Dolores Lake Traffic Impact Study

Prepared for:
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OC17-0487

FEHR PEERS

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1.0 INTRODUCTION

This chapter introduces the project and describes the area and scenarios analyzed in this transportation impact study.

PROJECT DESCRIPTION

The Dolores Lake Project proposes to redevelop an unoccupied recreational water facility into a new recreation and entertainment development in San Bernardino County. The project proposes to create a self-contained all-weather activity center for all ages on 268 acres. The project site is located approximately 20 miles northeast of the City of Barstow on the site formerly known as the Lake Dolores Resort and Rock-a-Hoola Water Park.

The proposed project will provide the following uses:

- Recreational Vehicle (RV) Park – 224 R.V. camping spaces
- Waterpark – 913 parking spaces
- Commercial Retail – 45,727 square feet
- Office/Administrative – 97,241 square feet
- Lake Recreation Area – 8.70 Acres

The proposed site plan is provided on **Figure 1**.

STUDY AREA

The study area, shown on **Figure 2**, was developed in conjunction with the County of San Bernardino and includes 11 intersections.

STUDY INTERSECTIONS

The study intersections are:

1. Minneola Road & Yermo Road
2. Minneola Road & I-15 Southbound Ramps
3. Minneola Road & I-15 Northbound Ramps

4. Coyote Lake Road & Yermo Road
5. Harvard Road & Barrett Road & Hacienda Road
6. Harvard Road & I-15 Southbound Ramps
7. Harvard Road & I-15 Northbound Ramps
8. Bragdon Road & Hacienda Road (Proposed)
9. Bragdon Road & Driveway 1 (Proposed)
10. Hacienda Road & Driveway 2 (Proposed)
11. Hacienda Road & Driveway 3 (Proposed)

Due to the regional traffic patterns in the area, including heavy travel to Las Vegas from Southern California using I-15 on Friday evenings, and return trips on Sunday afternoon, the PM and Weekend peak hours were studied.

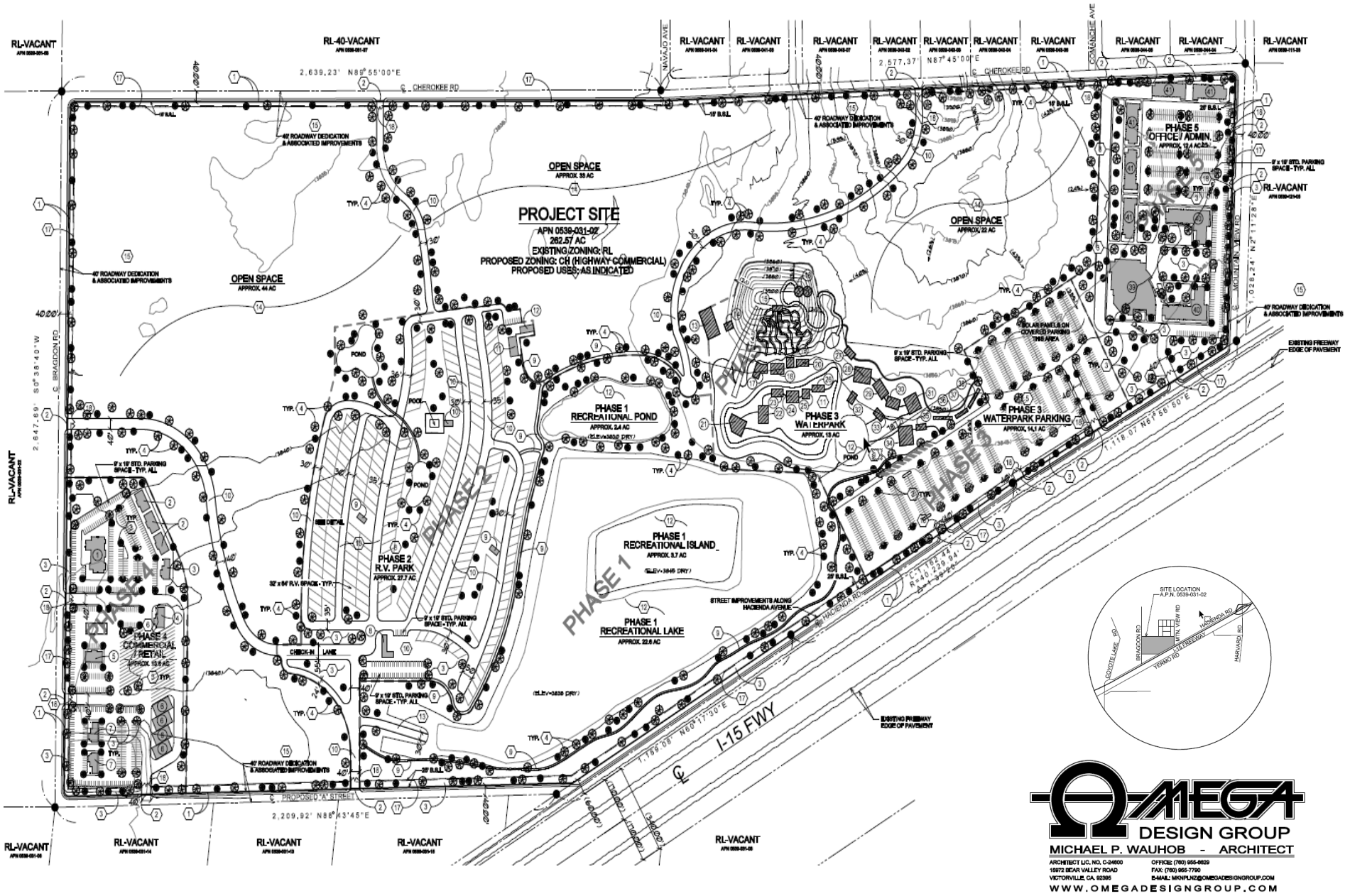

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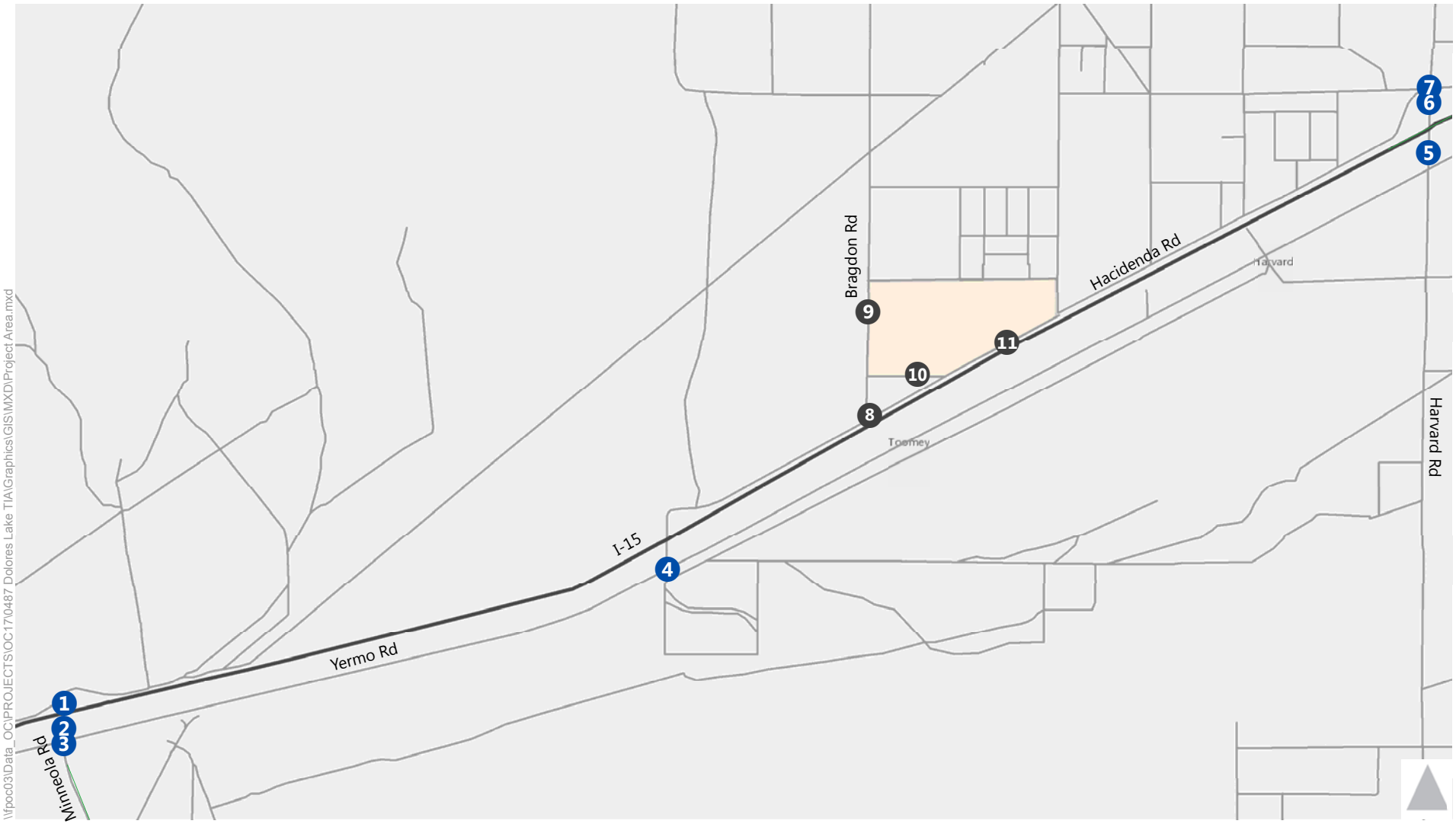
Figure 1

Project Site Plan



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Existing Study Intersections

Future Study Intersections

Project Site

Figure 2
Study Area

ANALYSIS SCENARIOS

The following scenarios are analyzed in this study:

- Existing (Year 2017) Conditions – This scenario consists of existing traffic counts collected in the study area in March 2017.
- Existing Plus Project (2017) – This scenario consists of adding traffic generated by the proposed project to the existing counts.
- Cumulative (2040) – This scenario consists of determining anticipated growth by the year 2040 using the San Bernardino Traffic Analysis Model (SBTAM) and applying that growth to existing traffic counts to determine the forecasted traffic volumes in year 2040.
- Cumulative (2040) Plus Project – This scenario consists of adding traffic generated by the proposed project to the Cumulative (2040) scenario.

2. ANALYSIS METHODOLOGIES

This chapter discuss the analysis methodologies and assumptions used to determine project impacts consistent with the County of San Bernardino Traffic Impact Study Guidelines (April, 2014).

INTERSECTION ANALYSIS

LEVEL OF SERVICE CRITERIA

Intersections were evaluated using the Highway Capacity Manual (HCM) Transportation Research Board 2010 methodology.

The HCM 2010 methodology for signalized and all-way stop-controlled intersections estimates the average control delay for the vehicle at the intersection. For side-street stop-controlled intersections, the methodology estimates the control delays for each turning movement and identifies the delay for the longest delayed approach (if there is a shared lane, delay is averaged for all turning movements from that lane). After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided **Table 1**.

TABLE 1 -INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Control Delay per Vehicle (seconds)		Definition
	Signalized	Unsignalized	
A	<10.0	<10.0	No vehicle waits longer than one red light and no approach phase is fully used.
B	>10.0 and <20.0	>10.0 and <15.0	An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	>20.0 and <35.0	>15.0 and <25.0	Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>35.0 and <55.0	>25.0 and <35.0	Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.

TABLE 1 -INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Average Control Delay per Vehicle (seconds)		Definition
	Signalized	Unsignalized	
E	>55.0 and <80.0	>35.0 and <50.0	Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	>80.0	>50.0	Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Highway Capacity Manual (Transportation Research Board, 2010)

Synchro 9.1 was used to perform the HCM 2010 level of service calculations for intersections. The following parameters were used in the traffic analysis for study intersections:

- Peak hour factors were determined based on existing traffic counts and used for Existing and Existing Plus Project analysis.
- Peak hour factor of 0.95 was assumed for Cumulative and Cumulative Plus Project analysis.
- Heavy vehicle percentages based on existing counts were used for Existing and 10 percent heavy vehicles was assumed for all future and plus project scenarios.
- 1800 vehicles per hour per green time per lane (vphpl) for exclusive thru and right turn lanes.
- 1700 vphpl for exclusive left turn lanes.

Significance Criteria

For the purpose of this study "LOS C" or better is considered acceptable operations, per the County guidelines and due to the fact that the study area is located in the Desert Region. For the purpose of this study the addition of project traffic was determined to cause a significant impact if:

- The addition of project related traffic causes the intersection to move from acceptable to unacceptable operations, **or**
- The project contributes additional traffic to an intersection already project to operate unacceptably, **and**
    - The project adds 10 or more trips to any approach.

- The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

PROJECT TRAFFIC

Project traffic was estimated using in a three step process. The first step is trip generation where the total number of new project trips is calculated using data about the project site and adjusted to account for internalization. The second step is trip distribution which is an estimation of where project traffic is expected to travel to and from based on a variety of data sources such as regional travel demand models, census journey-to-work data, and engineering judgement. Finally, the third step is trip assignment which assigns project trips to the roadway network in the study area.

Project Trip Generation

Project trip generation was estimated by applying standard trip generation rates from ITE's Trip Generation 9th Edition, 2012. Use of the rates is consistent with the County of San Bernardino Traffic Impact Study Guidelines.

ITE provides trip generation rates for the weekday daily, AM, and PM peak hours. Daily trip rates for the weekend are also provided. Trip generation rates for the weekend peak hour were generated based on the PM peak hour and the intended uses proposed by the project.

An internalization rate of 15 percent was applied to the project trip generation. This internalization rate was applied based on the percent of project trips generated by the retail uses, which accounts for 27 percent of the daily trips generated by the project. As this area is located twenty miles north of Barstow it is anticipated that retail uses would serve largely trips coming to the site for the waterpark or campground.

Table 2 shows the raw trip generation rates, and the trip generations rates after the applied internalization rates.

TABLE 2 – DOLORES LAKE TRIP GENERATION

ITE Category	ITE Land Use	ITE Code	Units	Daily	PM Peak Hour			Daily	Weekend Peak Hour		
				Total	In	Out	Total	Total	In	Out	Total
Recreational	Campground/Recreational Vehicle Park (Adj Streets, 7-9A, 4-6P)	416	240 Occupied Camp Sites	N/A	42	23	65	N/A	18	66	84
Retail	Shopping Center (Adj Streets, 7-9A, 4-6P)	820	45.727 / KSF sq ft leasable area	1,953	81	89	170	2,285	95	104	199
Recreational	Water Slide Park (Adj Streets, 7-9A, 4-6P)	414	913 Parking Spaces	2,073	54	202	256	2,657	69	259	328
Recreational	Regional Park (Adj Streets, 7-9A, 4-6P)	417	5.7 Acres	26	1	0	1	32	1	0	1
Office	General Office Building (Pk Hr, AM & PM)	495	97/ KSF sq ft gross floor area	1,070	25	120	145	239	48	232	281
External Vehicle Trips				**-**	**203**	**434**	**637**	**-**	**232**	**662**	**893**
Adjusted Trips with Internalization				**-**	**173**	**369**	**541**	**-**	**197**	**562**	**759**

Source: ITE Trip Generation, 9th Edition

Project Trip Distribution

Trip distribution for project traffic was developed using SBTAM and engineering judgement.

As this project is intended to be a regional attraction the majority of project traffic is expected to use I-15 with 30 percent traveling to and from the east and 55 percent traveling from the west. The remaining traffic will use Minneola Road. **Figure 3** shows the project trip distribution.

Project Trip Assignment

Based on the trip generation and trip distribution estimates described above, project trips were assigned to the study area roadway network. The project only trip assignment volumes are presented on **Figure 4**.

Cumulative Projects

Approved/Pending projects within a distance of twice the study area were requested from the County Land Use Department. After review of the projects provided by the County it was determined that one project, a gas station planned adjacent to the project site, would be incorporated into the cumulative analysis. These trips were manually assigned to the study network. Trip assignment volumes for this project are present on **Figure 5**.

Traffic Volume Forecasting

Traffic volume forecasts were developed using the San Bernardino Transportation Analysis Model (SBTAM), a subregional model based on the SCAG Regional Travel Demand Model. SBTAM is based on the traditional 4-step sequential modeling methodology with "feedback loop" procedures to insure internal modeling consistency. These transportation models use socioeconomic data to estimate trip generation, mode choice, as well as several submodels to address complex travel behavior and multi-modal transportation issues. The model responds to changes in land use types, household characteristics, transportation infrastructure, and travel costs such as transit fares, parking costs, tolls, and auto operating costs.

