	1870	1585	1688	1153	608
Grp Volume(v), veh/h	70	572	587	59	440	447	74	130	47	83	0	220
Grp Sat Flow(s),veh/h/ln	1688	1777	1821	1688	1777	1801	1688	1870	1585	1688	0	1761
Q Serve(g_s), s	3.1	21.4	21.4	2.6	14.9	14.8	3.0	5.1	2.0	3.2	0.0	9.2
Cycle Q Clear(g_c), s	3.1	21.4	21.4	2.6	14.9	14.8	3.0	5.1	2.0	3.2	0.0	9.2
Prop In Lane	1.00		0.15	1.00		0.21	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	71	698	716	68	695	705	184	154	173	272	0	237
V/C Ratio(X)	0.99	0.82	0.82	0.87	0.63	0.63	0.40	0.84	0.27	0.30	0.00	0.93
Avail Cap(c_a), veh/h	184	959	982	125	897	909	779	813	731	411	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.6	20.2	20.1	35.5	18.3	18.1	30.8	33.6	30.4	27.5	0.0	31.5
Incr Delay (d2), s/veh	46.0	4.1	4.0	25.9	1.0	0.9	1.4	11.7	0.8	0.6	0.0	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	8.9	9.1	1.5	5.9	5.9	1.3	2.7	0.8	1.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.6	24.3	24.1	61.3	19.3	19.1	32.2	45.3	31.2	28.1	0.0	52.0
LnGrp LOS	F	C	C	E	B	B	C	D	C	C	A	D
Approach Vol, veh/h		1229			946			251			303	
Approach Delay, s/veh		27.4			21.8			38.8			45.5	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	12.6	9.5	35.7		16.5	9.6	35.6
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s	34.3	7.5	42.1		18.1	10.1	39.5
Max Q Clear Time (g_c+I1), s	7.1	4.6	23.4		11.2	5.1	16.9
Green Ext Time (p_c), s	1.1	0.0	7.8		0.8	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	854	834	256	546	702	265
Future Volume (veh/h)	0	854	834	256	546	702	265
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		854	834	256	546	702	265
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		778	694	257	2296	746	410
Arrive On Green		0.44	0.45	0.15	0.65	0.24	0.26
Sat Flow, veh/h		1870	1585	1688	3647	3092	1585
Grp Volume(v), veh/h		854	834	256	546	702	265
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		50.5	50.5	17.5	7.4	25.7	17.2
Cycle Q Clear(g_c), s		50.5	50.5	17.5	7.4	25.7	17.2
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		778	694	257	2296	746	410
V/C Ratio(X)		1.10	1.20	1.00	0.24	0.94	0.65
Avail Cap(c_a), veh/h		778	694	265	2296	855	466
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		32.4	31.4	48.9	8.5	43.0	38.1
Incr Delay (d2), s/veh		62.5	104.5	54.2	0.1	16.9	2.6
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		34.4	38.5	11.2	2.7	11.5	6.9
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		95.0	135.9	103.1	8.6	59.8	40.6
LnGrp LOS		F	F	F	A	E	D
Approach Vol, veh/h		1688			802	967	
Approach Delay, s/veh		115.2			38.8	54.6	
Approach LOS		F			D	D	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	34.4	24.0	57.0			81.0
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	33.9	20.1	52.5			67.6
Max Q Clear Time (g_c+I1), s	27.7	19.5	52.5			9.4
Green Ext Time (p_c), s	2.1	0.1	0.0			4.3

Intersection Summary	
HCM 6th Ctrl Delay	80.5
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	59	331	50	89	79	374	868	30	61	864	153
Future Volume (veh/h)	234	59	331	50	89	79	374	868	30	61	864	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1870	1870	1772	1870	1870	1673	1870	1870	1772	1870	1870
Adj Flow Rate, veh/h	234	59	331	50	89	79	374	868	30	61	864	153
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	220	845	70	151	121	402	1560	740	70	1058	187
Arrive On Green	0.08	0.12	0.15	0.04	0.08	0.11	0.13	0.44	0.47	0.04	0.35	0.38
Sat Flow, veh/h	3092	1870	2790	1688	1871	1505	3092	3554	1585	1688	3017	534
Grp Volume(v), veh/h	234	59	331	50	84	84	374	868	30	61	509	508
Grp Sat Flow(s),veh/h/ln	1546	1870	1395	1688	1777	1599	1546	1777	1585	1688	1777	1774
Q Serve(g_s), s	5.4	2.1	6.8	2.1	3.3	3.6	8.6	13.1	0.7	2.6	18.8	18.7
Cycle Q Clear(g_c), s	5.4	2.1	6.8	2.1	3.3	3.6	8.6	13.1	0.7	2.6	18.8	18.7
Prop In Lane	1.00		1.00	1.00		0.94	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	243	220	845	70	143	129	402	1560	740	70	623	622
V/C Ratio(X)	0.96	0.27	0.39	0.71	0.59	0.65	0.93	0.56	0.04	0.87	0.82	0.82
Avail Cap(c_a), veh/h	416	938	1917	152	813	732	643	2024	947	239	894	893
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	29.0	19.9	34.1	32.0	31.3	31.1	15.0	10.5	34.4	21.3	21.0
Incr Delay (d2), s/veh	24.5	0.6	0.3	12.5	3.8	5.5	14.2	0.3	0.0	25.7	4.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.9	2.1	1.1	1.5	1.5	3.9	4.9	0.2	1.5	7.9	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	29.7	20.2	46.7	35.8	36.7	45.3	15.3	10.5	60.0	25.3	25.0
LnGrp LOS	E	C	C	D	D	D	D	B	B	E	C	C
Approach Vol, veh/h		624			218			1272			1078	
Approach Delay, s/veh		35.1			38.7			24.0			27.1	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	38.2	9.5	15.0	15.9	31.8	12.2	12.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	43.1	8.5	38.2	17.0	38.3	11.7	35.0
Max Q Clear Time (g_c+I1), s	4.1	15.1	4.1	8.8	10.6	20.8	7.4	5.6
Green Ext Time (p_c), s	0.1	7.1	0.0	1.7	0.7	6.5	0.3	1.0

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1132	80	0	971	0	173
Future Vol, veh/h	1132	80	0	971	0	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1132	80	0	971	0	173

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	606
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	377
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	377
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	377	-	-	-
HCM Lane V/C Ratio	0.459	-	-	-
HCM Control Delay (s)	22.4	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	2.3	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	0	1126	976	54
Future Vol, veh/h	0	15	0	1126	976	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	0	1126	976	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	515	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	505	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	505	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	505	-	-
HCM Lane V/C Ratio	-	0.03	-	-
HCM Control Delay (s)	-	12.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	68	1126	965	26
Future Vol, veh/h	0	39	68	1126	965	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	68	1126	965	26

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	496	991	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	519	693	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	519	693	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	693	-	519	-	-
HCM Lane V/C Ratio	0.098	-	0.075	-	-
HCM Control Delay (s)	10.8	-	12.5	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	411	165	238	598	253	120	489	99	174	618	83
Future Volume (veh/h)	162	411	165	238	598	253	120	489	99	174	618	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1772
Adj Flow Rate, veh/h	171	433	174	251	629	266	126	515	104	183	651	87
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	878	538	264	817	542	133	826	582	194	794	106
Arrive On Green	0.11	0.26	0.29	0.09	0.24	0.27	0.05	0.25	0.27	0.07	0.27	0.29
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2985	398
Grp Volume(v), veh/h	171	433	174	251	629	266	126	515	104	183	367	371
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1700
Q Serve(g_s), s	8.3	8.4	6.5	6.6	13.4	10.6	3.3	10.5	3.5	4.8	15.8	15.8
Cycle Q Clear(g_c), s	8.3	8.4	6.5	6.6	13.4	10.6	3.3	10.5	3.5	4.8	15.8	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	173	878	538	264	817	542	133	826	582	194	448	452
V/C Ratio(X)	0.99	0.49	0.32	0.95	0.77	0.49	0.94	0.62	0.18	0.95	0.82	0.82
Avail Cap(c_a), veh/h	237	1482	808	433	1482	839	433	1613	933	433	807	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	24.2	18.0	34.9	27.2	19.2	36.7	26.0	15.6	35.9	26.6	26.4
Incr Delay (d2), s/veh	47.8	0.4	0.3	22.6	1.6	0.7	24.8	0.8	0.1	19.4	3.8	3.8
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	5.4	3.3	2.2	3.1	5.3	3.6	1.6	4.1	1.2	2.2	6.5	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.2	24.6	18.3	57.5	28.8	19.9	61.6	26.7	15.7	55.3	30.4	30.2
LnGrp LOS	F	C	B	E	C	B	E	C	B	E	C	C
Approach Vol, veh/h		778			1146			745			921	
Approach Delay, s/veh		35.9			33.0			31.1			35.2	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	25.4	13.5	26.6	10.0	27.0	14.9	25.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	39.0	13.5	36.0	13.5	39.0	13.5	36.0
Max Q Clear Time (g_c+I1), s	6.8	12.5	8.6	10.4	5.3	17.8	10.3	15.4
Green Ext Time (p_c), s	0.3	4.0	0.4	3.6	0.2	4.7	0.1	5.3

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	737	207	147	531	159	212	644	261	274	663	87
Future Volume (veh/h)	151	737	207	147	531	159	212	644	261	274	663	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1575	1772	1772	1575	1772	1772	1575	1772	1870
Adj Flow Rate, veh/h	159	776	218	155	559	167	223	678	275	288	698	92
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	946	613	163	795	579	233	860	538	297	830	109
Arrive On Green	0.10	0.28	0.30	0.06	0.24	0.26	0.08	0.26	0.28	0.10	0.28	0.30
Sat Flow, veh/h	1594	3367	1502	2910	3367	1502	2910	3367	1502	2910	2991	394
Grp Volume(v), veh/h	159	776	218	155	559	167	223	678	275	288	393	397
Grp Sat Flow(s),veh/h/ln	1594	1683	1502	1455	1683	1502	1455	1683	1502	1455	1683	1701
Q Serve(g_s), s	8.5	18.3	8.6	4.5	13.0	6.6	6.5	16.0	12.3	8.4	18.7	18.7
Cycle Q Clear(g_c), s	8.5	18.3	8.6	4.5	13.0	6.6	6.5	16.0	12.3	8.4	18.7	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	161	946	613	163	795	579	233	860	538	297	467	472
V/C Ratio(X)	0.99	0.82	0.36	0.95	0.70	0.29	0.96	0.79	0.51	0.97	0.84	0.84
Avail Cap(c_a), veh/h	215	1343	790	393	1343	823	393	1462	807	393	731	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	28.6	17.5	40.1	29.8	18.1	39.0	29.6	21.5	38.1	29.0	28.8
Incr Delay (d2), s/veh	51.7	2.8	0.4	22.8	1.1	0.3	24.5	1.7	0.8	32.7	5.2	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	7.5	2.9	2.1	5.2	0.0	3.1	6.5	4.2	4.3	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.9	31.4	17.8	62.9	31.0	18.4	63.5	31.2	22.2	70.8	34.2	34.0
LnGrp LOS	F	C	B	E	C	B	E	C	C	E	C	C
Approach Vol, veh/h		1153			881			1176			1078	
Approach Delay, s/veh		36.9			34.2			35.2			43.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	28.3	11.3	30.4	13.3	30.2	15.1	26.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	13.5	39.0	13.5	36.0	13.5	39.0	13.5	36.0
Max Q Clear Time (g_c+I1), s	10.4	18.0	6.5	20.3	8.5	20.7	10.5	15.0
Green Ext Time (p_c), s	0.3	5.8	0.2	5.6	0.3	4.9	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	163	505	165	244	745	520	120	489	106	427	618	88
Future Volume (veh/h)	163	505	165	244	745	520	120	489	106	427	618	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	163	505	165	244	745	520	120	489	106	427	618	88
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	1137	642	254	1082	778	128	611	472	441	853	121
Arrive On Green	0.10	0.32	0.34	0.08	0.30	0.33	0.04	0.17	0.19	0.14	0.27	0.29
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3123	444
Grp Volume(v), veh/h	163	505	165	244	745	520	120	489	106	427	351	355
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1790
Q Serve(g_s), s	8.9	10.3	6.3	7.2	16.9	22.8	3.6	12.1	4.6	12.6	16.4	16.4
Cycle Q Clear(g_c), s	8.9	10.3	6.3	7.2	16.9	22.8	3.6	12.1	4.6	12.6	16.4	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	165	1137	642	254	1082	778	128	611	472	441	485	489
V/C Ratio(X)	0.99	0.44	0.26	0.96	0.69	0.67	0.94	0.80	0.22	0.97	0.72	0.73
Avail Cap(c_a), veh/h	212	1278	705	388	1278	865	522	1317	787	522	659	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	24.7	18.1	42.0	28.1	17.7	43.8	36.5	24.2	39.1	30.2	30.0
Incr Delay (d2), s/veh	53.5	0.3	0.2	28.1	1.3	1.7	24.3	2.5	0.2	29.1	2.5	2.6
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	6.1	4.3	2.3	3.7	7.2	8.2	1.8	5.4	1.7	6.5	7.2	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.9	25.0	18.3	70.1	29.3	19.4	68.1	39.0	24.5	68.2	32.7	32.6
LnGrp LOS	F	C	B	E	C	B	E	D	C	E	C	C
Approach Vol, veh/h		833			1509			715			1133	
Approach Delay, s/veh		37.4			32.5			41.7			46.1	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	22.3	14.0	35.8	10.3	31.6	15.5	34.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	36.0	13.5	35.0	17.5	36.0	13.5	35.0
Max Q Clear Time (g_c+I1), s	14.6	14.1	9.2	12.3	5.6	18.4	10.9	24.8
Green Ext Time (p_c), s	0.5	3.7	0.3	4.0	0.2	4.2	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	335	689	292	768	738	151
Future Volume (veh/h)	0	335	689	292	768	738	151
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		335	689	292	768	738	151
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1106	999	305	2031	835	467
Arrive On Green		0.31	0.34	0.18	0.57	0.27	0.29
Sat Flow, veh/h		3647	1585	1688	3647	3092	1585
Grp Volume(v), veh/h		335	689	292	768	738	151
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		5.9	23.3	14.1	9.7	18.8	6.1
Cycle Q Clear(g_c), s		5.9	23.3	14.1	9.7	18.8	6.1
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1106	999	305	2031	835	467
V/C Ratio(X)		0.30	0.69	0.96	0.38	0.88	0.32
Avail Cap(c_a), veh/h		1213	1046	677	2507	1492	804
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		21.5	9.9	33.3	9.6	28.7	22.6
Incr Delay (d2), s/veh		0.2	1.8	15.5	0.1	3.3	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.4	14.2	6.9	3.4	7.0	2.3
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		21.6	11.8	48.8	9.7	32.0	23.0
LnGrp LOS		C	B	D	A	C	C
Approach Vol, veh/h		1024			1060	889	
Approach Delay, s/veh		15.0			20.5	30.5	
Approach LOS		B			C	C	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	28.7	21.4	32.0			53.4
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	41.6	34.9	30.0			59.9
Max Q Clear Time (g_c+I1), s	20.8	16.1	25.3			11.7
Green Ext Time (p_c), s	3.4	0.8	2.2			6.5

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	936	207	160	672	392	212	644	270	565	663	87
Future Volume (veh/h)	162	936	207	160	672	392	212	644	270	565	663	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1772	1870	1870	1673	1870	1870	1673	1870	1870	1673	1870	1870
Adj Flow Rate, veh/h	162	936	207	160	672	392	212	644	270	565	663	87
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	1057	652	167	905	720	225	795	505	491	978	128
Arrive On Green	0.10	0.30	0.32	0.05	0.25	0.28	0.07	0.22	0.24	0.16	0.31	0.33
Sat Flow, veh/h	1688	3554	1585	3092	3554	1585	3092	3554	1585	3092	3159	414
Grp Volume(v), veh/h	162	936	207	160	672	392	212	644	270	565	373	377
Grp Sat Flow(s),veh/h/ln	1688	1777	1585	1546	1777	1585	1546	1777	1585	1546	1777	1796
Q Serve(g_s), s	9.4	24.5	8.6	5.0	17.0	17.5	6.7	16.8	13.7	15.5	17.9	17.9
Cycle Q Clear(g_c), s	9.4	24.5	8.6	5.0	17.0	17.5	6.7	16.8	13.7	15.5	17.9	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	163	1057	652	167	905	720	225	795	505	491	550	556
V/C Ratio(X)	0.99	0.89	0.32	0.96	0.74	0.54	0.94	0.81	0.53	1.15	0.68	0.68
Avail Cap(c_a), veh/h	199	1200	716	364	1200	852	491	1237	702	491	618	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.1	32.7	19.5	46.1	33.5	19.3	45.1	35.9	27.3	41.1	29.5	29.3
Incr Delay (d2), s/veh	57.4	7.5	0.3	23.3	1.8	0.6	17.0	2.3	0.9	89.6	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	11.4	3.2	2.5	7.4	6.3	3.1	7.4	5.2	11.9	7.9	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.5	40.3	19.8	69.4	35.2	20.0	62.1	38.3	28.2	130.7	32.0	31.8
LnGrp LOS	F	D	B	E	D	B	E	D	C	F	C	C
Approach Vol, veh/h		1305			1224			1126			1315	
Approach Delay, s/veh		44.6			34.8			40.3			74.3	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	28.4	11.8	35.6	13.6	36.8	16.0	31.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	17.5	36.0	13.5	35.0	17.5	36.0	13.5	35.0
Max Q Clear Time (g_c+I1), s	17.5	18.8	7.0	26.5	8.7	19.9	11.4	19.5
Green Ext Time (p_c), s	0.0	5.1	0.2	4.5	0.4	4.3	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	0	854	834	256	546	702	265
Future Volume (veh/h)	0	854	834	256	546	702	265
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1772	1870	1673	1870
Adj Flow Rate, veh/h		854	834	256	546	702	265
Peak Hour Factor		1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1325	1069	265	2134	798	443
Arrive On Green		0.37	0.39	0.16	0.60	0.26	0.28
Sat Flow, veh/h		3647	1585	1688	3647	3092	1585
Grp Volume(v), veh/h		854	834	256	546	702	265
Grp Sat Flow(s),veh/h/ln		1777	1585	1688	1777	1546	1585
Q Serve(g_s), s		18.2	33.2	13.8	6.7	20.0	13.3
Cycle Q Clear(g_c), s		18.2	33.2	13.8	6.7	20.0	13.3
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1325	1069	265	2134	798	443
V/C Ratio(X)		0.64	0.78	0.97	0.26	0.88	0.60
Avail Cap(c_a), veh/h		1335	1073	469	2205	1363	733
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh		23.8	10.3	38.5	8.7	32.7	28.6
Incr Delay (d2), s/veh		1.1	3.7	22.9	0.1	3.7	1.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		7.6	20.0	7.3	2.4	7.7	5.1
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		24.8	14.0	61.4	8.7	36.4	29.9
LnGrp LOS		C	B	E	A	D	C
Approach Vol, veh/h		1688			802	967	
Approach Delay, s/veh		19.5			25.5	34.6	
Approach LOS		B			C	C	