The model scenarios used in the forecasting process, are described below:

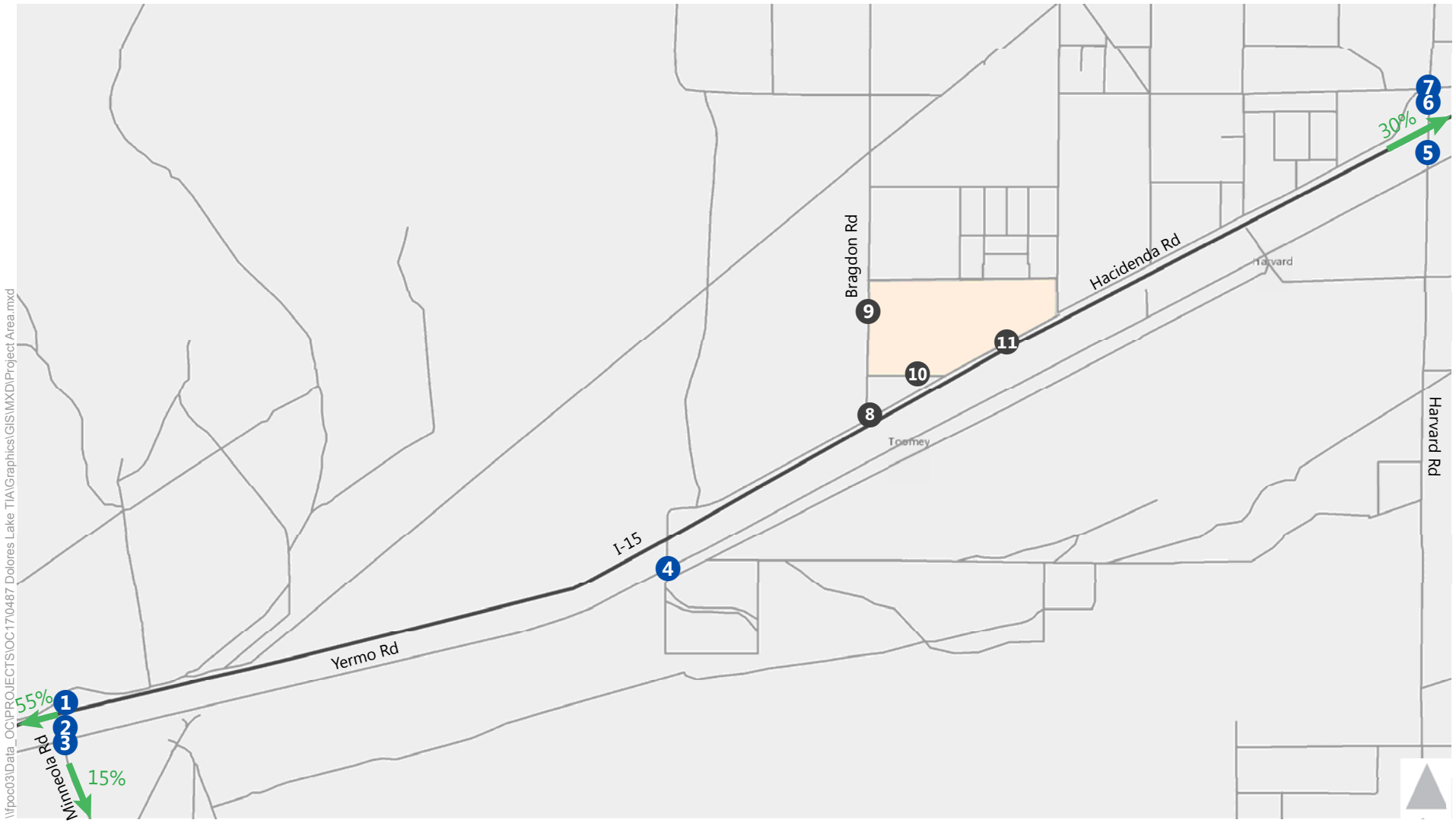
- Base Year Model – This scenario contains the base year (2008) land use and roadway network assumptions.
- Future Year Model (2040) – This scenario contains the land uses consistent with the latest SCAG 2016 RTP update.

To develop Cumulative (Year 2040) No Project scenario forecasts, the Future Year Model outputs were compared to the Base Year Model outputs using the difference method. The difference method was employed using standard techniques consistent with National Cooperative Highway Research Program

(NCHRP) Report 255. The arithmetic difference between the future year and base year model outputs were identified as the estimated growth in traffic volumes. That growth was then added to the existing 2017 volumes to produce a cumulative year of 2040.

TRAFFIC SIGNAL WARRANTS

Traffic signal warrant analysis was performed for all unsignalized study intersections under the Cumualtive (2040) conditions and both Existing and Cumulative Plus Project conditions. This analysis was performed using the latest edition of the California MUTCD. This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration Manual on Uniform Traffic Control Devices and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



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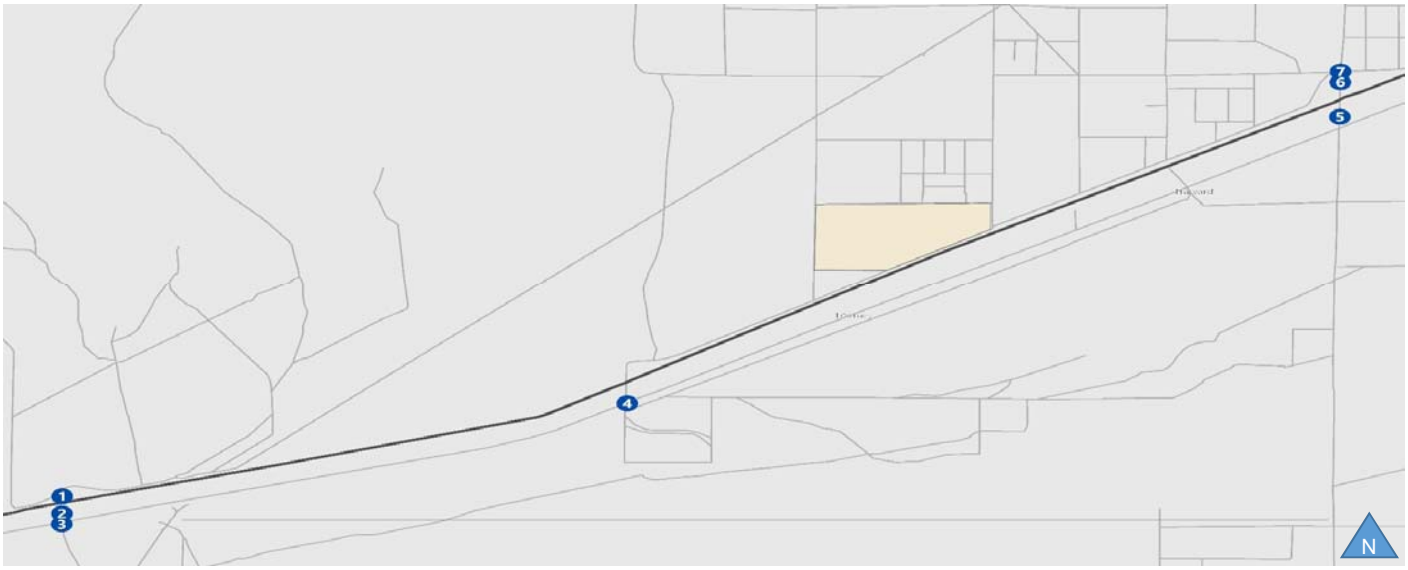
- Existing Study Intersections
- Future Study Intersections

Project Site

Figure 3
Trip Distribution



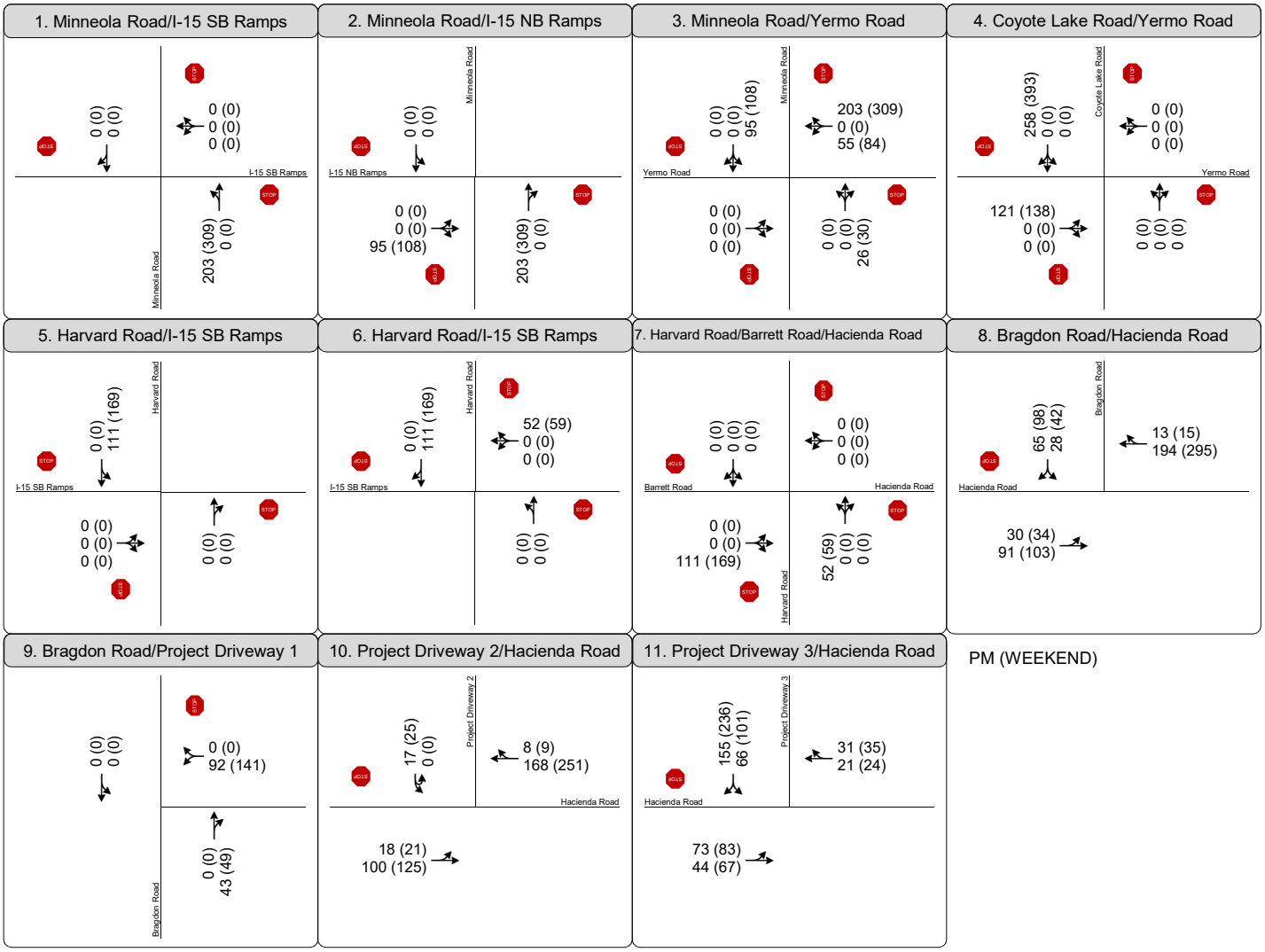
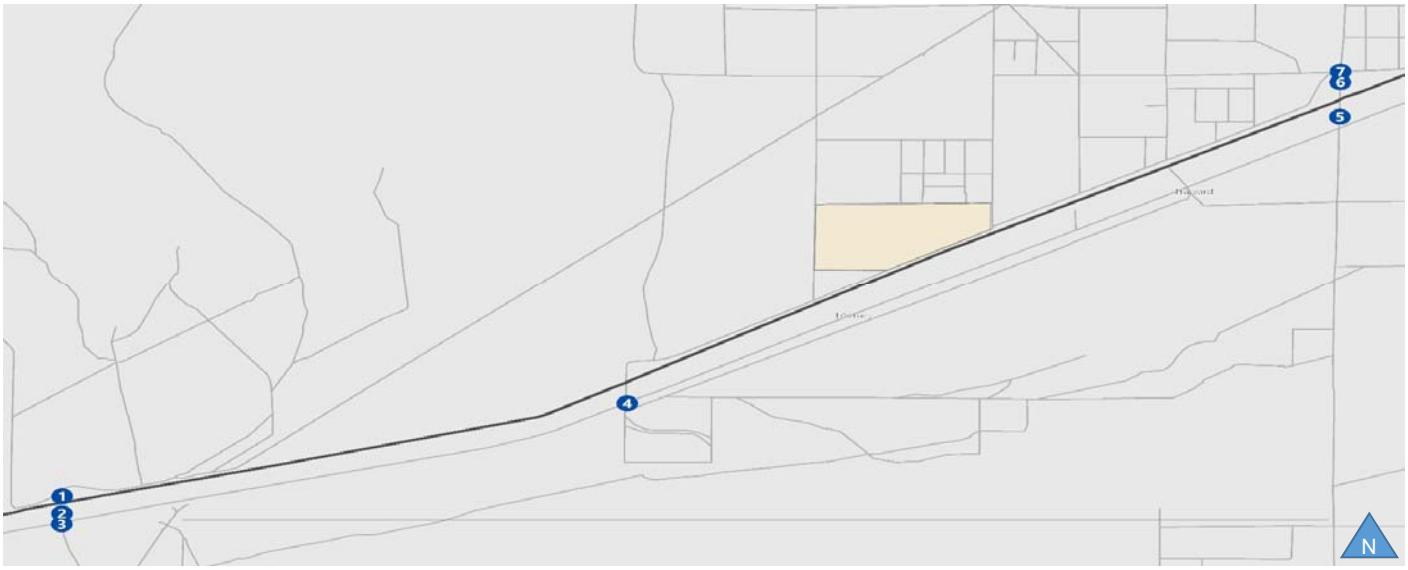


Figure 4

Project Only Peak Hour Traffic Volumes and Lane Configurations



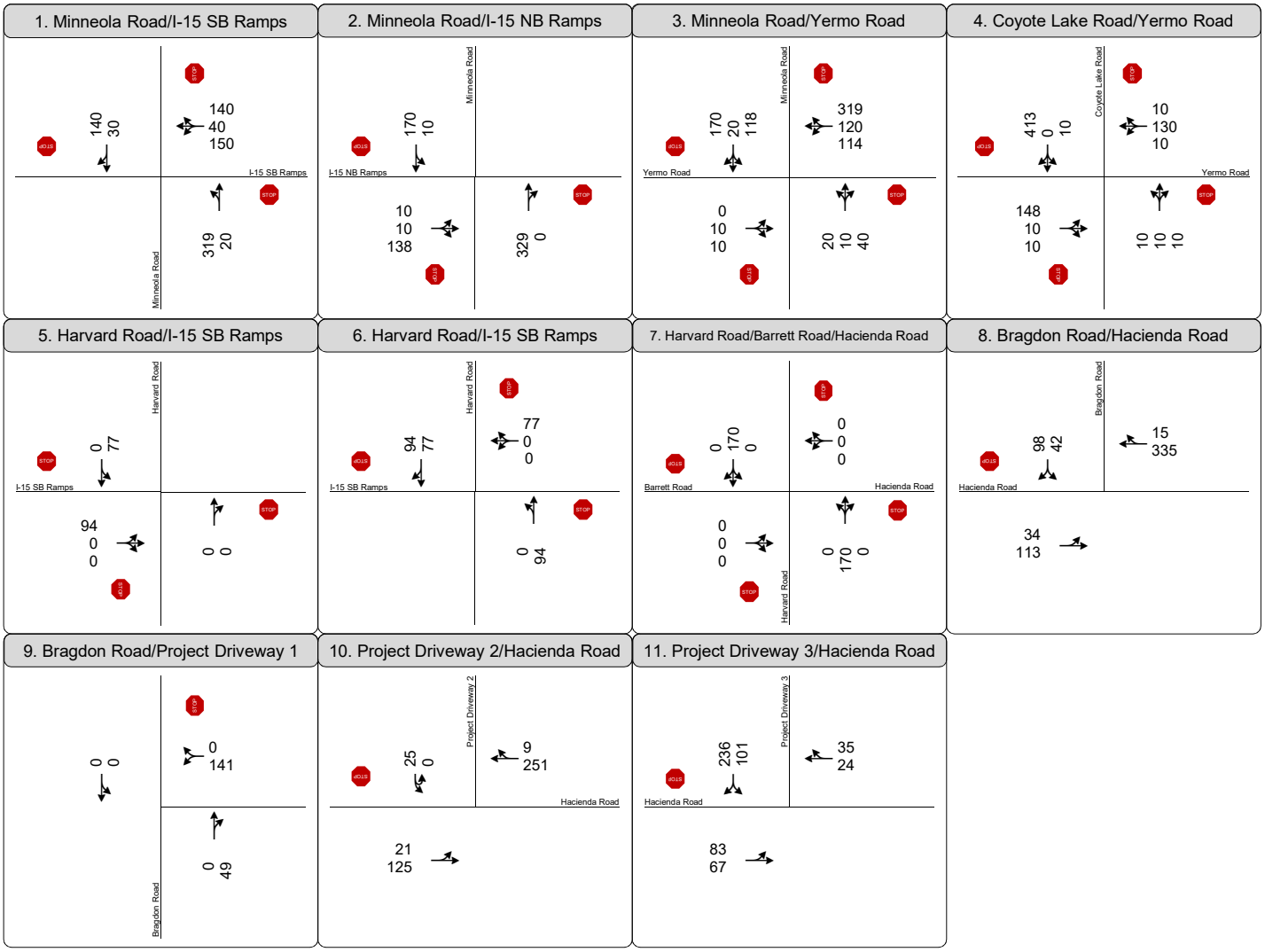


Figure 5

Cumulative Projects Peak Hour Traffic Volumes and Lane Configurations

3. EXISTING CONDITIONS

This chapter discusses the existing transportation conditions.

ROADWAY FACILITIES

Regional access to the proposed Dolores Lake Project site is provided by Interstate I-15 (I-15). Local access is provided by Minneola Road, Harvard Road, Coyote Lake Road, Yermo Road, Barrett Road, and Hacienda Road.

REGIONAL ROADS

- Interstate 15 Freeway (I-15) – I-15 is a north-south freeway that extends from San Diego into Riverside County and further north through the states of Nevada, Arizona, Utah, Idaho, and Montana, terminating at the United States/Canada border. In the study area, I-15 generally has eight lanes (four in each direction). Access to the project site is provided by the Minneola Road ramps and Harvard Road ramps.

LOCAL ACCESS ROADS

- Barrett Road – Barrett Road is an east-west facility with two lanes.
- Coyote Lake Road – Coyote Lake Road is a north-south facility with two lanes. South of Yermo Road it is classified as a major highway.
- Harvard Road – Harvard Road is a north-south facility with two lanes. It provides direct access to I-10. South of Yermo Road, it is classified as a major highway.
- Hacienda Road – Hacienda Road is an east-west facility with two lanes. It provides direct access to the project site.
- Minneola Road – Minneola Road is a north-south facility with two lanes. It provides direct access to I-10. South of Yermo Road, it is classified as a major highway
- Yermo Road – Yermo Road is an east-west facility with two lanes.

BICYCLE FACILITIES

Bicycle facilities typically include Class I, Class II, Class III, and Class IV facilities. Class I facilities are pathways that are completely separated from the vehicular travel way. Class II facilities are striped bicycle lanes on the travel way for the use of bicycles. Class III facilities are streets providing shared use for motor vehicles and bicyclists. Class IV facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). Given the existing rural nature of the project site, there are currently no existing bicycle facilities adjacent to the project site.

PEDESTRIAN FACILITIES

Pedestrian facilities typically consist of sidewalks, crosswalks at intersections, or off-street pathways. Given the rural nature of the project site, there are currently no existing pedestrian facilities adjacent to the project site.

TRANSIT FACILITIES

Transit facilities consist of bus or rail transportation. Given the rural nature of the project site, there are currently no existing transit facilities adjacent to the project site.

INTERSECTION VOLUMES AND LEVEL OF SERVICE

TRAFFIC VOLUMES AND LANE CONFIGURATIONS

Existing PM (Friday from 4:00 to 6:00 PM) and weekend (Sunday from 12:00 to 3:00 PM) peak period intersection counts were conducted at the study intersections in March 2017 at the following seven intersections:

1. Minneola Road & Yermo Road
2. Minneola Road & I-15 Southbound Ramps
3. Minneola Road & I-15 Northbound Ramps

4. Coyote Lake Road & Yermo Road
5. Harvard Road & Barrett Road & Hacienda Road
6. Harvard Road & I-15 Southbound Ramps
7. Harvard Road & I-15 Northbound Ramps

Traffic volumes and lane geometries collected in the field are shown on **Figure 6**. Count sheets can be found in Appendix A.

EXISTING INTERSECTION OPERATIONS

Fehr & Peers utilized the existing peak hour traffic volumes and lane configurations to evaluate traffic operations at the study intersections in the PM and Weekend peak hours. The results are summarized in Table 3. LOS calculations are provided in Appendix B.

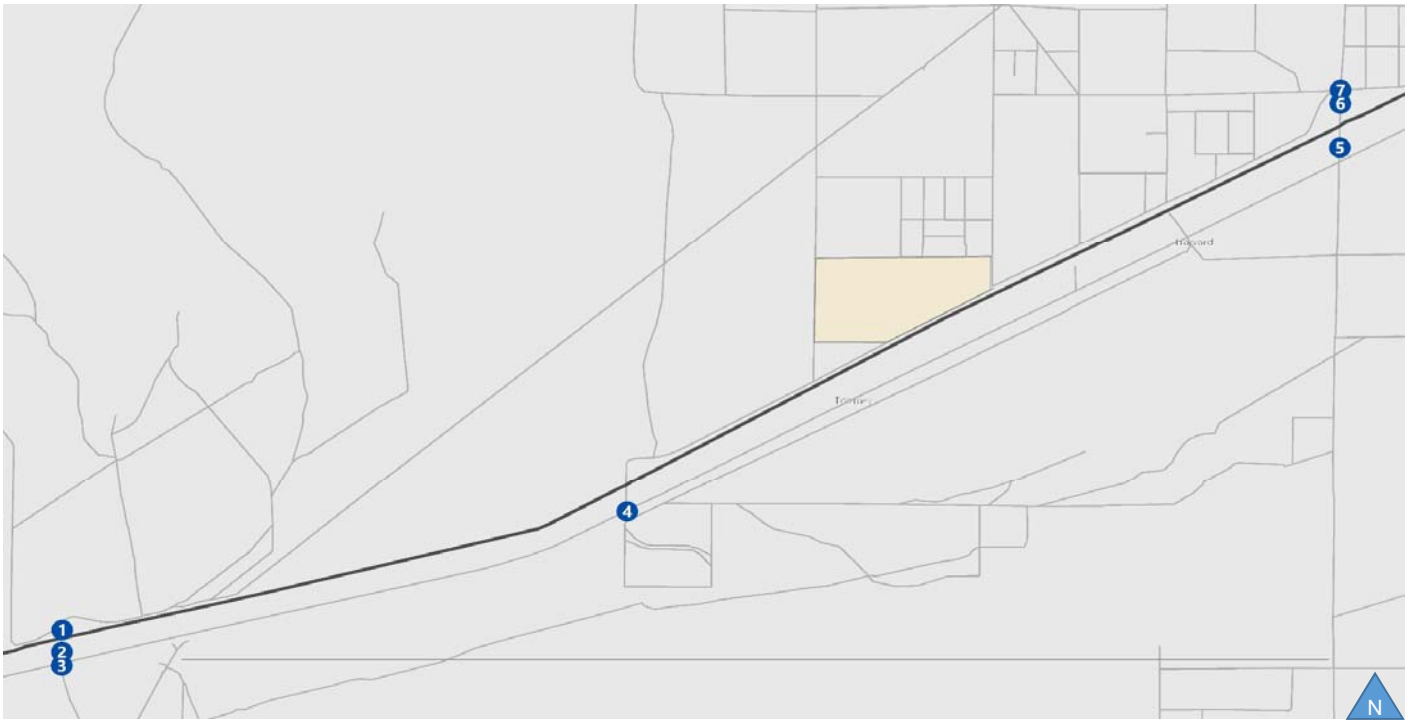
Under Existing (2017) conditions all intersections are operating acceptably during the PM and Weekend peak hours. None of the study intersections meet the peak hour signal warrant. Signal warrant calculations are provided in Appendix C.

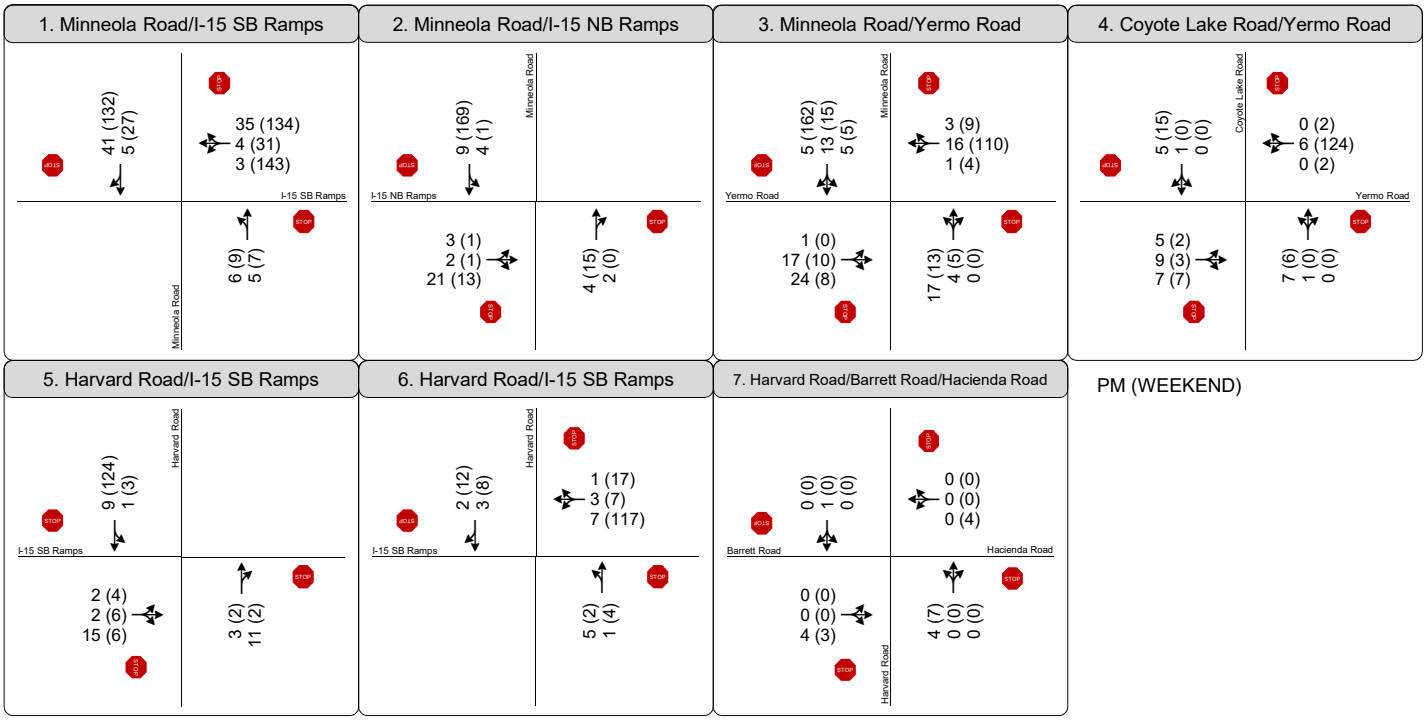
TABLE 3- EXISTING (2017) INTERSECTION OPERATIONS

INT #	Intersection	Control	Peak Hour	Existing	
				Delay	LOS
1	Minneola Road & I-15 Southbound Ramps	AWSC	PM	7.1	A
		AWSC	WKND	11.7	B
2	Minneola Road & I-15 Northbound Ramps	AWSC	PM	7.1	A
		AWSC	WKND	8.9	A
3	Minneola Road & Yermo Road	AWSC	PM	7.3	A
		AWSC	WKND	8.2	A
4	Yermo Road & Coyote Lake Road	AWSC	PM	7.3	A
		AWSC	WKND	8.4	A
5	Harvard Road & I-15 Southbound Ramps	AWSC	PM	7.1	A
		AWSC	WKND	8.4	A
6	Harvard Road & I-15 Northbound Ramps	AWSC	PM	7.3	A
		AWSC	WKND	8.5	A
7	Harvard Road & Barrett Road/Hacienda Road	AWSC	PM	7.2	A
		AWSC	WKND	7.4	A

Source: Fehr & Peers, 2017

Bold text indicates unacceptable operations





PM (WEEKEND)

Figure 6

Existing Peak Hour Traffic Volumes and Lane Configurations

4. EXISTING (2017) PLUS PROJECT CONDITIONS

TRAFFIC FORECASTS

Traffic forecasts for this analysis were developed by adding the project traffic to the existing traffic counts collected in March 2017. Traffic volumes and lane configurations used for this analysis are shown on **Figure 7**.

INTERSECTION OPERATIONS ANALYSIS

Under Existing (2017) Plus Project conditions all intersections operate acceptably, with no intersection operating worse than LOS B. Table 4 summarizes the operations under Existing Plus Project conditions. Under Existing Plus Project conditions none of the intersections meet the peak hour signal warrant. Signal warrant calculations are provided in Appendix C.

TABLE 4- EXISTING (2017) PLUS PROJECT INTERSECTION OPERATIONS

INT #	Intersection	Control	Peak Hour	Existing		Existing Plus Project	
				Delay	LOS	Delay	LOS
1	Minneola Road & I-15 Southbound Ramps	AWSC	PM	7.1	A	9.4	A
		AWSC	WKND	11.7	B	15	B
2	Minneola Road & I-15 Northbound Ramps	AWSC	PM	7.1	A	10	A
		AWSC	WKND	8.9	A	13.6	B
3	Minneola Road & Yermo Road	AWSC	PM	7.3	A	9.3	A
		AWSC	WKND	8.2	A	14.9	B
4	Yermo Road & Coyote Lake Road	AWSC	PM	7.3	A	10.1	B
		AWSC	WKND	8.4	A	12.9	B
5	Harvard Road & I-15 Southbound Ramps	AWSC	PM	7.1	A	8	A
		AWSC	WKND	8.4	A	10.7	B
6	Harvard Road & I-15 Northbound Ramps	AWSC	PM	7.3	A	7.8	A
		AWSC	WKND	8.5	A	9.7	A
7	Harvard Road & Barrett Road /Hacienda Road	AWSC	PM	7.2	A	8.4	A
		AWSC	WKND	7.4	A	8.6	A
8	Bragdon Road & Hacienda Road	TWSC	PM	-	-	10.7	B
		TWSC	WKND	-	-	12.6	B

9	Bragdon Road & Project Driveway 1	TWSC	PM	-	-	9.1	A
		TWSC	WKND	-	-	9.4	A
10	Hacienda Road & Project Driveway 2	TWSC	PM	-	-	10.1	B
		TWSC	WKND	-	-	11.1	B
11	Hacienda Road & Project Driveway 3	TWSC	PM	-	-	10.5	B
		TWSC	WKND	-	-	12.1	B

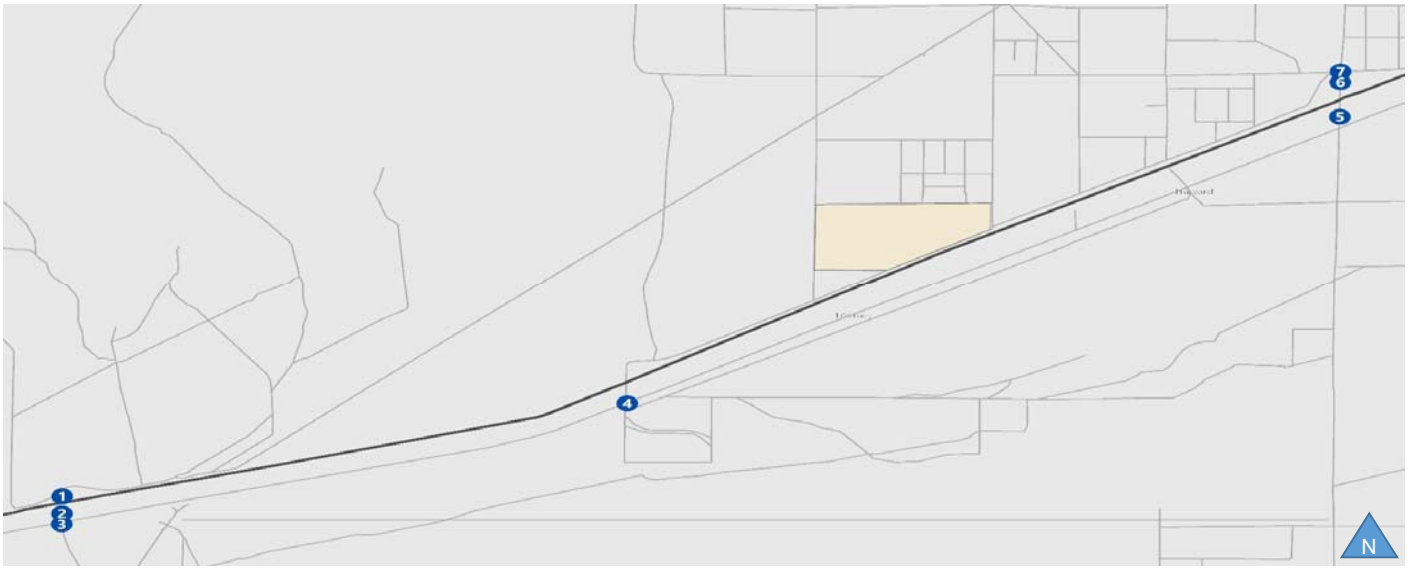
Source: Fehr & Peers, 2017

Bold text indicates unacceptable operations

INTERSECTION IMPACTS

Using the Significance Criteria discussed in Chapter 2, consistent with the County of San Bernardino TIS Guidelines, Existing Plus Project operations were reviewed for project impacts. The criteria requires that the project add traffic to an intersection already operating deficiently or that the project traffic degrade an intersection operating acceptably to unacceptable levels of service.

All study intersections operate acceptably with the addition of project traffic; therefore, there are no significant impacts identified under this scenario.