Timer - Assigned Phs	2	3	4			8
Phs Duration (G+Y+Rc), s	30.2	20.9	40.8			61.7
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5
Max Green Setting (Gmax), s	42.5	27.5	36.5			59.0
Max Q Clear Time (g_c+I1), s	22.0	15.8	35.2			8.7
Green Ext Time (p_c), s	3.7	0.6	1.1			4.3

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

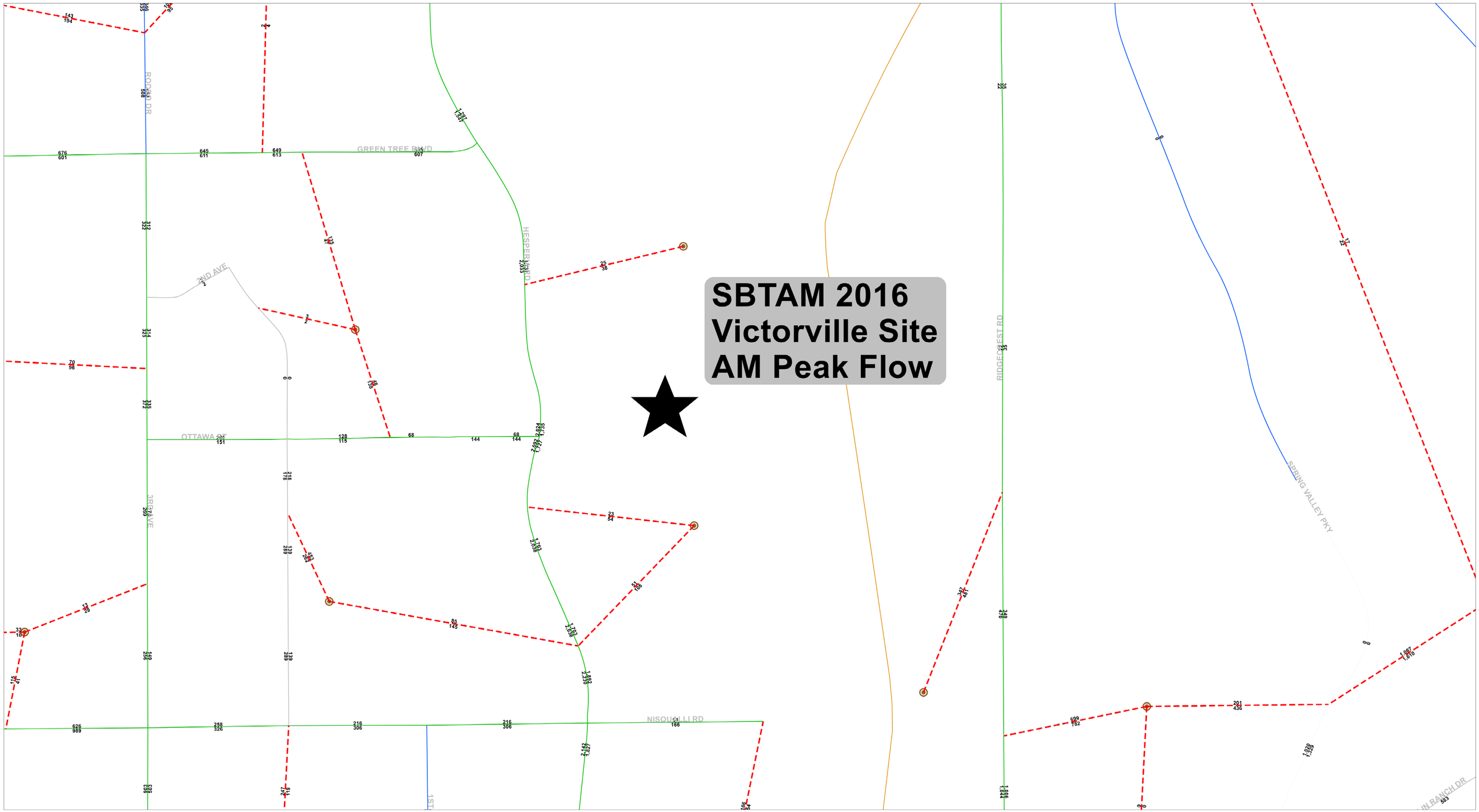
Notes

User approved pedestrian interval to be less than phase max green.
User approved ignoring U-Turning movement.