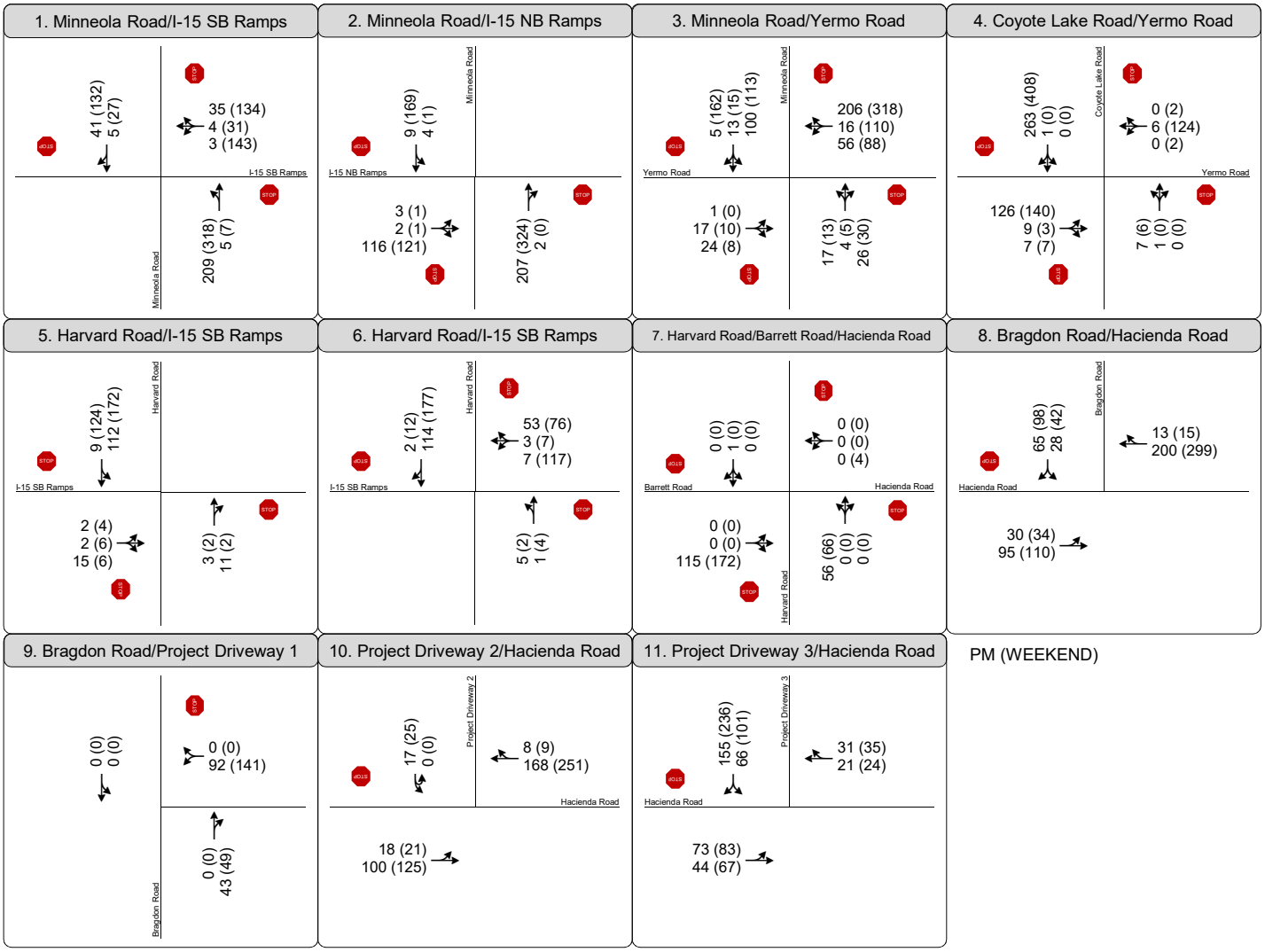


Figure 7

Existing Plus Project Peak Hour Traffic Volumes and Lane Configurations

5. CUMULATIVE YEAR (2040) CONDITIONS (WITHOUT PROJECT)

TRAFFIC FORECASTS

Traffic volumes for this analysis were developed by applying growth determined using SBTAM to existing traffic volumes to determine traffic volumes in year 2040. Traffic generated by cumulative projects were also accounted for in this analysis. Traffic volumes and lane geometries used in this analysis are shown on **Figure 8.**

INTERSECTION OPERATIONS ANALYSIS

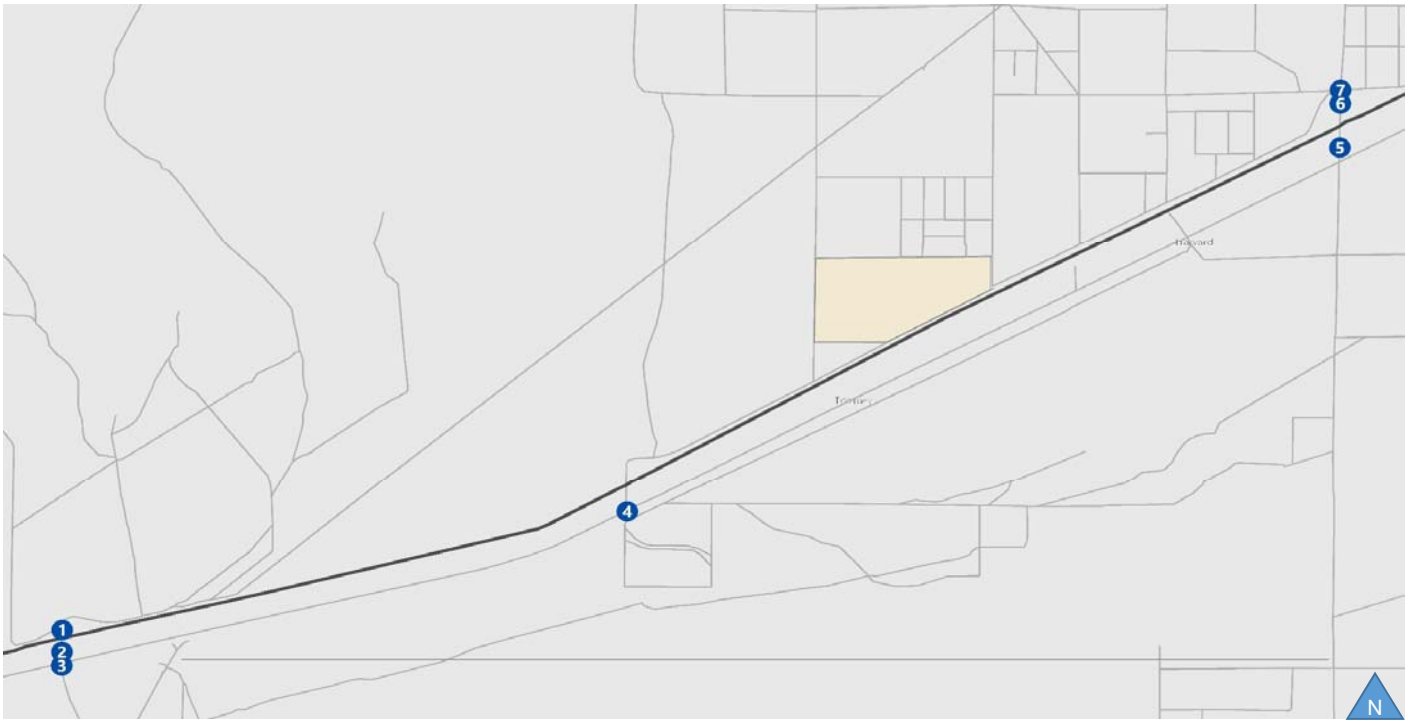
Intersection analysis were completed using the volumes and geometries shown on **Figure 8**. Table 5 summarizes the results. All intersections are expected to operate acceptably with minimal delay under Cumulative (2040) conditions with the addition of ambient growth and related projects. Under Cumulative (2040) conditions none of the intersections meet the peak hour signal warrant. Signal warrant calculations are provided in Appendix C.

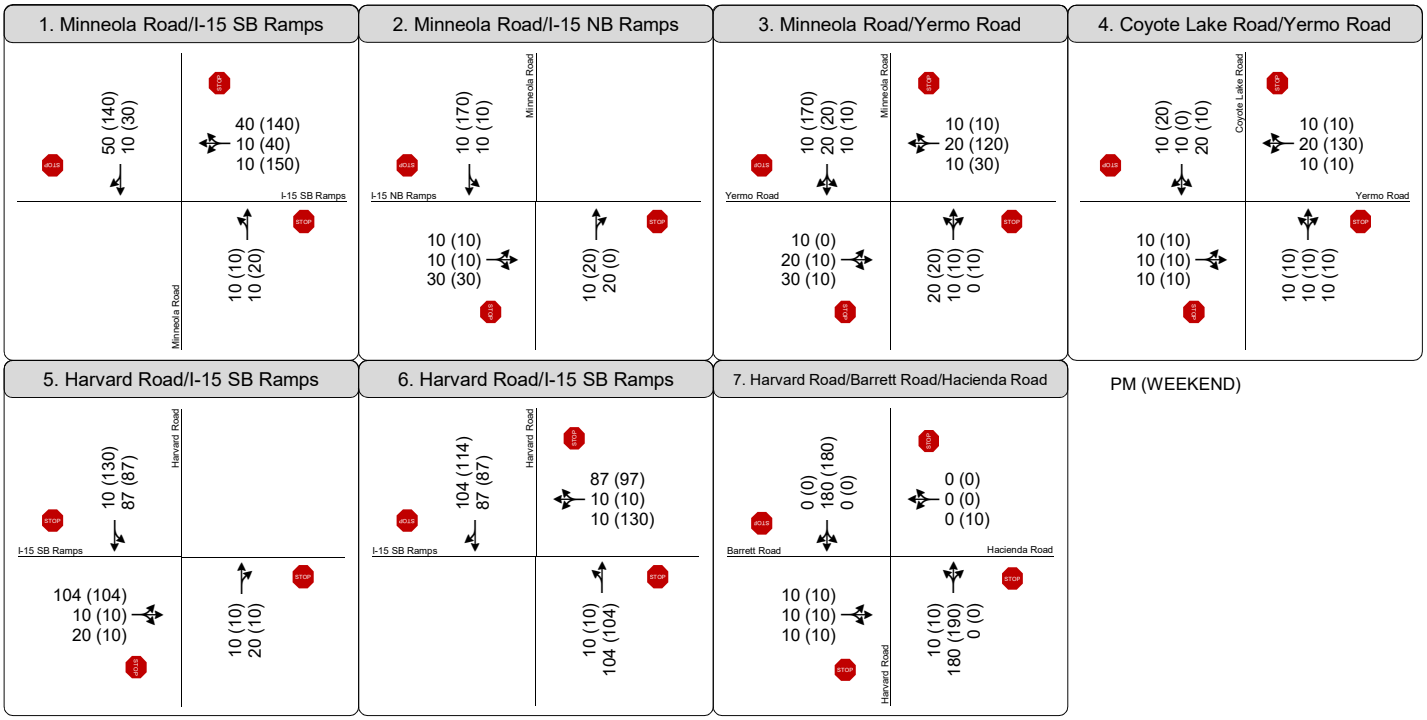
TABLE 5- CUMULATIVE (2040) INTERSECTION OPERATIONS

INT #	Intersection	Control	Peak Hour	Cumulative	
				Delay	LOS
1	Minneola Road & I-15 Southbound Ramps	AWSC	PM	7.2	A
		AWSC	WKND	9.9	A
2	Minneola Road & I-15 Northbound Ramps	AWSC	PM	7.1	A
		AWSC	WKND	8.1	A
3	Minneola Road & Yermo Road	AWSC	PM	7.4	A
		AWSC	WKND	8.6	A
4	Yermo Road & Coyote Lake Road	AWSC	PM	7.4	A
		AWSC	WKND	7.9	A
5	Harvard Road & I-15 Southbound Ramps	AWSC	PM	8.2	A
		AWSC	WKND	9	A
6	Harvard Road & I-15 Northbound Ramps	AWSC	PM	8.3	A
		AWSC	WKND	9.5	A
7	Harvard Road & Barrett Road/Hacienda Road	AWSC	PM	8.6	A
		AWSC	WKND	8.7	A

Source: Fehr & Peers, 2017

Bold text indicates unacceptable operations





PM (WEEKEND)

Figure 8

Cumulative (2040) Peak Hour Traffic Volumes and Lane Configurations

6. CUMULATIVE YEAR (2040) CONDITIONS (WITH PROJECT)

TRAFFIC FORECASTS

Traffic volumes for this analysis were developed by adding project traffic to volumes developed for the Cumulative analysis. Traffic volumes and lane geometries used for this analysis are shown on **Figure 9**.

INTERSECTION OPERATIONS ANALYSIS

Using the volumes and geometries shown on **Figure 9** intersection operations analysis was completed for the Cumulative (2040) Plus Project conditions. Table 6 summarizes the intersection operations for this scenario. Under Cumulative (2040) Plus Project conditions none of the intersections meet the peak hour signal warrant. Under Cumulative Plus Project conditions none of the intersections meet the peak hour signal warrant. Signal warrant calculations are provided in Appendix C.

TABLE 6- CUMULATIVE (2040) PLUS PROJECT INTERSECTION OPERATIONS

INT #	Intersection	Control	Peak Hour	Cumulative		Cumulative Plus Project	
				Delay	LOS	Delay	LOS
1	Minneola Road & I-15 Southbound Ramps	AWSC	PM	7.2	A	8.7	A
		AWSC	WKND	9.9	A	13.6	B
2	Minneola Road & I-15 Northbound Ramps	AWSC	PM	7.1	A	8.7	A
		AWSC	WKND	8.1	A	10.5	B
3	Minneola Road & Yermo Road	AWSC	PM	7.4	A	9.4	A
		AWSC	WKND	8.6	A	19.9	C
4	Yermo Road & Coyote Lake Road	AWSC	PM	7.4	A	9.3	A
		AWSC	WKND	7.9	A	11.7	B
5	Harvard Road & I-15 Southbound Ramps	AWSC	PM	8.2	A	9.1	A
		AWSC	WKND	9	A	11.5	B
6	Harvard Road & I-15 Northbound Ramps	AWSC	PM	8.3	A	9.5	A
		AWSC	WKND	9.5	A	12.3	B
7	Harvard Road & Barrett Road /Hacienda Road	AWSC	PM	8.6	A	9.5	A
		AWSC	WKND	8.7	A	10.1	B
8	Bragdon Road & Hacienda Road	TWSC	PM	-	-	12.6	B
		TWSC	WKND	-	-	15.9	C

9	Bragdon Road & Project Driveway 1	TWSC	PM	-	-	9.1	A
		TWSC	WKND	-	-	9.4	A
10	Hacienda Road & Project Driveway 2	TWSC	PM	-	-	10.1	B
		TWSC	WKND	-	-	11.1	B
11	Hacienda Road & Project Driveway 3	TWSC	PM	-	-	10.5	B
		TWSC	WKND	-	-	12.1	B

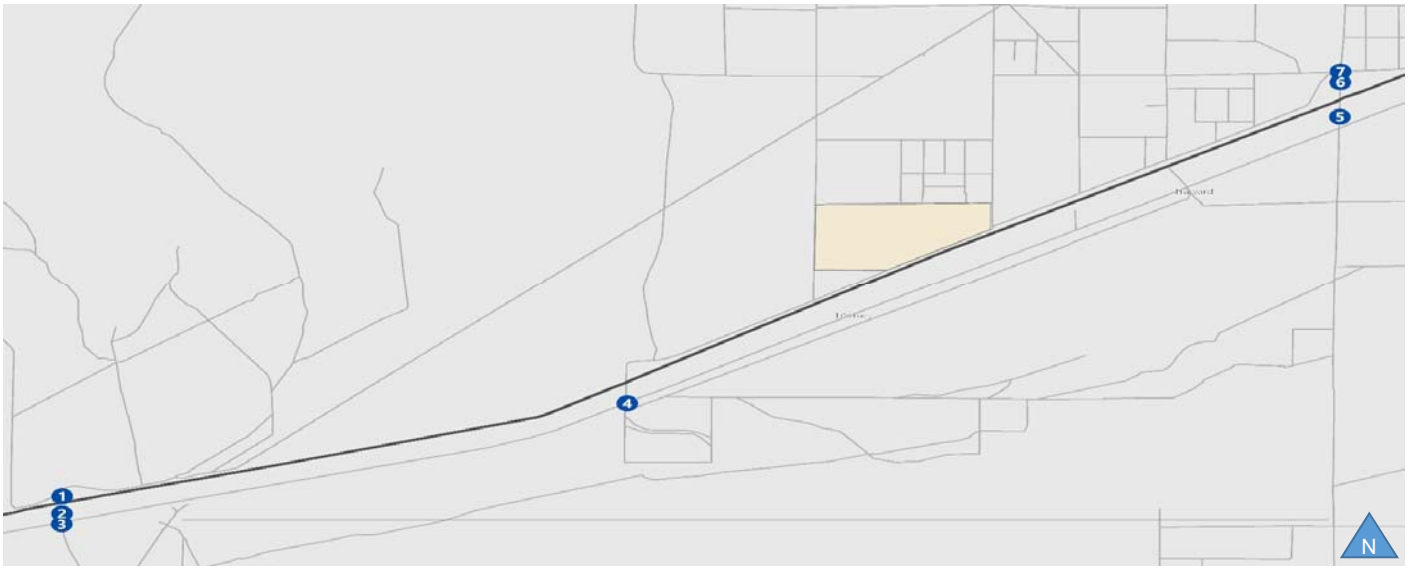
Source: Fehr & Peers, 2017

Bold text indicates unacceptable operations

INTERSECTION IMPACTS

Using the Significance Criteria discussed in Chapter 2, consistent with the County of San Bernardino TIS Guidelines, Cumulative Plus Project operations were reviewed for project impacts. The criteria requires that the project add traffic to an intersection already operating deficiently or that the project traffic degrade an intersection operating acceptably to unacceptable levels of service.

All study intersections operate acceptably with the addition of project traffic; therefore, there are no significant impacts identified under this scenario.



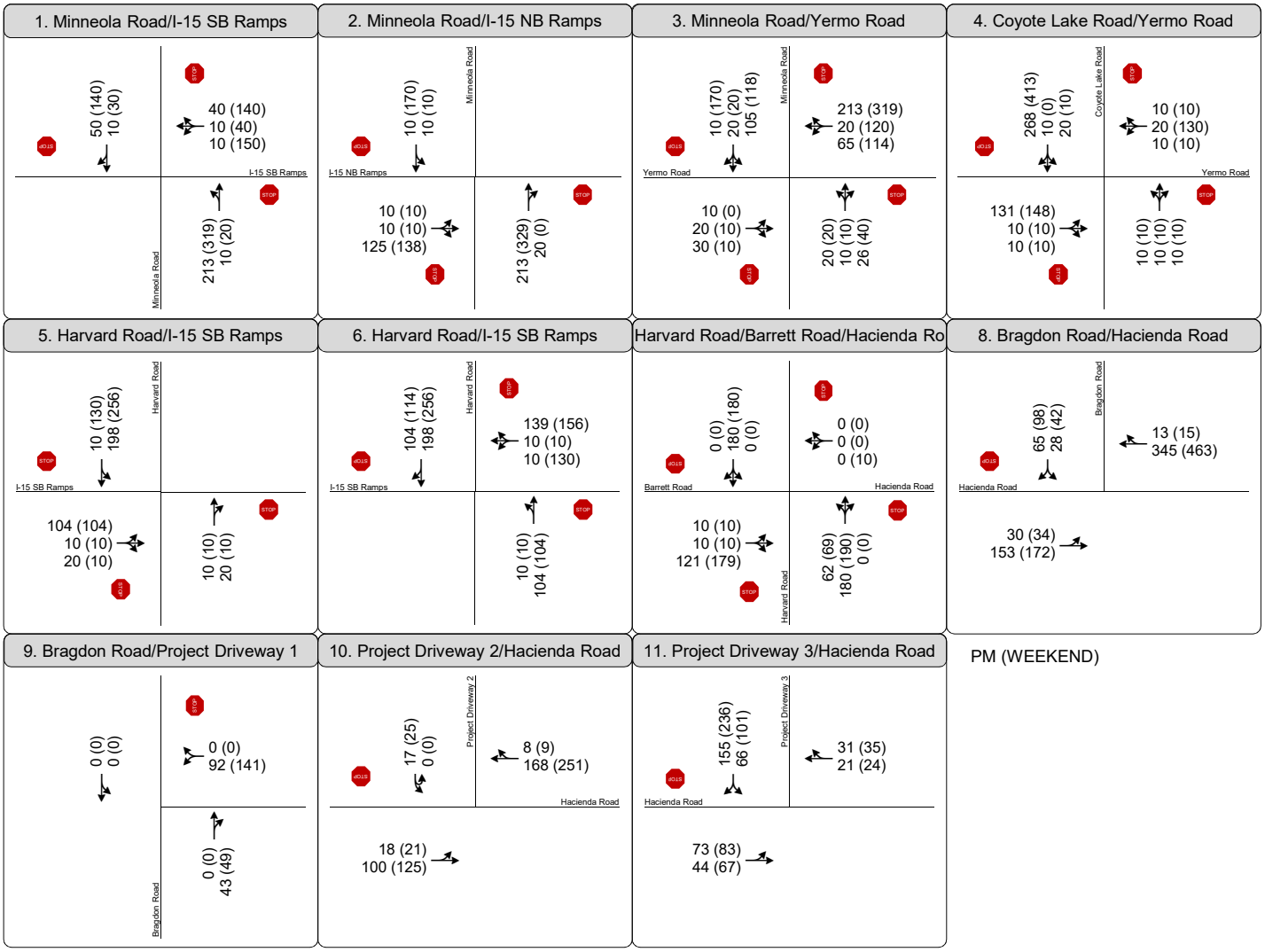


Figure 9

Cumulative (2040) Plus Project Peak Hour Traffic Volumes and Lane Configurations

7. SITE-ACCESS, ON-SITE CIRCULATION, AND PARKING

SITE-ACCESS/ON-SITE CIRCULATION

Project access will be provided from I-15 using three main access points; two access points will be provided from Hacienda Road, and the third major access point will be from Bragdon Road. Access at these locations has been analyzed as part of the intersection analysis. All access points were found to operate acceptably and should provide adequate access based on the estimated trip generation as part of this project.

There is limited topography in the area surrounding the project. Therefore, sight distance at all project access points is sufficient. Surrounding roads have limited horizontal curvature; as such, sight distance at project driveways should be adequate.

The project developer should also coordinate with the local fire department to ensure that adequate emergency access is provided.

While access provided by the existing infrastructure is adequate to serve traffic from I-15, interchanges serving the site from I-15 are more than five miles apart and the closest access is approximately two and a half miles from the project site. This creates out-of-direction travel for trips accessing the project from I-15 and could be improved by providing freeway access at Bragdon Road, less than a mile from the project site. It is recommended that the developer coordinate with the County and Caltrans to consider a potential interchange in the study area between Harvard Road and Minneola Road. This will improve access to the project site and adjacent properties significantly in the future.

The developer should work with County staff to ensure that adequate wayfinding signage is provided both on-site and off-site. This will ensure that circulation is optimal and that people traveling to and from the site are using the most direct routes.

It is also recommended that speed humps be explored as options to improve conditions for pedestrian's through-out the site. This should be considered for areas in the R.V. Park where long roadways with no intersections are provided and a high concentration of pedestrians could occur. Speed humps should also be considered in the parking area provided for the waterpark, especially in areas where pedestrians could be crossing to enter the park.

PARKING

Off-street parking requirements in the County of San Bernardino are documented in the County of San Bernardino 2007 Development Code. Table 7 below shows the requirement for each land use for the proposed project and the number of spots being provided.

TABLE 7- PARKING REQUIREMENTS

Land Use	Size	Parking Requirement	Required Spaces	Spaces Provided
R.V. Park	224 R.V. Spaces	1 Space for Each R.V. Space	224	291[1]
WaterPark [2]	-	-	-	913
Retail	45 KSF	1 Space for Each 250 Square Feet of Gross Floor Area	183	498
Office	97 KSF	1 Space for Each 350 Square Feet of Gross Floor Area	278	419

1. Includes 224 R.V. spaces plus 67 spaces provided for staff and tow vehicles.
2. Spaces required for this use should be determined at Project Review Meeting
Source: Fehr & Peers, 2017

Parking generally exceeds County parking standards. The project developer should work with the County to verify parking requirements for the WaterPark.

8. CONCLUSION

Based on this project the following has been found for this project:

- No significant impacts have been identified at the study locations.
- All study intersections are expected to operate acceptably under Existing (2017) Plus Project conditions and Cumulative (2040) Plus Project conditions. None of the study intersections meet the peak hour signal warrant in any of the study scenarios.
- No changes to air traffic patterns would occur as a result of this project and no design features will increase hazards in the area. Adequate emergency access will also be provided to the project site.
- Parking for all uses has been provided to meet or exceed County requirements per the site plan.

APPENDIX A- INTERSECTION COUNTS

TRAFFIC COUNTS

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #:	SC1209
	NORTH & SOUTH:	Minneola	LOCATION #:	1
	EAST & WEST:	I-15 WB Ramp	CONTROL:	STOP W

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	1	0	0	1	8	0	0	0	1	2	6	21	0	0	0	0	0
	4:15 PM	2	2	0	0	2	7	0	0	0	1	0	6	20	0	0	0	0	0
	4:30 PM	1	1	0	0	1	13	0	0	0	1	1	18	36	0	0	0	0	0
	4:45 PM	1	1	0	0	1	13	0	0	0	0	1	5	22	0	0	0	0	0
	5:00 PM	1	2	0	0	1	4	0	0	0	2	1	8	19	0	0	0	0	0
	5:15 PM	0	3	0	0	5	6	0	0	0	0	0	3	17	0	0	0	0	0
	5:30 PM	0	0	0	0	1	9	0	0	0	1	0	6	17	0	0	0	0	0
	5:45 PM	1	0	0	0	2	5	0	0	0	1	0	5	14	0	0	0	0	0
	VOLUMES	8	10	0	0	14	65	0	0	0	7	5	57	166	0	0	0	0	0
	APPROACH %	44%	56%	0%	0%	18%	82%	0%	0%	0%	10%	7%	83%						
	APP/DEPART	18	/	67	79	/	21	0	/	0	69	/	78	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	6	5	0	0	5	41	0	0	0	3	4	35	99					
	APPROACH %	55%	45%	0%	0%	11%	89%	0%	0%	0%	7%	10%	83%						
	PEAK HR FACTOR		0.688			0.821			0.000			0.525		0.688					
	APP/DEPART	11	/	40	46	/	8	0	/	0	42	/	51	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Mar 12, 17

LOCATION: San Bernardino
NORTH & SOUTH: Minneola
EAST & WEST: I-15 WB Ramp

PROJECT #: SC1209
LOCATION #: 1
CONTROL: STOP W

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	2	1	0	0	1	17	0	0	0	3	3	23	50	0	0	0	0	0
	1:15 PM	0	1	1	0	2	26	0	0	0	19	6	25	80	0	0	0	0	0
	1:30 PM	0	1	0	0	5	31	0	0	0	5	1	35	78	0	0	0	0	0
	1:45 PM	0	0	0	0	2	34	0	0	0	8	4	47	95	0	0	0	0	0
	2:00 PM	1	3	0	0	2	29	0	0	0	9	7	43	94	0	0	0	0	0
	2:15 PM	2	1	0	0	5	35	0	0	0	60	12	28	143	0	0	0	0	0
	2:30 PM	0	2	0	0	5	31	0	0	0	41	9	32	120	0	0	0	0	0
	2:45 PM	3	1	0	0	13	31	0	0	0	18	5	41	112	0	0	0	0	0
	3:00 PM	4	3	0	0	4	35	0	0	0	24	5	33	108	0	0	0	0	0
	3:15 PM	6	3	0	0	6	40	0	0	0	22	1	50	128	0	0	0	0	0
	3:30 PM	4	2	0	0	2	42	0	0	0	23	5	31	109	0	0	0	0	0
	3:45 PM	1	0	0	0	3	31	0	0	0	16	1	34	86	0	0	0	0	0
	VOLUMES	23	18	1	0	50	382	0	0	0	248	59	422	1,203	0	0	0	0	0
	APPROACH %	55%	43%	2%	0%	12%	88%	0%	0%	0%	34%	8%	58%						
	APP/DEPART	42	/	440	432	/	298	0	/	1	729	/	464	0					
	BEGIN PEAK HR		2:15 PM																
	VOLUMES	9	7	0	0	27	132	0	0	0	143	31	134	483					
	APPROACH %	56%	44%	0%	0%	17%	83%	0%	0%	0%	46%	10%	44%						
	PEAK HR FACTOR		0.571			0.903			0.000			0.770		0.844					
	APP/DEPART	16	/	141	159	/	170	0	/	0	308	/	172	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Fri, Mar 3, 17

LOCATION: San Bernardino
NORTH & SOUTH: Minneola
EAST & WEST: I-15 EB Ramp

PROJECT #: SC1209
LOCATION #: 2
CONTROL: STOP E

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	0	1	2	0	3	0	4	0	0	0	11	0	0	0	0	0
	4:15 PM	0	5	0	1	0	0	0	0	4	0	0	0	10	0	0	0	0	0
	4:30 PM	0	0	0	1	2	0	0	1	4	0	0	0	8	0	0	0	0	0
	4:45 PM	0	1	0	1	1	0	1	0	4	0	0	0	8	0	0	0	0	0
	5:00 PM	0	1	1	0	1	0	2	0	6	0	0	0	11	0	0	0	0	0
	5:15 PM	0	2	1	2	5	0	0	1	7	0	0	0	18	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	0	2	0	0	0	4	0	0	0	0	0
	5:45 PM	0	2	0	0	3	0	0	0	6	0	0	0	11	0	0	0	0	0
	VOLUMES	0	12	3	6	15	0	6	2	37	0	0	0	81	0	0	0	0	0
	APPROACH %	0%	80%	20%	29%	71%	0%	13%	4%	82%	0%	0%	0%						
	APP/DEPART	15	/	18	21	/	52	45	/	11	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	4	2	4	9	0	3	2	21	0	0	0	45					
	APPROACH %	0%	67%	33%	31%	69%	0%	12%	8%	81%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.464			0.813			0.000		0.625					
	APP/DEPART	6	/	7	13	/	30	26	/	8	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Mar 12, 17

LOCATION: San Bernardino
NORTH & SOUTH: Minneola
EAST & WEST: I-15 EB Ramp

PROJECT #: SC1209
LOCATION #: 2
CONTROL: STOP E

NOTES:

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	0	2	0	0	4	0	1	0	0	0	0	0	7	0	0	0	0	0
	1:15 PM	0	0	0	1	20	0	0	0	5	0	0	0	26	0	0	0	0	0
	1:30 PM	0	1	1	0	9	0	0	1	1	0	0	0	13	0	0	0	0	0
	1:45 PM	0	0	0	0	10	0	0	1	6	0	0	0	17	0	0	0	0	0
	2:00 PM	0	4	0	0	10	0	0	0	4	0	0	0	18	0	0	0	0	0
	2:15 PM	0	2	0	1	63	0	1	0	6	0	0	0	73	0	0	0	0	0
	2:30 PM	0	2	0	0	47	0	0	0	1	0	0	0	50	0	0	0	0	0
	2:45 PM	0	4	0	0	31	0	0	1	5	0	0	0	41	0	0	0	0	0
	3:00 PM	0	7	0	0	28	0	0	0	1	0	0	0	36	0	0	0	0	0
	3:15 PM	0	6	1	0	27	0	4	0	3	0	0	0	41	0	0	0	0	0
	3:30 PM	0	4	0	1	24	0	1	1	1	0	0	0	32	0	0	0	0	0
	3:45 PM	0	0	0	0	19	0	1	2	4	0	0	0	26	0	0	0	0	0
	VOLUMES	0	32	2	3	292	0	8	6	37	0	0	0	380	0	0	0	0	0
	APPROACH %	0%	94%	6%	1%	99%	0%	16%	12%	73%	0%	0%	0%						
	APP/DEPART	34	/	40	295	/	329	51	/	11	0	/	0	0					
	BEGIN PEAK HR		2:15 PM																
	VOLUMES	0	15	0	1	169	0	1	1	13	0	0	0	200					
	APPROACH %	0%	100%	0%	1%	99%	0%	7%	7%	87%	0%	0%	0%						
	PEAK HR FACTOR		0.536			0.664			0.536			0.000		0.685					
	APP/DEPART	15	/	16	170	/	182	15	/	2	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:			
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #: SC1209
	NORTH & SOUTH:	Minneola	LOCATION #: 3
	EAST & WEST:	Yermo	CONTROL: STOP N/S

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND Yermo			WESTBOUND Yermo				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	7	1	0	1	3	1	0	3	6	0	2	0	24	0	0	0	0	0
	4:15 PM	3	1	0	2	2	1	1	4	6	0	7	3	30	0	0	0	0	0
	4:30 PM	6	0	0	0	3	1	0	4	6	0	4	0	24	0	0	0	0	0
	4:45 PM	3	1	0	1	4	1	0	4	5	0	4	0	23	0	0	0	0	0
	5:00 PM	5	2	0	2	4	2	0	5	7	1	1	0	29	0	0	0	0	0
	5:15 PM	2	2	0	4	6	1	1	1	8	0	2	0	27	0	0	0	0	0
	5:30 PM	0	0	1	0	5	1	0	3	7	0	5	1	23	0	0	0	0	0
	5:45 PM	2	1	0	3	2	1	0	3	6	0	6	1	25	0	0	0	0	0
	VOLUMES	28	8	1	13	29	9	2	27	51	1	31	5	205	0	0	0	0	0
	APPROACH %	76%	22%	3%	25%	57%	18%	3%	34%	64%	3%	84%	14%						
	APP/DEPART	37	/	15	51	/	81	80	/	41	37	/	68	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	17	4	0	5	13	5	1	17	24	1	16	3	106					
	APPROACH %	81%	19%	0%	22%	57%	22%	2%	40%	57%	5%	80%	15%						
	PEAK HR FACTOR		0.750			0.719			0.875			0.500		0.883					
	APP/DEPART	21	/	8	23	/	38	42	/	22	20	/	38	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Mar 12, 17