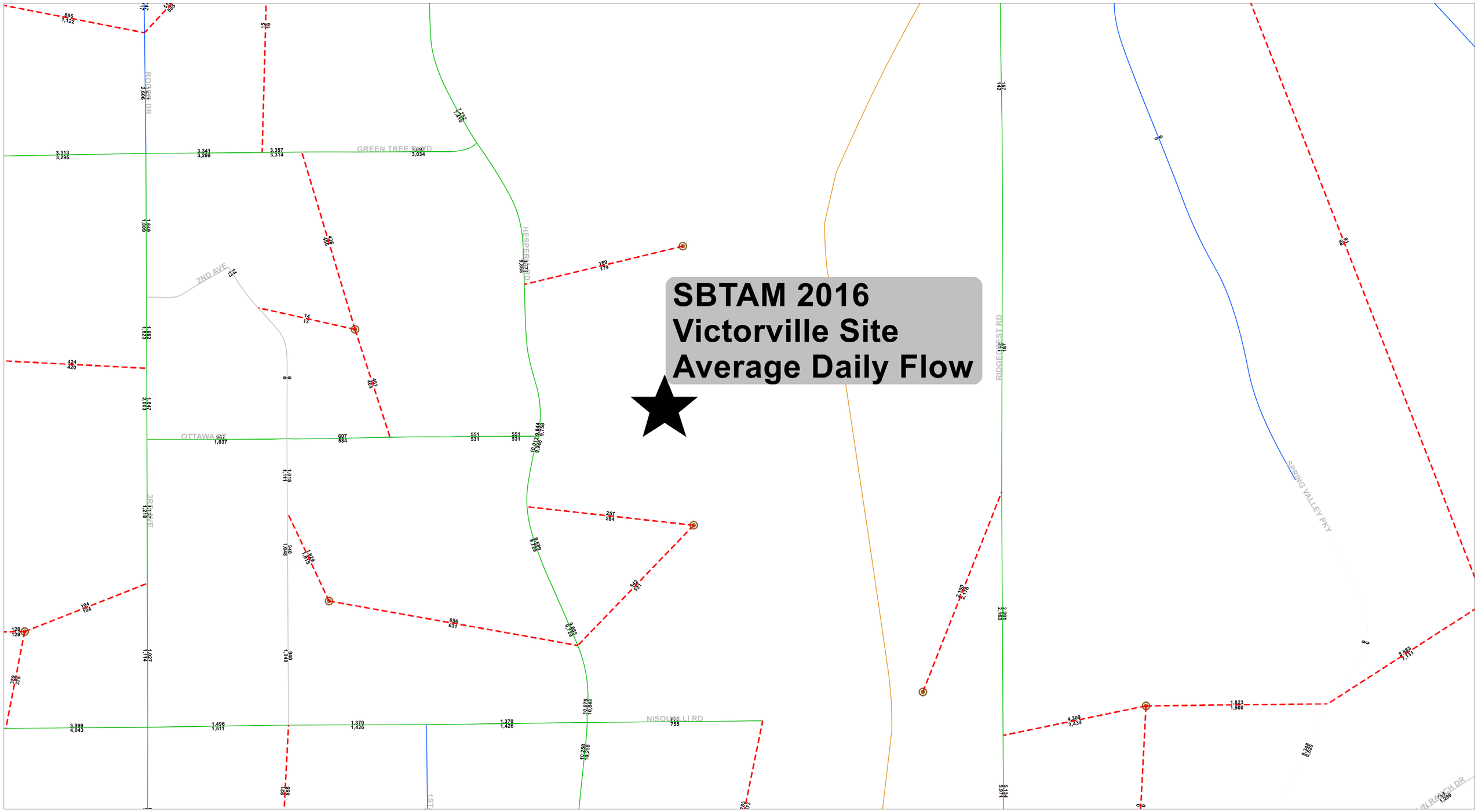
APPENDIX E

SBTAM MODEL PLOTS AND B-TURNS WORKSHEETS

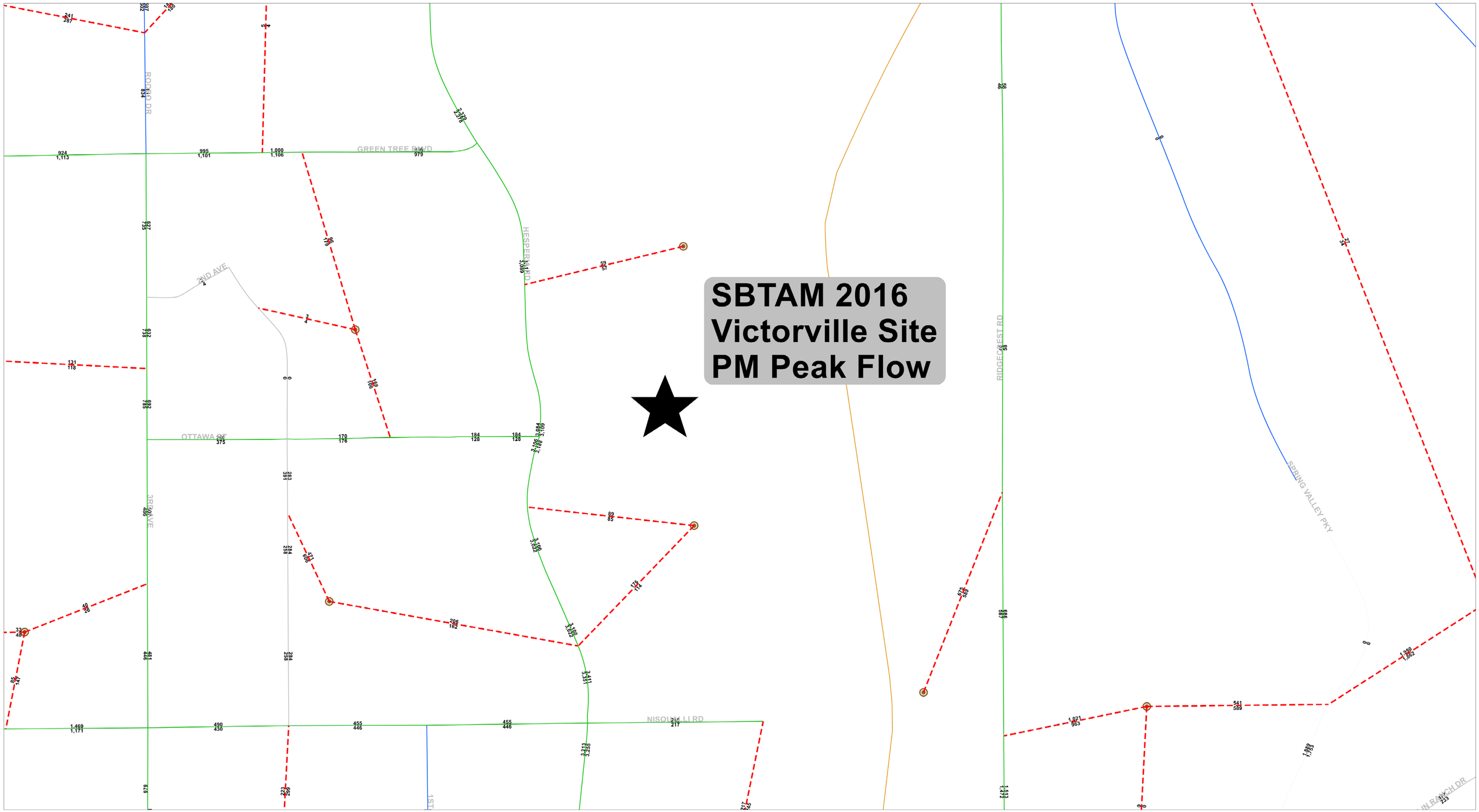
SBTAM 2016 Victorville Site AM Peak Flow