LOCATION: San Bernardino
NORTH & SOUTH: Minneola
EAST & WEST: Yermo

PROJECT #: SC1209
LOCATION #: 3
CONTROL: STOP N/S

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Minneola			SOUTHBOUND Minneola			EASTBOUND Yermo			WESTBOUND Yermo				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	5	1	0	0	1	3	0	1	2	0	25	1	39	0	0	0	0	0
	1:15 PM	1	0	0	1	4	20	0	2	1	1	13	0	43	0	0	0	0	0
	1:30 PM	4	0	0	0	1	9	1	3	7	1	12	1	39	0	0	0	0	0
	1:45 PM	6	0	0	2	5	9	0	3	1	0	9	0	35	0	0	0	0	0
	2:00 PM	1	0	0	3	1	11	2	1	4	0	13	2	38	0	0	0	0	0
	2:15 PM	2	0	0	1	6	63	0	2	2	0	9	1	86	0	1	0	0	1
	2:30 PM	5	1	0	1	0	46	0	2	2	1	28	1	87	0	0	0	0	0
	2:45 PM	4	1	0	3	7	26	0	1	2	1	34	3	82	0	0	0	0	0
	3:00 PM	2	3	0	0	2	27	0	5	2	2	39	4	86	0	0	0	0	0
	3:15 PM	5	3	2	1	5	24	1	4	4	0	31	2	82	0	1	0	0	1
	3:30 PM	5	0	0	1	1	23	0	2	4	0	32	4	72	0	0	0	0	0
	3:45 PM	3	0	0	2	4	17	0	1	2	0	24	0	53	0	0	0	0	0
	VOLUMES	43	9	2	15	37	278	4	27	33	6	269	19	742	0	2	0	0	2
	APPROACH %	80%	17%	4%	5%	11%	84%	6%	42%	52%	2%	91%	6%						
	APP/DEPART	54	/	34	330	/	76	64	/	42	294	/	590	0					
	BEGIN PEAK HR		2:15 PM																
	VOLUMES	13	5	0	5	15	162	0	10	8	4	110	9	341					
	APPROACH %	72%	28%	0%	3%	8%	89%	0%	56%	44%	3%	89%	7%						
	PEAK HR FACTOR		0.750			0.650			0.643			0.683		0.980					
	APP/DEPART	18	/	15	182	/	27	18	/	14	123	/	285	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:					
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #:	SC1209
	NORTH & SOUTH:	Coyote Lake	LOCATION #:	4
	EAST & WEST:	Yermo	CONTROL:	STOP N/S

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Coyote Lake			SOUTHBOUND Coyote Lake			EASTBOUND Yermo			WESTBOUND Yermo				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	3	1	0	0	0	1	0	0	2	0	3	0	10	0	0	0	0	0
	4:15 PM	2	0	0	0	0	3	2	1	2	0	1	0	11	0	0	0	0	0
	4:30 PM	1	0	2	0	0	0	2	3	1	0	2	0	11	0	0	0	0	0
	4:45 PM	0	0	0	0	0	3	2	0	1	0	1	0	7	0	0	0	0	0
	5:00 PM	0	0	0	0	0	1	1	1	2	0	1	0	6	0	0	0	0	0
	5:15 PM	0	1	0	0	0	1	1	2	2	0	3	0	10	0	0	0	0	0
	5:30 PM	3	0	0	0	1	1	0	3	1	0	1	0	10	0	0	0	0	0
	5:45 PM	4	0	0	0	0	2	3	3	2	0	1	0	15	0	0	0	0	0
	VOLUMES	13	2	2	0	1	12	11	13	13	0	13	0	80	0	0	0	0	0
	APPROACH %	76%	12%	12%	0%	8%	92%	30%	35%	35%	0%	100%	0%						
	APP/DEPART	17	/	13	13	/	14	37	/	15	13	/	38	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	7	1	0	0	1	5	5	9	7	0	6	0	41					
	APPROACH %	88%	13%	0%	0%	17%	83%	24%	43%	33%	0%	100%	0%						
	PEAK HR FACTOR		0.500			0.750			0.656			0.500		0.683					
	APP/DEPART	8	/	6	6	/	8	21	/	9	6	/	18	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Mar 12, 17

LOCATION: San Bernardino
NORTH & SOUTH: Coyote Lake
EAST & WEST: Yermo

PROJECT #: SC1209
LOCATION #: 4
CONTROL: STOP N/S

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Coyote Lake			SOUTHBOUND Coyote Lake			EASTBOUND Yermo			WESTBOUND Yermo				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	1	0	0	0	0	1	2	2	0	0	24	0	30	0	0	0	0	0
	1:15 PM	1	0	0	0	4	2	1	0	0	0	9	0	17	0	0	0	0	0
	1:30 PM	2	0	0	0	0	2	1	1	1	0	8	1	16	0	0	0	0	0
	1:45 PM	4	0	0	0	0	0	2	2	0	1	10	0	19	0	0	0	0	0
	2:00 PM	1	0	0	0	0	3	1	1	1	0	8	0	15	0	0	0	0	0
	2:15 PM	0	0	0	0	0	3	1	2	2	0	8	0	16	0	0	0	0	0
	2:30 PM	0	0	0	0	0	7	1	0	1	1	28	1	39	0	0	0	0	0
	2:45 PM	1	0	0	0	0	4	0	1	0	0	26	0	32	0	0	0	0	0
	3:00 PM	5	0	0	0	0	1	1	1	2	0	39	1	50	0	0	0	0	0
	3:15 PM	0	0	0	0	0	3	0	1	4	1	31	0	40	0	0	0	0	0
	3:30 PM	0	0	0	1	0	3	1	0	3	0	30	0	38	0	0	0	0	0
	3:45 PM	2	0	0	0	1	6	1	0	1	0	19	0	30	0	0	0	0	0
	VOLUMES	17	0	0	1	5	35	12	11	15	3	240	3	342	0	0	0	0	0
	APPROACH %	100%	0%	0%	2%	12%	85%	32%	29%	39%	1%	98%	1%						
	APP/DEPART	17	/	15	41	/	23	38	/	12	246	/	292	0					
	BEGIN PEAK HR		2:30 PM																
	VOLUMES	6	0	0	0	0	15	2	3	7	2	124	2	161					
	APPROACH %	100%	0%	0%	0%	0%	100%	17%	25%	58%	2%	97%	2%						
	PEAK HR FACTOR		0.300			0.536			0.600			0.800		0.805					
	APP/DEPART	6	/	4	15	/	9	12	/	3	128	/	145	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:					
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #:	SC1209
	NORTH & SOUTH:	Harvard	LOCATION #:	5
	EAST & WEST:	I-15 EB Ramp	CONTROL:	STOP E

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	1	3	0	3	0	1	0	2	0	0	0	10	0	0	0	0	0
	4:15 PM	0	0	0	1	1	0	1	0	6	0	0	0	9	0	0	0	0	0
	4:30 PM	0	2	3	0	3	0	0	1	1	0	0	0	10	0	0	0	0	0
	4:45 PM	0	0	5	0	2	0	0	1	6	0	0	0	14	0	0	0	0	0
	5:00 PM	0	0	2	0	2	0	0	2	3	0	0	0	9	0	0	0	0	0
	5:15 PM	0	3	1	0	1	0	0	2	0	0	0	0	7	0	0	0	0	0
	5:30 PM	0	2	0	0	5	0	0	1	1	0	0	0	9	0	0	0	0	0
	5:45 PM	0	0	1	0	2	0	1	3	1	0	0	0	8	0	0	0	0	0
	VOLUMES	0	8	15	1	19	0	3	10	20	0	0	0	76	0	0	0	0	0
	APPROACH %	0%	35%	65%	5%	95%	0%	9%	30%	61%	0%	0%	0%						
	APP/DEPART	23	/	11	20	/	39	33	/	26	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	3	11	1	9	0	2	2	15	0	0	0	43					
	APPROACH %	0%	21%	79%	10%	90%	0%	11%	11%	79%	0%	0%	0%						
	PEAK HR FACTOR		0.700			0.833			0.679			0.000		0.768					
	APP/DEPART	14	/	5	10	/	24	19	/	14	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Sun, Mar 12, 17

LOCATION: San Bernardino
NORTH & SOUTH: Harvard
EAST & WEST: I-15 EB Ramp

PROJECT #: SC1209
LOCATION #: 5
CONTROL: STOP E

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND I-15 EB Ramp			WESTBOUND I-15 EB Ramp				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL 0	ET 1	ER 0	WL X	WT X	WR X	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	0	4	0	0	14	0	0	1	0	0	0	0	19	0	0	0	0	0
	1:15 PM	0	1	0	1	10	0	1	0	0	0	0	0	13	0	0	0	0	0
	1:30 PM	0	0	1	1	12	0	0	1	1	0	0	0	16	0	0	0	0	0
	1:45 PM	0	1	1	0	11	0	0	1	0	0	0	0	14	0	0	0	0	0
	2:00 PM	0	1	0	1	9	0	3	1	1	0	0	0	16	0	0	0	0	0
	2:15 PM	0	0	1	0	13	0	0	5	0	0	0	0	19	0	0	0	0	0
	2:30 PM	0	0	0	0	33	0	1	2	1	0	0	0	37	0	0	0	0	0
	2:45 PM	0	1	0	2	29	0	2	2	3	0	0	0	39	0	0	0	0	0
	3:00 PM	0	0	1	1	44	0	1	0	2	0	0	0	49	0	0	0	0	0
	3:15 PM	0	1	1	0	18	0	0	2	0	0	0	0	22	0	0	0	0	0
	3:30 PM	0	2	1	1	29	0	1	1	1	0	0	0	36	0	0	0	0	0
	3:45 PM	0	0	1	0	17	0	0	3	1	0	0	0	22	0	0	0	0	0
	VOLUMES	0	11	7	7	239	0	9	19	10	0	0	0	302	0	0	0	0	0
	APPROACH %	0%	61%	39%	3%	97%	0%	24%	50%	26%	0%	0%	0%						
	APP/DEPART	18	/	20	246	/	249	38	/	33	0	/	0	0					
	BEGIN PEAK HR		2:30 PM																
	VOLUMES	0	2	2	3	124	0	4	6	6	0	0	0	147					
	APPROACH %	0%	50%	50%	2%	98%	0%	25%	38%	38%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.706			0.571			0.000		0.750					
	APP/DEPART	4	/	6	127	/	130	16	/	11	0	/	0	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:			
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #: SC1209
	NORTH & SOUTH:	Harvard	LOCATION #: 6
	EAST & WEST:	I-15 WB Ramp	CONTROL: STOP W

NOTES:

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

☐ Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	2	0	0	2	1	0	0	0	2	0	0	7	0	0	0	0	0
	4:15 PM	2	0	0	0	1	0	0	0	0	1	1	0	5	1	0	0	0	1
	4:30 PM	1	0	0	0	0	1	0	0	0	2	0	3	7	0	0	0	0	0
	4:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	5:15 PM	3	0	0	0	1	1	0	0	0	2	0	0	7	0	0	0	0	0
	5:30 PM	1	1	0	0	2	0	0	0	0	1	1	1	7	0	0	0	0	0
	5:45 PM	1	0	0	0	0	1	0	0	0	3	2	0	7	1	0	0	0	1
	VOLUMES	8	3	0	0	7	4	0	0	0	12	5	4	43	2	0	0	0	2
	APPROACH %	73%	27%	0%	0%	64%	36%	0%	0%	0%	57%	24%	19%						
	APP/DEPART	11	/	7	11	/	21	0	/	0	21	/	15	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	5	1	0	0	3	2	0	0	0	7	3	1	22					
	APPROACH %	83%	17%	0%	0%	60%	40%	0%	0%	0%	64%	27%	9%						
	PEAK HR FACTOR		0.500			0.625			0.000			0.550		0.786					
	APP/DEPART	6	/	2	5	/	11	0	/	0	11	/	9	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC1209
Sun, Mar 12, 17	NORTH & SOUTH:	Harvard	LOCATION #:	6
	EAST & WEST:	I-15 WB Ramp	CONTROL:	STOP W

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND I-15 WB Ramp			WESTBOUND I-15 WB Ramp				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL X	ET X	ER X	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	4	0	0	0	1	3	0	0	0	13	4	3	28	0	0	0	0	0
	1:15 PM	1	1	0	0	2	1	0	0	0	10	4	0	19	0	0	0	0	0
	1:30 PM	0	0	0	0	2	0	0	0	0	10	5	0	17	0	0	0	0	0
	1:45 PM	1	0	0	0	2	6	0	0	0	10	1	2	22	0	0	0	0	0
	2:00 PM	2	2	0	0	1	0	0	0	0	9	1	7	22	0	0	0	0	0
	2:15 PM	0	0	0	0	0	8	0	0	0	14	2	3	27	0	0	0	0	0
	2:30 PM	0	1	0	0	1	5	0	0	0	30	1	6	44	0	0	0	0	0
	2:45 PM	1	2	0	0	5	1	0	0	0	26	1	2	38	0	0	0	0	0
	3:00 PM	0	1	0	0	2	1	0	0	0	42	3	3	52	0	0	0	0	0
	3:15 PM	1	0	0	0	0	5	0	0	0	19	2	6	33	0	0	0	0	0
	3:30 PM	1	2	0	0	1	3	0	0	0	28	3	4	42	0	0	0	0	0
	3:45 PM	0	0	0	0	0	4	0	0	0	18	0	4	26	0	0	0	0	0
	VOLUMES	11	9	0	0	17	37	0	0	0	229	27	40	370	0	0	0	0	0
	APPROACH %	55%	45%	0%	0%	31%	69%	0%	0%	0%	77%	9%	14%						
	APP/DEPART	20	/	49	54	/	246	0	/	0	296	/	75	0					
	BEGIN PEAK HR		2:30 PM																
	VOLUMES	2	4	0	0	8	12	0	0	0	117	7	17	167					
	APPROACH %	33%	67%	0%	0%	40%	60%	0%	0%	0%	83%	5%	12%						
	PEAK HR FACTOR		0.500			0.833			0.000			0.734		0.803					
	APP/DEPART	6	/	21	20	/	125	0	/	0	141	/	21	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:					
Fri, Mar 3, 17	LOCATION:	San Bernardino	PROJECT #:	SC1209
	NORTH & SOUTH:	Harvard	LOCATION #:	7
	EAST & WEST:	Hacienda	CONTROL:	STOP E/W

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND Hacienda			WESTBOUND Hacienda				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
PM	12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	2	0	0	0	1	0	0	0	2	0	0	0	5	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
	4:45 PM	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
	5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	5:30 PM	1	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	5	0	0	0	1	1	0	0	7	0	0	0	14	0	0	0	0	0
	APPROACH %	100%	0%	0%	0%	50%	50%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	5	/	0	2	/	8	7	/	0	0	/	6	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	4	0	0	0	1	0	0	0	4	0	0	0	9					
	APPROACH %	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.250			0.500			0.000		0.450					
	APP/DEPART	4	/	0	1	/	5	4	/	0	0	/	4	0					

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	San Bernardino	PROJECT #:	SC1209
Sun, Mar 12, 17	NORTH & SOUTH:	Harvard	LOCATION #:	7
	EAST & WEST:	Hacienda	CONTROL:	STOP E/W

NOTES:

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

Add U-Turns to Left Turns

		NORTHBOUND Harvard			SOUTHBOUND Harvard			EASTBOUND Hacienda			WESTBOUND Hacienda				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		12:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	1:30 PM	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0
	2:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1
	2:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	2:30 PM	4	0	0	0	0	0	0	0	2	0	0	0	6	0	0	0	0	0
	2:45 PM	1	0	0	0	0	0	0	0	0	3	0	0	4	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	3:15 PM	2	0	0	0	0	0	0	0	0	1	0	0	3	1	0	0	0	1
	3:30 PM	3	1	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0
	3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	VOLUMES	13	2	0	0	1	0	0	0	7	7	0	0	30	2	0	0	0	2
	APPROACH %	87%	13%	0%	0%	100%	0%	0%	0%	100%	100%	0%	0%						
	APP/DEPART	15	/	2	1	/	17	7	/	0	7	/	11	0					
	BEGIN PEAK HR		2:30 PM																
	VOLUMES	7	0	0	0	0	0	0	0	3	4	0	0	14					
	APPROACH %	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%						
	PEAK HR FACTOR		0.438			0.000			0.375			0.333		0.583					
	APP/DEPART	7	/	0	0	/	8	3	/	0	4	/	6	0					

APPENDIX B- TECHNICAL CALCULATIONS

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	3	4	35	0	6	5	0
Future Vol, veh/h	0	0	0	0	0	3	4	35	0	6	5	0
Peak Hour Factor	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	4	4	4	2	4	4	4	2	16	16	16
Mvmt Flow	0	0	0	0	0	4	6	51	0	9	7	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	6.9	7.6
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	55%	7%	0%
Vol Thru, %	45%	10%	11%
Vol Right, %	0%	83%	89%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	11	42	46
LT Vol	6	3	0
Through Vol	5	4	5
RT Vol	0	35	41
Lane Flow Rate	16	61	67
Geometry Grp	1	1	1
Degree of Util (X)	0.02	0.061	0.07
Departure Headway (Hd)	4.439	3.624	3.755
Convergence, Y/N	Yes	Yes	Yes
Cap	807	985	955
Service Time	2.462	1.657	1.774
HCM Lane V/C Ratio	0.02	0.062	0.07
HCM Control Delay	7.6	6.9	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	5	41
Future Vol, veh/h	0	0	5	41
Peak Hour Factor	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	16	16	16
Mvmt Flow	0	0	7	59
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	7.1
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	3	2	21	0	0	0	0	0	0	4	2
Future Vol, veh/h	0	3	2	21	0	0	0	0	0	0	4	2
Peak Hour Factor	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63
Heavy Vehicles, %	2	15	15	15	2	2	2	2	2	16	16	16
Mvmt Flow	0	5	3	33	0	0	0	0	0	0	6	3
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	6.9	7.1
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	12%	31%
Vol Thru, %	67%	8%	69%
Vol Right, %	33%	81%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	6	26	13
LT Vol	0	3	4
Through Vol	4	2	9
RT Vol	2	21	0
Lane Flow Rate	10	41	21
Geometry Grp	1	1	1
Degree of Util (X)	0.011	0.043	0.025
Departure Headway (Hd)	4.06	3.744	4.314
Convergence, Y/N	Yes	Yes	Yes
Cap	883	957	832
Service Time	2.078	1.763	2.328
HCM Lane V/C Ratio	0.011	0.043	0.025
HCM Control Delay	7.1	6.9	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	4	9	0
Future Vol, veh/h	0	4	9	0
Peak Hour Factor	0.95	0.63	0.63	0.63
Heavy Vehicles, %	2	16	16	16
Mvmt Flow	0	6	14	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	17	24	0	1	16	3	0	17	4	0
Future Vol, veh/h	0	1	17	24	0	1	16	3	0	17	4	0
Peak Hour Factor	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	2	2	2
Mvmt Flow	0	1	19	27	0	1	18	3	0	19	5	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.4	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	81%	2%	5%	22%
Vol Thru, %	19%	40%	80%	57%
Vol Right, %	0%	57%	15%	22%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	42	20	23
LT Vol	17	1	1	5
Through Vol	4	17	16	13
RT Vol	0	24	3	5
Lane Flow Rate	24	48	23	26
Geometry Grp	1	1	1	1
Degree of Util (X)	0.028	0.053	0.027	0.029
Departure Headway (Hd)	4.237	4.005	4.282	3.986
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	842	893	834	894
Service Time	2.277	2.036	2.317	2.027
HCM Lane V/C Ratio	0.029	0.054	0.028	0.029
HCM Control Delay	7.4	7.3	7.4	7.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.1	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	5	13	5
Future Vol, veh/h	0	5	13	5
Peak Hour Factor	0.95	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	6	15	6
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.1
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	5	9	7	0	0	6	0	0	7	1	0
Future Vol, veh/h	0	5	9	7	0	0	6	0	0	7	1	0
Peak Hour Factor	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	20	20	20
Mvmt Flow	0	7	13	10	0	0	9	0	0	10	1	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.4	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	88%	24%	0%	0%
Vol Thru, %	12%	43%	100%	17%
Vol Right, %	0%	33%	0%	83%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	21	6	6
LT Vol	7	5	0	0
Through Vol	1	9	6	1
RT Vol	0	7	0	5
Lane Flow Rate	12	31	9	9
Geometry Grp	1	1	1	1
Degree of Util (X)	0.015	0.035	0.011	0.009
Departure Headway (Hd)	4.491	4.13	4.298	3.817
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	798	869	834	937
Service Time	2.513	2.144	2.317	1.843
HCM Lane V/C Ratio	0.015	0.036	0.011	0.01
HCM Control Delay	7.6	7.3	7.4	6.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.1	0	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	1	5
Future Vol, veh/h	0	0	1	5
Peak Hour Factor	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	20	20	20
Mvmt Flow	0	0	1	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	6.9
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	2	2	15	0	0	0	0	0	0	3	11
Future Vol, veh/h	0	2	2	15	0	0	0	0	0	0	3	11
Peak Hour Factor	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77
Heavy Vehicles, %	2	16	16	16	2	2	2	2	2	26	26	26
Mvmt Flow	0	3	3	19	0	0	0	0	0	0	4	14
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	6.9	7
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	11%	10%
Vol Thru, %	21%	11%	90%
Vol Right, %	79%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	14	19	10
LT Vol	0	2	1
Through Vol	3	2	9
RT Vol	11	15	0
Lane Flow Rate	18	25	13
Geometry Grp	1	1	1
Degree of Util (X)	0.02	0.026	0.016
Departure Headway (Hd)	3.924	3.774	4.419
Convergence, Y/N	Yes	Yes	Yes
Cap	915	950	813
Service Time	1.935	1.789	2.43
HCM Lane V/C Ratio	0.02	0.026	0.016
HCM Control Delay	7	6.9	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	1	9	0
Future Vol, veh/h	0	1	9	0
Peak Hour Factor	0.95	0.77	0.77	0.77
Heavy Vehicles, %	2	26	26	26
Mvmt Flow	0	1	12	0
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	7	3	1	0	5	1	0
Future Vol, veh/h	0	0	0	0	0	7	3	1	0	5	1	0
Peak Hour Factor	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	27	27	27	2	2	2	2
Mvmt Flow	0	0	0	0	0	9	4	1	0	6	1	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	7.5	7.2
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	83%	64%	0%
Vol Thru, %	17%	27%	60%
Vol Right, %	0%	9%	40%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	6	11	5
LT Vol	5	7	0
Through Vol	1	3	3
RT Vol	0	1	2
Lane Flow Rate	8	14	6
Geometry Grp	1	1	1
Degree of Util (X)	0.009	0.017	0.007
Departure Headway (Hd)	4.129	4.457	3.723
Convergence, Y/N	Yes	Yes	Yes
Cap	870	807	964
Service Time	2.14	2.463	1.735
HCM Lane V/C Ratio	0.009	0.017	0.006
HCM Control Delay	7.2	7.5	6.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	3	2
Future Vol, veh/h	0	0	3	2
Peak Hour Factor	0.95	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	4	3
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	4	0	0	0	0	0	4	0	0
Future Vol, veh/h	0	0	0	4	0	0	0	0	0	4	0	0
Peak Hour Factor	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	26	26	26
Mvmt Flow	0	0	0	9	0	0	0	0	0	9	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	6.7	0	7.6
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	4	0	1
LT Vol	4	0	0	0
Through Vol	0	0	0	1
RT Vol	0	4	0	0
Lane Flow Rate	9	9	0	2
Geometry Grp	1	1	1	1
Degree of Util (X)	0.011	0.009	0	0.003
Departure Headway (Hd)	4.56	3.659	4.266	4.365
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	982	0	824
Service Time	2.562	1.667	2.275	2.369
HCM Lane V/C Ratio	0.011	0.009	0	0.002
HCM Control Delay	7.6	6.7	7.3	7.4
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0	0	0	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	1	0
Future Vol, veh/h	0	0	1	0
Peak Hour Factor	0.95	0.45	0.45	0.45
Heavy Vehicles, %	2	26	26	26
Mvmt Flow	0	0	2	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	143	31	134	0	9	7	0
Future Vol, veh/h	0	0	0	0	0	143	31	134	0	9	7	0
Peak Hour Factor	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	4	4	4	2	4	4	4	2	16	16	16
Mvmt Flow	0	0	0	0	0	207	45	194	0	13	10	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	12.7	8.9
HCM LOS	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	56%	46%	0%
Vol Thru, %	44%	10%	17%
Vol Right, %	0%	44%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	16	308	159
LT Vol	9	143	0
Through Vol	7	31	27
RT Vol	0	134	132
Lane Flow Rate	23	446	230
Geometry Grp	1	1	1
Degree of Util (X)	0.036	0.548	0.304
Departure Headway (Hd)	5.628	4.42	4.743
Convergence, Y/N	Yes	Yes	Yes
Cap	633	812	756
Service Time	3.695	2.456	2.791
HCM Lane V/C Ratio	0.036	0.549	0.304
HCM Control Delay	8.9	12.7	9.9
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.1	3.4	1.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	27	132
Future Vol, veh/h	0	0	27	132
Peak Hour Factor	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	16	16	16
Mvmt Flow	0	0	39	191
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	9.9
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	1	13	0	0	0	0	0	0	15	0
Future Vol, veh/h	0	1	1	13	0	0	0	0	0	0	15	0
Peak Hour Factor	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63
Heavy Vehicles, %	2	15	15	15	2	2	2	2	2	16	16	16
Mvmt Flow	0	2	2	21	0	0	0	0	0	0	24	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	7.4	7.6
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	7%	1%
Vol Thru, %	100%	7%	99%
Vol Right, %	0%	87%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	15	15	170
LT Vol	0	1	1
Through Vol	15	1	169
RT Vol	0	13	0
Lane Flow Rate	24	24	270
Geometry Grp	1	1	1
Degree of Util (X)	0.029	0.029	0.317
Departure Headway (Hd)	4.416	4.316	4.232
Convergence, Y/N	Yes	Yes	Yes
Cap	801	835	850
Service Time	2.498	2.316	2.255
HCM Lane V/C Ratio	0.03	0.029	0.318
HCM Control Delay	7.6	7.4	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	1.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	1	169	0
Future Vol, veh/h	0	1	169	0
Peak Hour Factor	0.95	0.63	0.63	0.63
Heavy Vehicles, %	2	16	16	16
Mvmt Flow	0	2	268	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.2
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	8	0	4	110	9	0	13	5	0
Future Vol, veh/h	0	0	10	8	0	4	110	9	0	13	5	0
Peak Hour Factor	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	2	2	2
Mvmt Flow	0	0	11	9	0	5	125	10	0	15	6	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	8.7	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	72%	0%	3%	3%
Vol Thru, %	28%	56%	89%	8%
Vol Right, %	0%	44%	7%	89%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	18	123	182
LT Vol	13	0	4	5
Through Vol	5	10	110	15
RT Vol	0	8	9	162
Lane Flow Rate	20	20	140	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.027	0.026	0.179	0.22
Departure Headway (Hd)	4.672	4.605	4.614	3.824
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	779	766	943
Service Time	2.682	2.623	2.709	1.827
HCM Lane V/C Ratio	0.026	0.026	0.183	0.22
HCM Control Delay	7.8	7.7	8.7	7.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.6	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	5	15	162
Future Vol, veh/h	0	5	15	162
Peak Hour Factor	0.95	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	6	17	184
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.9
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	2	3	7	0	2	124	2	0	6	0	0
Future Vol, veh/h	0	2	3	7	0	2	124	2	0	6	0	0
Peak Hour Factor	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	20	20	20
Mvmt Flow	0	3	4	10	0	3	182	3	0	9	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	8.6	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	17%	2%	0%
Vol Thru, %	0%	25%	97%	0%
Vol Right, %	0%	58%	2%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	12	128	15
LT Vol	6	2	2	0
Through Vol	0	3	124	0
RT Vol	0	7	2	15
Lane Flow Rate	9	18	188	22
Geometry Grp	1	1	1	1
Degree of Util (X)	0.012	0.02	0.225	0.025
Departure Headway (Hd)	4.943	4.119	4.302	4.127
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	728	860	836	873
Service Time	2.943	2.187	2.323	2.127
HCM Lane V/C Ratio	0.012	0.021	0.225	0.025
HCM Control Delay	8	7.3	8.6	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.1	0.9	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	0	15
Future Vol, veh/h	0	0	0	15
Peak Hour Factor	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	20	20	20
Mvmt Flow	0	0	0	22
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	4	6	6	0	0	0	0	0	0	2	2
Future Vol, veh/h	0	4	6	6	0	0	0	0	0	0	2	2
Peak Hour Factor	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77
Heavy Vehicles, %	2	16	16	16	2	2	2	2	2	26	26	26
Mvmt Flow	0	5	8	8	0	0	0	0	0	0	3	3
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	7.5	7.3
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	25%	2%
Vol Thru, %	50%	38%	98%
Vol Right, %	50%	38%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	4	16	127
LT Vol	0	4	3
Through Vol	2	6	124
RT Vol	2	6	0
Lane Flow Rate	5	21	165
Geometry Grp	1	1	1
Degree of Util (X)	0.006	0.025	0.201
Departure Headway (Hd)	4.201	4.401	4.387
Convergence, Y/N	Yes	Yes	Yes
Cap	845	818	820
Service Time	2.261	2.401	2.401
HCM Lane V/C Ratio	0.006	0.026	0.201
HCM Control Delay	7.3	7.5	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.1	0.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	3	124	0
Future Vol, veh/h	0	3	124	0
Peak Hour Factor	0.95	0.77	0.77	0.77
Heavy Vehicles, %	2	26	26	26
Mvmt Flow	0	4	161	0
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	117	7	17	0	2	4	0
Future Vol, veh/h	0	0	0	0	0	117	7	17	0	2	4	0
Peak Hour Factor	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	27	27	27	2	2	2	2
Mvmt Flow	0	0	0	0	0	148	9	22	0	3	5	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	8.8	7.5
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	33%	83%	0%
Vol Thru, %	67%	5%	40%
Vol Right, %	0%	12%	60%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	6	141	20
LT Vol	2	117	0
Through Vol	4	7	8
RT Vol	0	17	12
Lane Flow Rate	8	178	25
Geometry Grp	1	1	1
Degree of Util (X)	0.009	0.224	0.028
Departure Headway (Hd)	4.468	4.511	4.023
Convergence, Y/N	Yes	Yes	Yes
Cap	806	798	895
Service Time	2.469	2.525	2.023
HCM Lane V/C Ratio	0.01	0.223	0.028
HCM Control Delay	7.5	8.8	7.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.9	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	8	12
Future Vol, veh/h	0	0	8	12
Peak Hour Factor	0.95	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	10	15
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	7.1
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	3	0	4	0	0	0	7	0	0
Future Vol, veh/h	0	0	0	3	0	4	0	0	0	7	0	0
Peak Hour Factor	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45
Heavy Vehicles, %	2	20	20	20	2	20	20	20	2	26	26	26
Mvmt Flow	0	0	0	7	0	9	0	0	0	16	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	6.7	7.5	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%
Vol Thru, %	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	3	4	0
LT Vol	7	0	4	0
Through Vol	0	0	0	0
RT Vol	0	3	0	0
Lane Flow Rate	16	7	9	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.02	0.007	0.011	0
Departure Headway (Hd)	4.569	3.674	4.473	4.381
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	787	976	803	0
Service Time	2.577	1.689	2.486	2.394
HCM Lane V/C Ratio	0.02	0.007	0.011	0
HCM Control Delay	7.7	6.7	7.5	7.4
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.1	0	0	0

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	0	0
Future Vol, veh/h	0	0	0	0
Peak Hour Factor	0.95	0.45	0.45	0.45
Heavy Vehicles, %	2	26	26	26
Mvmt Flow	0	0	0	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	0
HCM LOS	-

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	3	4	35	0	209	5	0
Future Vol, veh/h	0	0	0	0	0	3	4	35	0	209	5	0
Peak Hour Factor	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	4	6	51	0	303	7	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	7.8	10.2
HCM LOS	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	98%	7%	0%
Vol Thru, %	2%	10%	11%
Vol Right, %	0%	83%	89%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	214	42	46
LT Vol	209	3	0
Through Vol	5	4	5
RT Vol	0	35	41
Lane Flow Rate	310	61	67
Geometry Grp	1	1	1
Degree of Util (X)	0.381	0.075	0.074
Departure Headway (Hd)	4.423	4.448	4.002
Convergence, Y/N	Yes	Yes	Yes
Cap	809	810	899
Service Time	2.478	2.451	2.011
HCM Lane V/C Ratio	0.383	0.075	0.075
HCM Control Delay	10.2	7.8	7.3
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.8	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	5	41
Future Vol, veh/h	0	0	5	41
Peak Hour Factor	0.95	0.69	0.69	0.69
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	7	59
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	3	2	116	0	0	0	0	0	0	207	2	0	4	9	0
Future Vol, veh/h	0	3	2	116	0	0	0	0	0	0	207	2	0	4	9	0
Peak Hour Factor	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63	0.95	0.63	0.63	0.63
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	5	3	184	0	0	0	0	0	0	329	3	0	6	14	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	10.8	8.1
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	2%	31%
Vol Thru, %	99%	2%	69%
Vol Right, %	1%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	209	121	13
LT Vol	0	3	4
Through Vol	207	2	9
RT Vol	2	116	0
Lane Flow Rate	332	192	21
Geometry Grp	1	1	1
Degree of Util (X)	0.417	0.231	0.028
Departure Headway (Hd)	4.522	4.337	4.942
Convergence, Y/N	Yes	Yes	Yes
Cap	796	830	724
Service Time	2.547	2.358	2.977
HCM Lane V/C Ratio	0.417	0.231	0.029
HCM Control Delay	10.8	8.7	8.1
HCM Lane LOS	B	A	A
HCM 95th-tile Q	2.1	0.9	0.1

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	1	17	24	0	56	16	206	0	17	4	26	0	100	13	5
Future Vol, veh/h	0	1	17	24	0	56	16	206	0	17	4	26	0	100	13	5
Peak Hour Factor	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88	0.95	0.88	0.88	0.88
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	1	19	27	0	64	18	234	0	19	5	30	0	114	15	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	9.7	8.2	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	2%	20%	85%
Vol Thru, %	9%	40%	6%	11%
Vol Right, %	55%	57%	74%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	42	278	118
LT Vol	17	1	56	100
Through Vol	4	17	16	13
RT Vol	26	24	206	5
Lane Flow Rate	53	48	316	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.071	0.06	0.369	0.189
Departure Headway (Hd)	4.787	4.549	4.2	5.076
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	746	786	856	705
Service Time	2.832	2.585	2.222	3.116
HCM Lane V/C Ratio	0.071	0.061	0.369	0.19
HCM Control Delay	8.2	7.9	9.7	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	1.7	0.7

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	126	9	7	0	0	6	0	0	7	1	0	0	0	1	263
Future Vol, veh/h	0	126	9	7	0	0	6	0	0	7	1	0	0	0	1	263
Peak Hour Factor	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	185	13	10	0	0	9	0	0	10	1	0	0	0	1	387
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	8.3	8.4	10.2
HCM LOS	B	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	88%	89%	0%	0%
Vol Thru, %	12%	6%	100%	0%
Vol Right, %	0%	5%	0%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	142	6	264
LT Vol	7	126	0	0
Through Vol	1	9	6	1
RT Vol	0	7	0	263
Lane Flow Rate	12	209	9	388
Geometry Grp	1	1	1	1
Degree of Util (X)	0.017	0.294	0.013	0.438
Departure Headway (Hd)	5.23	5.075	5.207	4.065
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	683	706	684	885
Service Time	3.273	3.121	3.264	2.085
HCM Lane V/C Ratio	0.018	0.296	0.013	0.438
HCM Control Delay	8.4	10.2	8.3	10.2
HCM Lane LOS	A	B	A	B
HCM 95th-tile Q	0.1	1.2	0	2.3