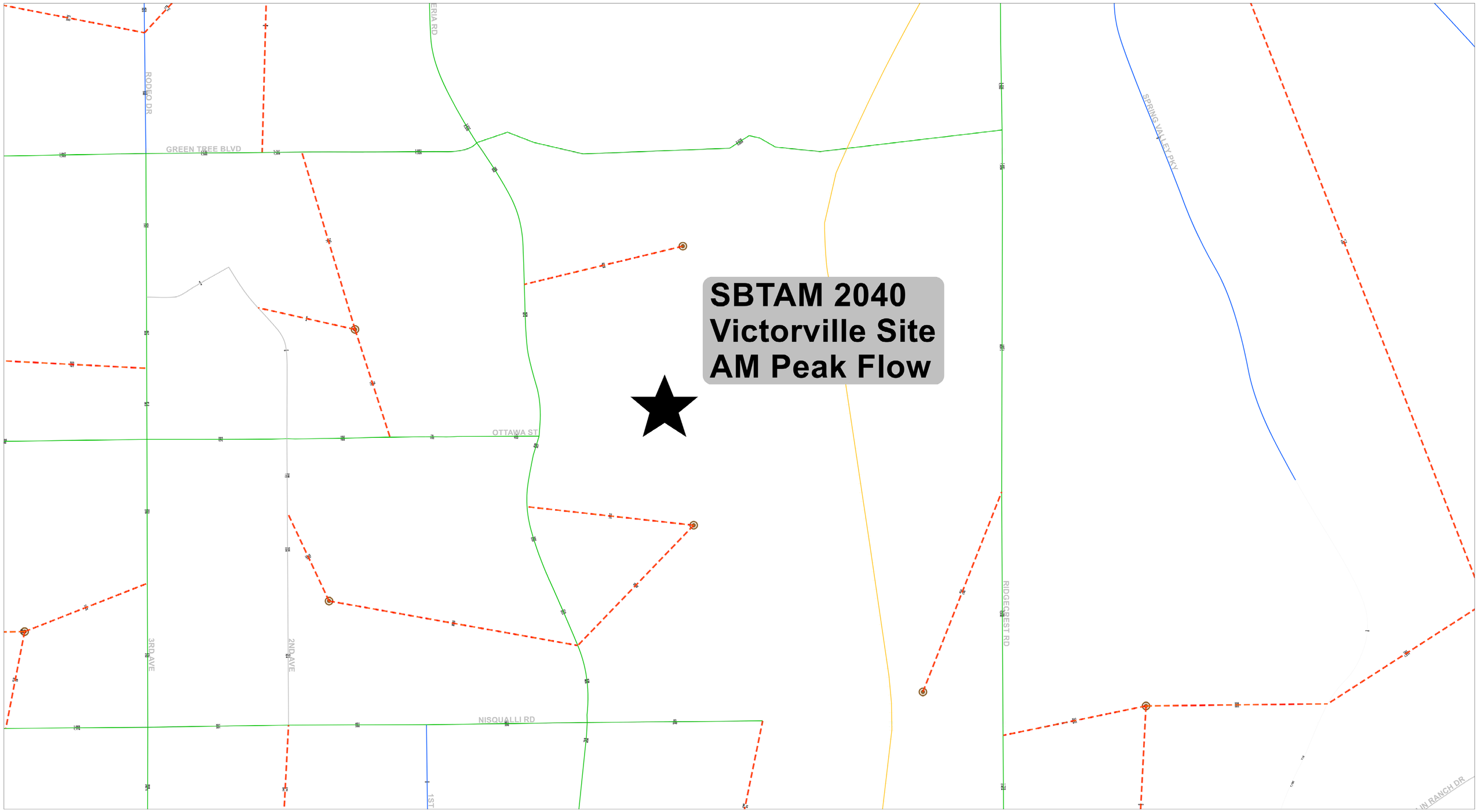


SBTAM 2016
Victorville Site
Average Daily Flow

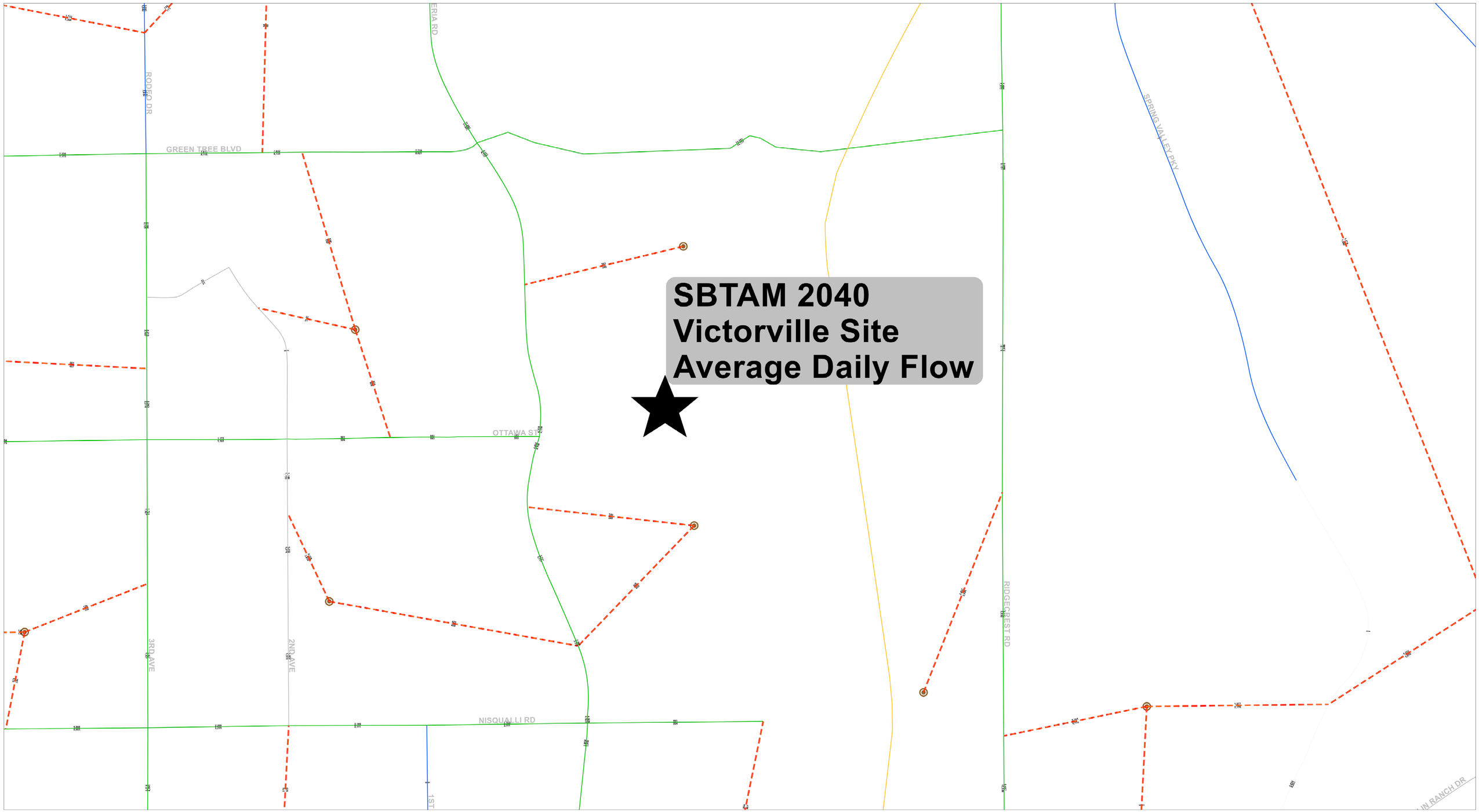


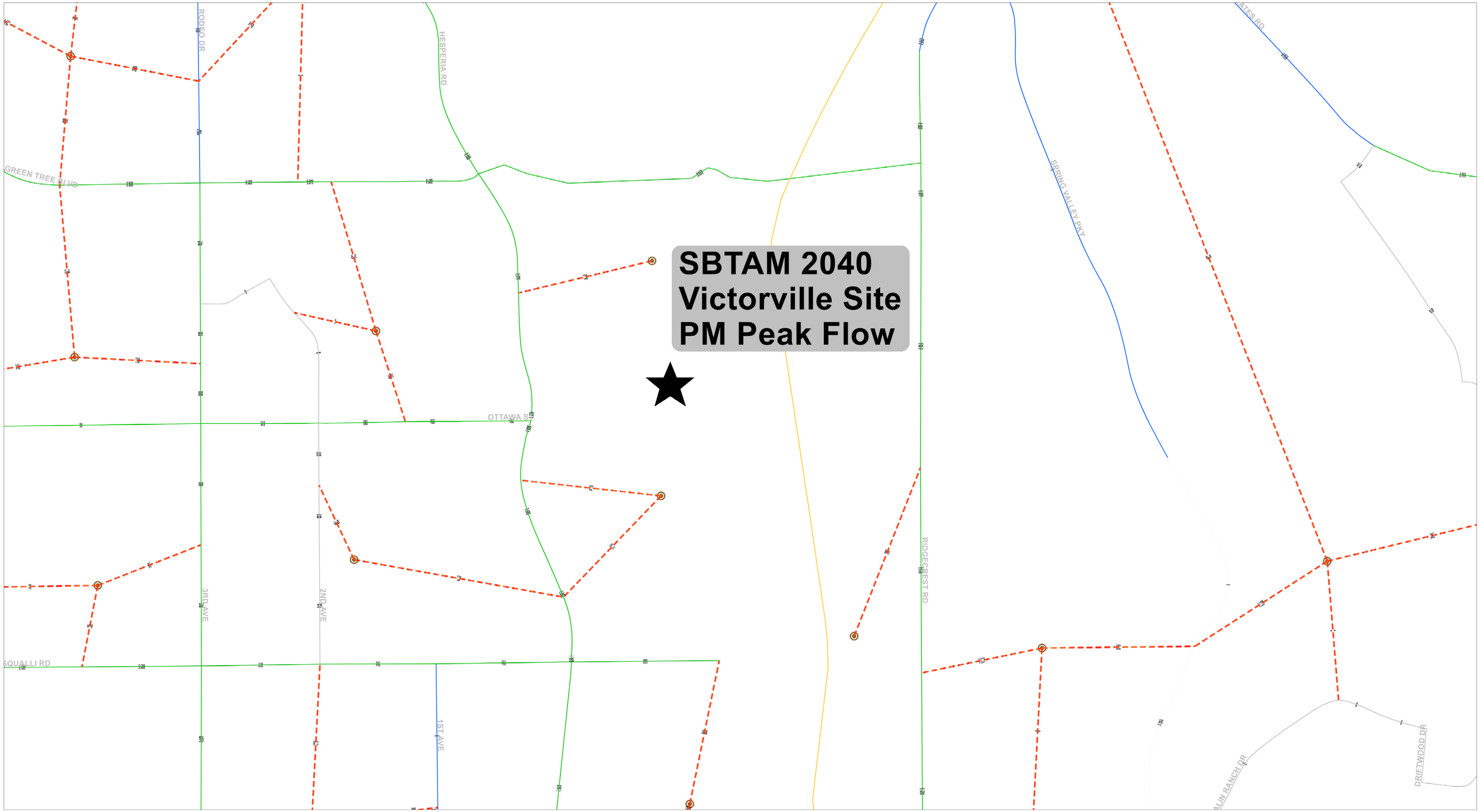
SBTAM 2016
Victorville Site
PM Peak Flow




SBTAM 2040
Victorville Site
AM Peak Flow
RODEO DR
GREEN TREE BLVD
ERIA RD
OTTAWA ST
3RD AVE
2ND AVE
NISQUALLI RD
1ST
SPRING VALLEY PKY
RIDGECREST RD
IN RANCH DR

SBTAM 2040
Victorville Site
Average Daily Flow



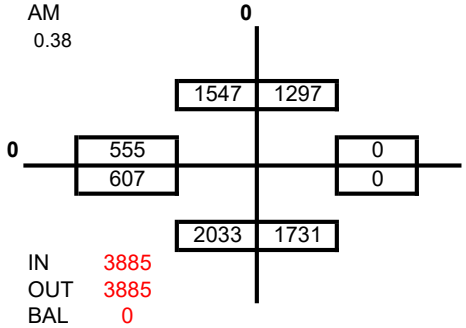

SBTAM 2040
Victorville Site
PM Peak Flow
RODEO DR
HESPERIA RD
GREEN TREE BLVD
OTTAWA ST
SQUALLI RD
3RD AVE
2ND AVE
1ST AVE
SPRING VALLEY PKY
RIDGECREST RD
DRIFTWOOD DR

Project:	Victorville Green Tree & Hesperi	**Model Base Year**	2016
Condition:	Future Year	**Model Build-out Year**	2040
Intersection Number:	1	**Total Difference**	24
		Existing Year Counts	2023
North/South Street	Hesperia Rd	**Difference Ex to B-O**	17
		Percent	0.71
East/West Street	Green Tree Blvd	**Study Year Forecast**	2034 Future Yea
		Difference Ex to Forecast	11

Date 06/29/23

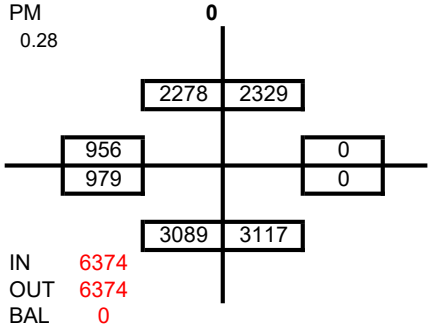
Model Base Year: **2016**

AM 0.38



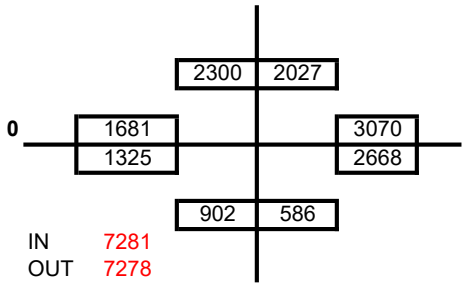
IN 3885
OUT 3885
BAL 0

PM 0.28

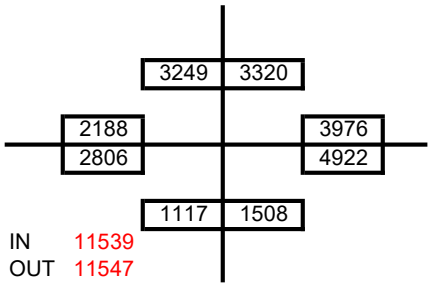


IN 6374
OUT 6374
BAL 0

Model Build-out Year: **2040 Future Year**

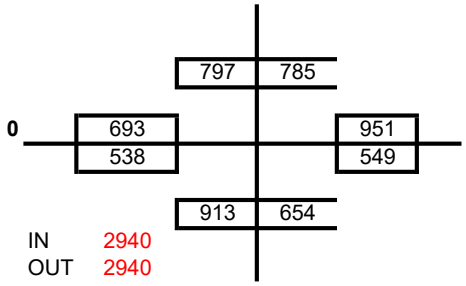


IN 7281
OUT 7278
BAL -3

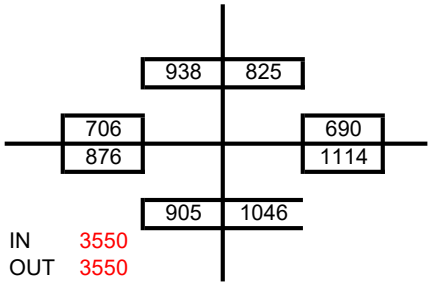


IN 11539
OUT 11547
BAL 8

Existing Year Counts **2023**

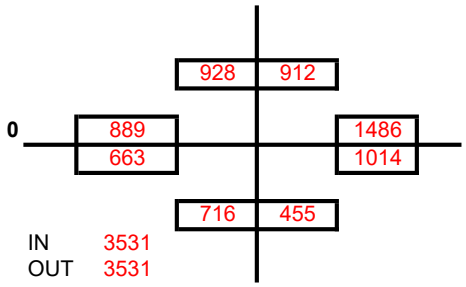


IN 2940
OUT 2940
BAL 0

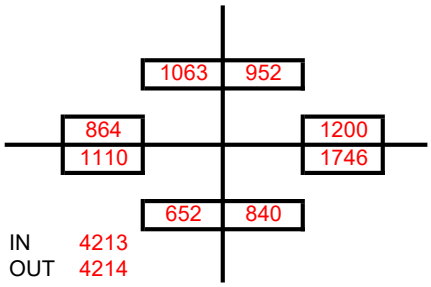


IN 3550
OUT 3550
BAL 0

Study Year Forecast **2034 Future Year**



IN 3531
OUT 3531
BAL -1



IN 4213
OUT 4214
BAL 1

Intersection: Hesperia Rd Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	117	SOUTH LEG	
	THRU	440	IN ...	455
	RIGHT	97	OUT ...	716
SOUTH BOUND	LEFT	171	NORTH LEG	
	THRU	545	IN ...	928
	RIGHT	81	OUT ...	912
EAST BOUND	LEFT	97	WEST LEG	
	THRU	281	IN ...	663
	RIGHT	160	OUT ...	889
WEST BOUND	LEFT	208	EAST LEG	
	THRU	495	IN ...	1,486
	RIGHT	248	OUT ...	1,014
		2,940		7,062

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	117	56
	THRU	440	292
	RIGHT	97	106
SOUTH BOUND	LEFT	171	427
	THRU	545	414
	RIGHT	81	88
EAST BOUND	LEFT	97	100
	THRU	281	480
	RIGHT	160	83
WEST BOUND	LEFT	208	219
	THRU	495	745
	RIGHT	248	520
		2,940	3,531

Intersection: Hesperia Rd Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	206	SOUTH LEG	
	THRU	585	IN ...	840
	RIGHT	255	OUT ...	652
SOUTH BOUND	LEFT	269	NORTH LEG	
	THRU	584	IN ...	1,063
	RIGHT	85	OUT ...	952
EAST BOUND	LEFT	84	WEST LEG	
	THRU	590	IN ...	1,110
	RIGHT	202	OUT ...	864
WEST BOUND	LEFT	119	EAST LEG	
	THRU	415	IN ...	1,200
	RIGHT	156	OUT ...	1,746
		3,550		8,427

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

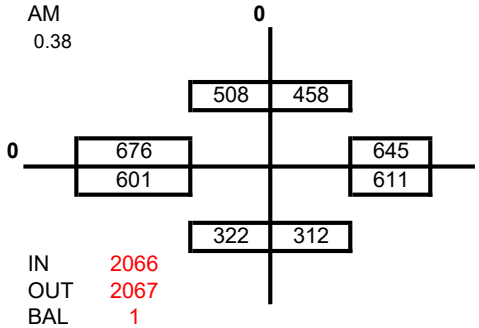
APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	206	105
	THRU	585	464
	RIGHT	255	270
SOUTH BOUND	LEFT	269	565
	THRU	584	413
	RIGHT	85	86
EAST BOUND	LEFT	84	97
	THRU	590	910
	RIGHT	202	105
WEST BOUND	LEFT	119	134
	THRU	415	672
	RIGHT	156	392
		3,550	4,214

Project:	Victorville Green Tree & Hesperi	**Model Base Year**	2016
Condition:	Future Year	**Model Build-out Year**	2040
Intersection Number:	2	**Total Difference**	24
		Existing Year Counts	2023
North/South Street	3rd Ave	**Difference Ex to B-O**	17
		Percent	0.71
East/West Street	Green Tree Blvd	**Study Year Forecast**	2034 Future Yea
		Difference Ex to Forecast	11

Date 06/29/23

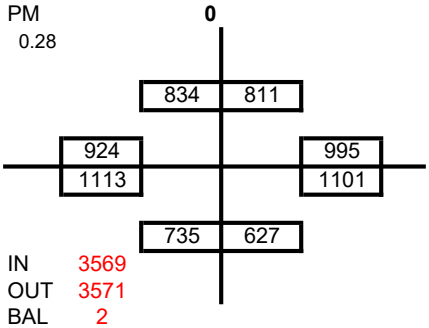
Model Base Year: **2016**

AM 0.38



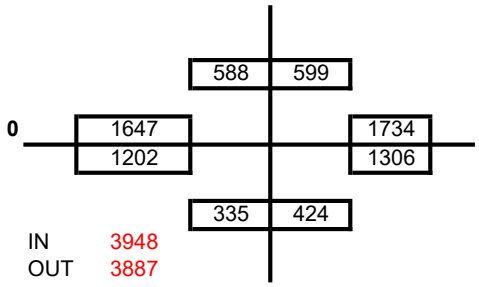
IN 2066
OUT 2067
BAL 1

PM 0.28

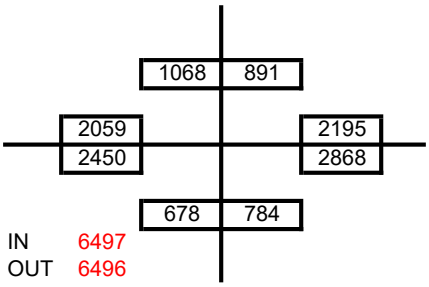


IN 3569
OUT 3571
BAL 2

Model Build-out Year: **2040 Future Year**

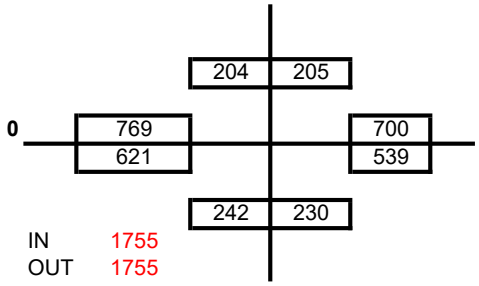


IN 3948
OUT 3887
BAL -61

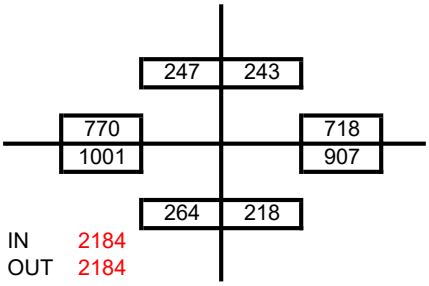


IN 6497
OUT 6496
BAL -1

Existing Year Counts **2023**

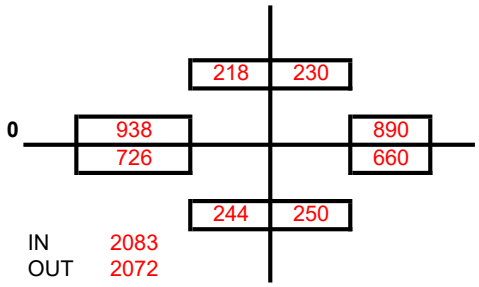


IN 1755
OUT 1755
BAL 0

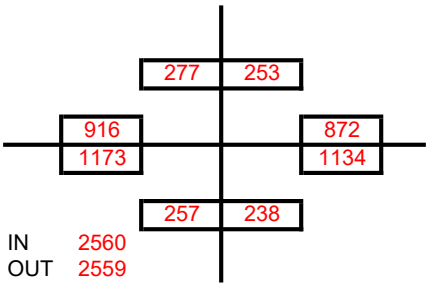


IN 2184
OUT 2184
BAL 0

Study Year Forecast **2034 Future Year**



IN 2083
OUT 2072
BAL -11



IN 2560
OUT 2559
BAL 0

Intersection: 3rd Ave Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	77	SOUTH LEG	
	THRU	130	IN ...	250
	RIGHT	23	OUT ...	244
SOUTH BOUND	LEFT	37	NORTH LEG	
	THRU	115	IN ...	218
	RIGHT	52	OUT ...	230
EAST BOUND	LEFT	49	WEST LEG	
	THRU	479	IN ...	726
	RIGHT	93	OUT ...	938
WEST BOUND	LEFT	34	EAST LEG	
	THRU	640	IN ...	890
	RIGHT	26	OUT ...	660
		1,755		4,155

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	77	78
	THRU	130	142
	RIGHT	23	28
SOUTH BOUND	LEFT	37	47
	THRU	115	115
	RIGHT	52	55
EAST BOUND	LEFT	49	53
	THRU	479	584
	RIGHT	93	88
WEST BOUND	LEFT	34	41
	THRU	640	806
	RIGHT	26	35
		1,755	2,072

Intersection: 3rd Ave Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	70	SOUTH LEG	
	THRU	124	IN ...	238
	RIGHT	24	OUT ...	257
SOUTH BOUND	LEFT	38	NORTH LEG	
	THRU	141	IN ...	277
	RIGHT	68	OUT ...	253
EAST BOUND	LEFT	69	WEST LEG	
	THRU	845	IN ...	1,173
	RIGHT	87	OUT ...	916
WEST BOUND	LEFT	36	EAST LEG	
	THRU	632	IN ...	872
	RIGHT	50	OUT ...	1,134
		2,184		5,119

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

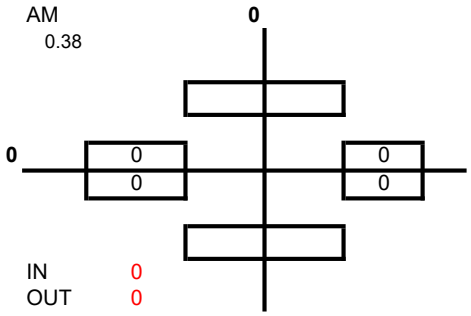
APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	70	74
	THRU	124	130
	RIGHT	24	34
SOUTH BOUND	LEFT	38	57
	THRU	141	144
	RIGHT	68	76
EAST BOUND	LEFT	69	64
	THRU	845	1,044
	RIGHT	87	73
WEST BOUND	LEFT	36	40
	THRU	632	765
	RIGHT	50	60
		2,184	2,559

Project:	Victorville Green Tree & Hesperia	**Model Base Year**	2016
Condition:	Future Year	**Model Build-out Year**	2040
Intersection Number:	3	**Total Difference**	24
		Existing Year Counts	2023
North/South Street	Ridgecrest Rd	**Difference Ex to B-O**	17
		Percent	0.71
East/West Street	Green Tree Blvd	**Study Year Forecast**	2034 Future Yea
		Difference Ex to Forecast	11

Date: 06/29/23

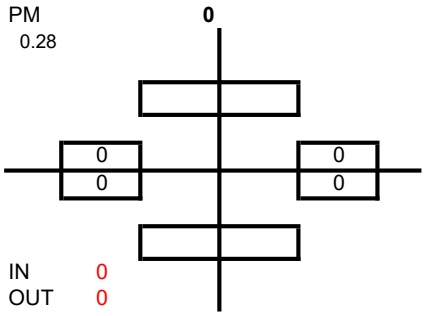
Model Base Year: **2016**

AM 0.38



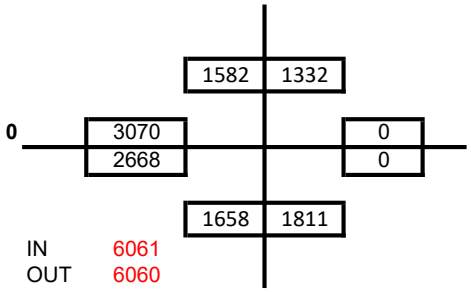
IN 0
OUT 0
BAL 0

PM 0.28

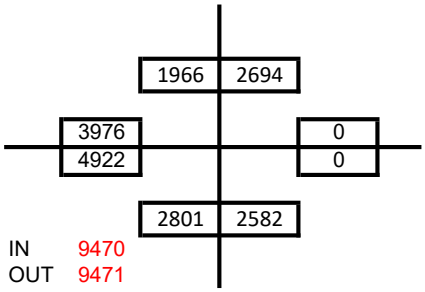


IN 0
OUT 0
BAL 0

Model Build-out Year: **2040 Future Year**

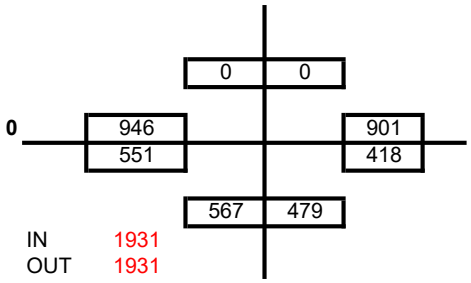


IN 6061
OUT 6060
BAL -1

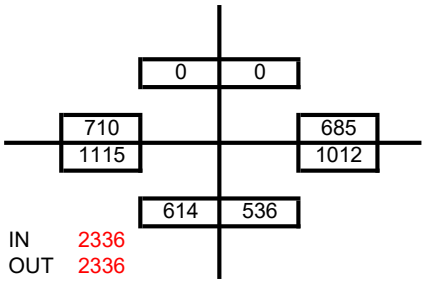


IN 9470
OUT 9471
BAL 1

Existing Year Counts **2023**

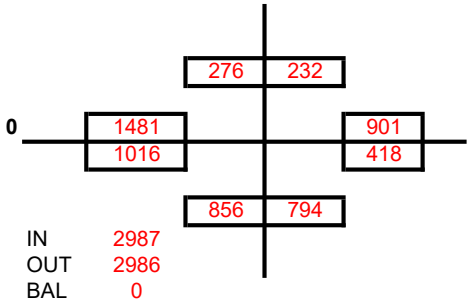


IN 1931
OUT 1931
BAL 0

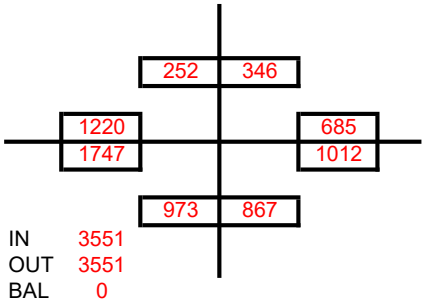


IN 2336
OUT 2336
BAL 0

Study Year Forecast **2034 Future Year**



IN 2987
OUT 2986
BAL 0



IN 3551
OUT 3551
BAL 0

Intersection: Ridgecrest Rd Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	331	SOUTH LEG	
	THRU	0	IN ...	794
	RIGHT	148	OUT ...	856
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	276
	RIGHT	0	OUT ...	232
EAST BOUND	LEFT	0	WEST LEG	
	THRU	270	IN ...	1,016
	RIGHT	281	OUT ...	1,481
WEST BOUND	LEFT	286	EAST LEG	
	THRU	615	IN ...	901
	RIGHT	0	OUT ...	418
		1,931		5,973

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	331	732
	THRU	0	0
	RIGHT	148	83
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	270	335
	RIGHT	281	683
WEST BOUND	LEFT	286	172
	THRU	615	749
	RIGHT	0	0
		1,931	2,754

Intersection: Ridgecrest Rd Green Tree Blvd

Condition: 2034 Future Year

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	276	SOUTH LEG	
	THRU	0	IN ...	867
	RIGHT	260	OUT ...	973
SOUTH BOUND	LEFT	0	NORTH LEG	
	THRU	0	IN ...	252
	RIGHT	0	OUT ...	346
EAST BOUND	LEFT	0	WEST LEG	
	THRU	752	IN ...	1,747
	RIGHT	363	OUT ...	1,220
WEST BOUND	LEFT	251	EAST LEG	
	THRU	434	IN ...	685
	RIGHT	0	OUT ...	1,012
		2,336		7,103

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

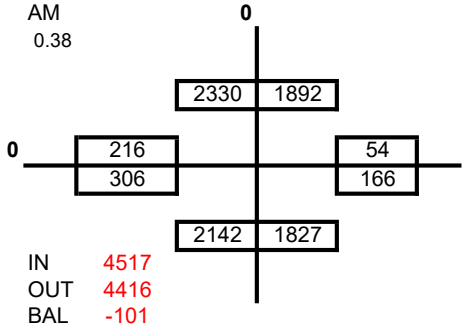
APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	276	695
	THRU	0	0
	RIGHT	260	158
SOUTH BOUND	LEFT	0	0
	THRU	0	0
	RIGHT	0	0
EAST BOUND	LEFT	0	0
	THRU	752	854
	RIGHT	363	827
WEST BOUND	LEFT	251	147
	THRU	434	526
	RIGHT	0	0
		2,336	3,206

Project:	Victorville Green Tree & Hesperi	**Model Base Year**	2016
Condition:	Future Year	**Model Build-out Year**	2040
Intersection Number:	4	**Total Difference**	24
		Existing Year Counts	2023
North/South Street	Hesperia Rd	**Difference Ex to B-O**	17
		Percent	0.71
East/West Street	Nisqualli Rd	**Study Year Forecast**	2034 Future Yea
		Difference Ex to Forecast	11

Date 06/29/23

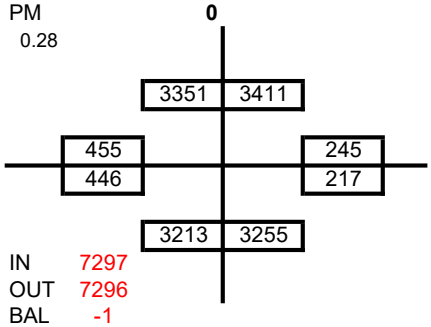
Model Base Year: **2016**

AM 0.38



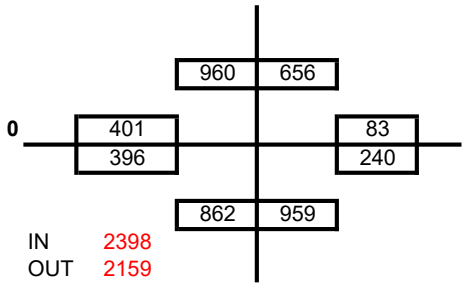
IN 4517
OUT 4416
BAL -101

PM 0.28

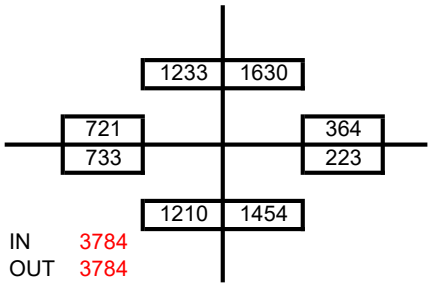


IN 7297
OUT 7296
BAL -1

Model Build-out Year: **2040 Future Year**

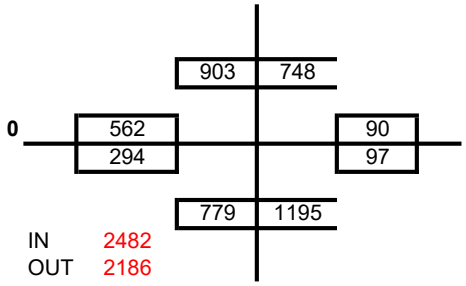


IN 2398
OUT 2159
BAL -239

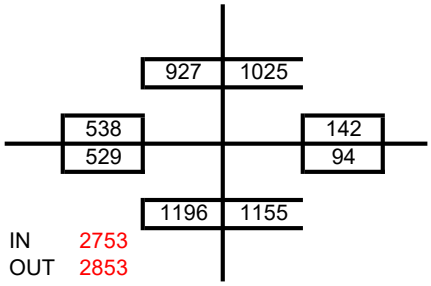


IN 3784
OUT 3784
BAL 0

Existing Year Counts **2023**

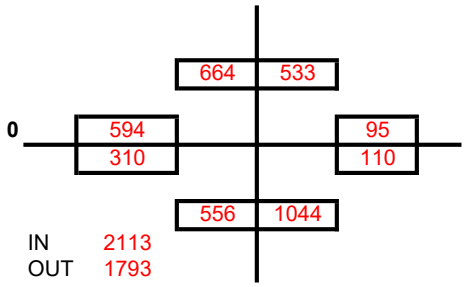


IN 2482
OUT 2186
BAL -296

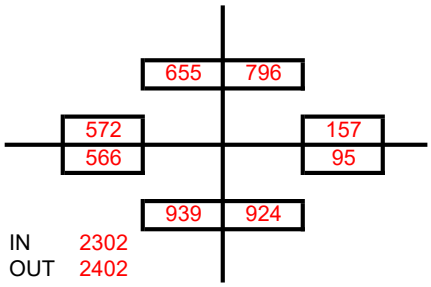


IN 2753
OUT 2853
BAL 100

Study Year Forecast **2034 Future Year**



IN 2113
OUT 1793
BAL -320



IN 2302
OUT 2402
BAL 100

Intersection: Hesperia Rd Nisqualli Rd

Condition: 2034 Future Year

Peak Hour: AM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	165	SOUTH LEG	
	THRU	590	IN ...	1,044
	RIGHT	24	OUT ...	556
SOUTH BOUND	LEFT	22	NORTH LEG	
	THRU	791	IN ...	664
	RIGHT	90	OUT ...	533
EAST BOUND	LEFT	138	WEST LEG	
	THRU	51	IN ...	310
	RIGHT	373	OUT ...	594
WEST BOUND	LEFT	31	EAST LEG	
	THRU	39	IN ...	95
	RIGHT	20	OUT ...	110
		2,334		3,906

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	165	389
	THRU	590	460
	RIGHT	24	38
SOUTH BOUND	LEFT	22	24
	THRU	791	390
	RIGHT	90	148
EAST BOUND	LEFT	138	63
	THRU	51	47
	RIGHT	373	153
WEST BOUND	LEFT	31	14
	THRU	39	57
	RIGHT	20	10
		2,334	1,793

Intersection: Hesperia Rd Nisqualli Rd

Condition: 2034 Future Year

Peak Hour: PM Peak Hour

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** INPUT DATA *** Modified by: COMSIS Corp. (M. Roskin) 4/9/86
Modified by: FHWA 12/21/87

APPROACH	TURN MOVEMENT	BY COUNT	INTERSECTION LEG	FY TOTAL
NORTH BOUND	LEFT	359	SOUTH LEG	
	THRU	808	IN ...	924
	RIGHT	29	OUT ...	939
SOUTH BOUND	LEFT	16	NORTH LEG	
	THRU	804	IN ...	655
	RIGHT	107	OUT ...	796
EAST BOUND	LEFT	186	WEST LEG	
	THRU	49	IN ...	566
	RIGHT	303	OUT ...	572
WEST BOUND	LEFT	48	EAST LEG	
	THRU	63	IN ...	157
	RIGHT	31	OUT ...	95
		2,803		4,704

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES
NCHRP 255, PAGE 105 Written by: FHWA (C. Fleet)
*** RESULTS *** Modified by: COMSIS Corp. (M. Roskin) 2/13/86

APPROACH	TURN MOVEMENT	BY COUNT	FY FORECAST
NORTH BOUND	LEFT	359	374
	THRU	808	567
	RIGHT	29	23
SOUTH BOUND	LEFT	16	12
	THRU	804	562
	RIGHT	107	109
EAST BOUND	LEFT	186	200
	THRU	49	59
	RIGHT	303	331
WEST BOUND	LEFT	48	46
	THRU	63	89
	RIGHT	31	29
		2,803	2,402

APPENDIX F

DRIVE THROUGH
QUEUEING WORKSHEETS

SUMMARY OF CAR WASH DRIVE-THROUGH QUEUING DATA COLLECTION
FRIDAY

Time Period	Number of Drive-through Vehicles in the Queue					
	Average Queue		95th %-ile [1] Queue		Peak Queue	
	Shell	Circle K	Shell	Circle K	Shell	Circle K
Lunch						
2:00-2:15 PM	0	1	0	1	3	7
2:15-2:30 PM	0	0	0	0	4	3
2:30-2:45 PM	0	0	1	0	2	4
2:45-3:00 PM	0	0	1	1	2	5
3:00-3:15 PM	1	1	2	1	6	5
3:15-3:30 PM	0	0	1	0	6	2
3:30-3:45 PM	1	0	1	1	3	2
3:45-4:00 PM	0	0	1	0	2	3
4:00-4:15 PM	0	0	0	0	1	9
4:15-4:30 PM	0	0	1	0	3	6
4:30-4:45 PM	0	0	0	0	4	3
4:45-5:00 PM	0	0	0	0	5	5
5:00-5:15 PM	0	0	0	1	4	6
5:15-5:30 PM	0	0	1	0	4	7
5:30-5:45 PM	0	0	0	1	4	3
5:45-6:00 PM	0	0	0	1	3	5
Highest Value	1	1	2	1	6	9

Notes: [1] 95th percentile = The queue will be less than the queue shown 95% of the time.

SUMMARY OF CAR WASH DRIVE-THROUGH QUEUING DATA COLLECTION
SATURDAY

Time Period	Number of Drive-through Vehicles in the Queue					
	Average Queue		95th %-ile [1] Queue		Peak Queue	
	Shell	Circle K	Shell	Circle K	Shell	Circle K
Lunch						
10:00-10:15 AM	0	1	0	2	3	7
10:15-10:30 AM	0	0	1	0	4	3
10:30-10:45 AM	0	0	0	1	2	4
10:45-11:00 AM	0	1	0	1	2	5
11:00-11:15 AM	0	0	0	0	6	5
11:15-11:30 AM	0	1	1	1	6	2
11:30-11:45 AM	0	1	1	2	3	2
11:45 AM-12:00 PM	0	0	1	1	2	3
12:00-12:15 PM	0	0	1	1	1	9
12:15-12:30 PM	0	0	0	1	3	6
12:30-12:45 PM	1	0	1	1	4	3
12:45-1:00 PM	0	0	0	1	5	5
1:00-1:15 PM	1	0	1	1	4	6
1:15-1:30 PM	0	0	1	1	4	7
1:30-1:45 PM	0	0	0	0	4	3
1:45-2:00 PM	0	0	1	1	3	5
Highest Value	1	1	1	2	6	9

Notes: [1] 95th percentile = The queue will be less than the queue shown 95% of the time.