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	2	2	15	0	0	0	0	0	0	3	11	0	112	9	0
Future Vol, veh/h	0	2	2	15	0	0	0	0	0	0	3	11	0	112	9	0
Peak Hour Factor	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77	0.95	0.77	0.77	0.77
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	3	3	19	0	0	0	0	0	0	4	14	0	145	12	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.1	6.9	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	11%	93%
Vol Thru, %	21%	11%	7%
Vol Right, %	79%	79%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	14	19	121
LT Vol	0	2	112
Through Vol	3	2	9
RT Vol	11	15	0
Lane Flow Rate	18	25	157
Geometry Grp	1	1	1
Degree of Util (X)	0.019	0.027	0.188
Departure Headway (Hd)	3.759	3.92	4.312
Convergence, Y/N	Yes	Yes	Yes
Cap	945	896	834
Service Time	1.81	2.018	2.325
HCM Lane V/C Ratio	0.019	0.028	0.188
HCM Control Delay	6.9	7.1	8.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.1	0.7

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	0	0	7	3	53	0	5	1	0	0	0	114	2
Future Vol, veh/h	0	0	0	0	0	7	3	53	0	5	1	0	0	0	114	2
Peak Hour Factor	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79	0.95	0.79	0.79	0.79
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	9	4	67	0	6	1	0	0	0	144	3
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	7.6	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	83%	11%	0%
Vol Thru, %	17%	5%	98%
Vol Right, %	0%	84%	2%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	6	63	116
LT Vol	5	7	0
Through Vol	1	3	114
RT Vol	0	53	2
Lane Flow Rate	8	80	147
Geometry Grp	1	1	1
Degree of Util (X)	0.009	0.085	0.172
Departure Headway (Hd)	4.491	3.856	4.206
Convergence, Y/N	Yes	Yes	Yes
Cap	790	915	852
Service Time	2.555	1.939	2.235
HCM Lane V/C Ratio	0.01	0.087	0.173
HCM Control Delay	7.6	7.3	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.3	0.6

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	115	0	0	0	0	0	56	0	0	0	0	1	0
Future Vol, veh/h	0	0	0	115	0	0	0	0	0	56	0	0	0	0	1	0
Peak Hour Factor	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45	0.95	0.45	0.45	0.45
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	256	0	0	0	0	0	124	0	0	0	0	2	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	0	8.7	7.8
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	100%
Vol Right, %	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	115	0	1
LT Vol	56	0	0	0
Through Vol	0	0	0	1
RT Vol	0	115	0	0
Lane Flow Rate	124	256	0	2
Geometry Grp	1	1	1	1
Degree of Util (X)	0.163	0.269	0	0.003
Departure Headway (Hd)	4.721	3.793	4.633	4.742
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	752	953	0	757
Service Time	2.805	1.793	2.639	2.756
HCM Lane V/C Ratio	0.165	0.269	0	0.003
HCM Control Delay	8.7	8.2	7.6	7.8
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.6	1.1	0	0

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	95	200	13	28	65
Future Vol, veh/h	30	95	200	13	28	65
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, %	10	10	10	10	10	10
Mvmt Flow	32	100	211	14	29	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	224	0	-	0	380	217
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	163	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1299	-	-	-	607	803
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1299	-	-	-	591	803
Mov Cap-2 Maneuver	-	-	-	-	591	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	825	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1299	-	-	-	725
HCM Lane V/C Ratio	0.024	-	-	-	0.135
HCM Control Delay (s)	7.8	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	6.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	0	0	43	0	0
Future Vol, veh/h	92	0	0	43	0	0
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, %	10	10	10	10	10	10
Mvmt Flow	97	0	0	45	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	24	23	0	0	45	0
Stage 1	23	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	972	1031	-	-	1513	-
Stage 1	979	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	972	1031	-	-	1513	-
Mov Cap-2 Maneuver	972	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	972	1513	-
HCM Lane V/C Ratio	-	-	0.1	-	-
HCM Control Delay (s)	-	-	9.1	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	100	168	8	17	39
Future Vol, veh/h	18	100	168	8	17	39
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, %	10	10	10	10	10	10
Mvmt Flow	19	105	177	8	18	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	185	0	-	0	324	181
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1343	-	-	-	654	841
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1343	-	-	-	644	841
Mov Cap-2 Maneuver	-	-	-	-	644	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1343	-	-	-	770
HCM Lane V/C Ratio	0.014	-	-	-	0.077
HCM Control Delay (s)	7.7	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	73	44	21	31	66	155
Future Vol, veh/h	73	44	21	31	66	155
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, %	10	10	10	10	10	10
Mvmt Flow	77	46	22	33	69	163

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	55	0	-	0	238	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1500	-	-	-	733	1012
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1500	-	-	-	694	1012
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1500	-	-	-	890
HCM Lane V/C Ratio	0.051	-	-	-	0.261
HCM Control Delay (s)	7.5	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	143	31	134	0	318	7	0
Future Vol, veh/h	0	0	0	0	0	143	31	134	0	318	7	0
Peak Hour Factor	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	170	37	160	0	379	8	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	15.2	17
HCM LOS	C	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	98%	46%	0%
Vol Thru, %	2%	10%	17%
Vol Right, %	0%	44%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	325	308	159
LT Vol	318	143	0
Through Vol	7	31	27
RT Vol	0	134	132
Lane Flow Rate	387	367	189
Geometry Grp	1	1	1
Degree of Util (X)	0.605	0.557	0.277
Departure Headway (Hd)	5.63	5.473	5.268
Convergence, Y/N	Yes	Yes	Yes
Cap	642	660	681
Service Time	3.666	3.51	3.312
HCM Lane V/C Ratio	0.603	0.556	0.278
HCM Control Delay	17	15.2	10.3
HCM Lane LOS	C	C	B
HCM 95th-tile Q	4.1	3.4	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	27	132
Future Vol, veh/h	0	0	27	132
Peak Hour Factor	0.95	0.84	0.84	0.84
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	32	157
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	10.3
HCM LOS	B

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	1	1	121	0	0	0	0	0	0	324	0	0	1	169	0
Future Vol, veh/h	0	1	1	121	0	0	0	0	0	0	324	0	0	1	169	0
Peak Hour Factor	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68	0.95	0.68	0.68	0.68
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	1	1	178	0	0	0	0	0	0	476	0	0	1	249	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.1	16.3	11
HCM LOS	B	C	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	1%	1%
Vol Thru, %	100%	1%	99%
Vol Right, %	0%	98%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	324	123	170
LT Vol	0	1	1
Through Vol	324	1	169
RT Vol	0	121	0
Lane Flow Rate	476	181	250
Geometry Grp	1	1	1
Degree of Util (X)	0.641	0.26	0.354
Departure Headway (Hd)	4.844	5.17	5.103
Convergence, Y/N	Yes	Yes	Yes
Cap	739	687	697
Service Time	2.918	3.263	3.191
HCM Lane V/C Ratio	0.644	0.263	0.359
HCM Control Delay	16.3	10.1	11
HCM Lane LOS	C	B	B
HCM 95th-tile Q	4.7	1	1.6

Intersection	
Intersection Delay, s/veh	14.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	10	8	0	88	110	318	0	13	5	30	0	113	15	162
Future Vol, veh/h	0	0	10	8	0	88	110	318	0	13	5	30	0	113	15	162
Peak Hour Factor	0.95	0.98	0.98	0.98	0.95	0.98	0.98	0.98	0.95	0.98	0.98	0.98	0.95	0.98	0.98	0.98
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	10	8	0	90	112	324	0	13	5	31	0	115	15	165
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	17.2	9.1	12.2
HCM LOS	A	C	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	0%	17%	39%
Vol Thru, %	10%	56%	21%	5%
Vol Right, %	62%	44%	62%	56%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	18	516	290
LT Vol	13	0	88	113
Through Vol	5	10	110	15
RT Vol	30	8	318	162
Lane Flow Rate	49	18	527	296
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.028	0.68	0.433
Departure Headway (Hd)	5.612	5.495	4.648	5.272
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	641	653	769	687
Service Time	3.623	3.515	2.738	3.274
HCM Lane V/C Ratio	0.076	0.028	0.685	0.431
HCM Control Delay	9.1	8.7	17.2	12.2
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.2	0.1	5.4	2.2

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	140	3	7	0	2	124	2	0	6	0	0	0	0	0	408
Future Vol, veh/h	0	140	3	7	0	2	124	2	0	6	0	0	0	0	0	408
Peak Hour Factor	0.95	0.81	0.81	0.81	0.95	0.81	0.81	0.81	0.95	0.81	0.81	0.81	0.95	0.81	0.81	0.81
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	173	4	9	0	2	153	2	0	7	0	0	0	0	0	504
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	10.5	9.1	14.4
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	93%	2%	0%
Vol Thru, %	0%	2%	97%	0%
Vol Right, %	0%	5%	2%	100%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	150	128	408
LT Vol	6	140	2	0
Through Vol	0	3	124	0
RT Vol	0	7	2	408
Lane Flow Rate	7	185	158	504
Geometry Grp	1	1	1	1
Degree of Util (X)	0.012	0.295	0.247	0.617
Departure Headway (Hd)	5.964	5.73	5.616	4.409
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	601	630	643	811
Service Time	3.991	3.736	3.623	2.492
HCM Lane V/C Ratio	0.012	0.294	0.246	0.621
HCM Control Delay	9.1	11.1	10.5	14.4
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0	1.2	1	4.3

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	4	6	6	0	0	0	0	0	0	2	2	0	172	124	0
Future Vol, veh/h	0	4	6	6	0	0	0	0	0	0	2	2	0	172	124	0
Peak Hour Factor	0.95	0.75	0.75	0.75	0.95	0.75	0.75	0.75	0.95	0.75	0.75	0.75	0.95	0.75	0.75	0.75
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	5	8	8	0	0	0	0	0	0	3	3	0	229	165	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8	7.2	10.9
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	25%	58%
Vol Thru, %	50%	38%	42%
Vol Right, %	50%	38%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	4	16	296
LT Vol	0	4	172
Through Vol	2	6	124
RT Vol	2	6	0
Lane Flow Rate	5	21	395
Geometry Grp	1	1	1
Degree of Util (X)	0.006	0.029	0.464
Departure Headway (Hd)	4.214	4.811	4.228
Convergence, Y/N	Yes	Yes	Yes
Cap	853	749	852
Service Time	2.219	2.811	2.249
HCM Lane V/C Ratio	0.006	0.028	0.464
HCM Control Delay	7.2	8	10.9
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0	0.1	2.5

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	0	0	117	7	76	0	2	4	0	0	0	177	12
Future Vol, veh/h	0	0	0	0	0	117	7	76	0	2	4	0	0	0	177	12
Peak Hour Factor	0.95	0.80	0.80	0.80	0.95	0.80	0.80	0.80	0.95	0.80	0.80	0.80	0.95	0.80	0.80	0.80
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	146	9	95	0	3	5	0	0	0	221	15
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	9.7	8.1	9.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	33%	58%	0%
Vol Thru, %	67%	4%	94%
Vol Right, %	0%	38%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	6	200	189
LT Vol	2	117	0
Through Vol	4	7	177
RT Vol	0	76	12
Lane Flow Rate	8	250	236
Geometry Grp	1	1	1
Degree of Util (X)	0.01	0.316	0.305
Departure Headway (Hd)	5.021	4.551	4.642
Convergence, Y/N	Yes	Yes	Yes
Cap	712	790	775
Service Time	3.057	2.572	2.666
HCM Lane V/C Ratio	0.011	0.316	0.305
HCM Control Delay	8.1	9.7	9.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	1.4	1.3

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	172	0	4	0	0	0	66	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	172	0	4	0	0	0	66	0	0	0	0	0	0
Peak Hour Factor	0.95	0.58	0.58	0.58	0.95	0.58	0.58	0.58	0.95	0.58	0.58	0.58	0.95	0.58	0.58	0.58
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	297	0	7	0	0	0	114	0	0	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.9	8.8	0
HCM LOS	A	A	A	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%
Vol Thru, %	0%	0%	0%	100%
Vol Right, %	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	172	4	0
LT Vol	66	0	4	0
Through Vol	0	0	0	0
RT Vol	0	172	0	0
Lane Flow Rate	114	297	7	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0.152	0.311	0.009	0
Departure Headway (Hd)	4.798	3.777	4.844	4.828
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	737	958	742	0
Service Time	2.895	1.777	2.851	2.845
HCM Lane V/C Ratio	0.155	0.31	0.009	0
HCM Control Delay	8.8	8.5	7.9	7.8
HCM Lane LOS	A	A	A	N
HCM 95th-tile Q	0.5	1.3	0	0

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	110	299	15	42	98
Future Vol, veh/h	34	110	299	15	42	98
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, %	10	10	10	10	10	10
Mvmt Flow	36	116	315	16	44	103

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	331	0	-	0	510	323
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1185	-	-	-	509	700
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	826	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1185	-	-	-	493	700
Mov Cap-2 Maneuver	-	-	-	-	493	-
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	800	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1185	-	-	-	622
HCM Lane V/C Ratio	0.03	-	-	-	0.237
HCM Control Delay (s)	8.1	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	141	0	0	49	0	0
Future Vol, veh/h	141	0	0	49	0	0
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, %	10	10	10	10	10	10
Mvmt Flow	148	0	0	52	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	27	26	0	0	52	0
Stage 1	26	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	968	1027	-	-	1504	-
Stage 1	976	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1027	-	-	1504	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1504	-
HCM Lane V/C Ratio	-	-	0.153	-	-
HCM Control Delay (s)	-	-	9.4	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	125	251	9	25	59
Future Vol, veh/h	21	125	251	9	25	59
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, %	10	10	10	10	10	10
Mvmt Flow	22	132	264	9	26	62

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	274	0	-	0	445	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1244	-	-	-	556	751
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	545	751
Mov Cap-2 Maneuver	-	-	-	-	545	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	820	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1244	-	-	-	675
HCM Lane V/C Ratio	0.018	-	-	-	0.131
HCM Control Delay (s)	7.9	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	67	24	35	101	236
Future Vol, veh/h	83	67	24	35	101	236
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, %	10	10	10	10	10	10
Mvmt Flow	87	71	25	37	106	248

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	62	0	-	0	289	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	245	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1491	-	-	-	685	1004
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1491	-	-	-	643	1004
Mov Cap-2 Maneuver	-	-	-	-	643	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1491	-	-	-	859
HCM Lane V/C Ratio	0.059	-	-	-	0.413
HCM Control Delay (s)	7.6	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	2

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	10	10	40	0	10	10	0
Future Vol, veh/h	0	0	0	0	0	10	10	40	0	10	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	11	11	42	0	11	11	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	7.2	7.5
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	50%	17%	0%
Vol Thru, %	50%	17%	17%
Vol Right, %	0%	67%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	60	60
LT Vol	10	10	0
Through Vol	10	10	10
RT Vol	0	40	50
Lane Flow Rate	21	63	63
Geometry Grp	1	1	1
Degree of Util (X)	0.025	0.068	0.065
Departure Headway (Hd)	4.329	3.849	3.696
Convergence, Y/N	Yes	Yes	Yes
Cap	826	929	968
Service Time	2.361	1.878	1.725
HCM Lane V/C Ratio	0.025	0.068	0.065
HCM Control Delay	7.5	7.2	7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	10	50
Future Vol, veh/h	0	0	10	50
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	11	53
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	7
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	30	0	0	0	0	0	0	10	20
Future Vol, veh/h	0	10	10	30	0	0	0	0	0	0	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	32	0	0	0	0	0	0	11	21
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	7.1	6.9
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	20%	50%
Vol Thru, %	33%	20%	50%
Vol Right, %	67%	60%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	50	20
LT Vol	0	10	10
Through Vol	10	10	10
RT Vol	20	30	0
Lane Flow Rate	32	53	21
Geometry Grp	1	1	1
Degree of Util (X)	0.033	0.056	0.025
Departure Headway (Hd)	3.779	3.841	4.287
Convergence, Y/N	Yes	Yes	Yes
Cap	947	933	836
Service Time	1.802	1.863	2.309
HCM Lane V/C Ratio	0.034	0.057	0.025
HCM Control Delay	6.9	7.1	7.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	10	10	0
Future Vol, veh/h	0	10	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	11	11	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	20	30	0	10	20	10	0	20	10	0
Future Vol, veh/h	0	10	20	30	0	10	20	10	0	20	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	21	32	0	11	21	11	0	21	11	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.4	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	17%	25%	25%
Vol Thru, %	33%	33%	50%	50%
Vol Right, %	0%	50%	25%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	60	40	40
LT Vol	20	10	10	10
Through Vol	10	20	20	20
RT Vol	0	30	10	10
Lane Flow Rate	32	63	42	42
Geometry Grp	1	1	1	1
Degree of Util (X)	0.039	0.07	0.048	0.049
Departure Headway (Hd)	4.417	3.962	4.145	4.175
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	897	857	851
Service Time	2.477	2.016	2.202	2.234
HCM Lane V/C Ratio	0.04	0.07	0.049	0.049
HCM Control Delay	7.7	7.3	7.4	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	10	20	10
Future Vol, veh/h	0	10	20	10
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	11	21	11
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	10	0	10	20	10	0	10	10	10
Future Vol, veh/h	0	10	10	10	0	10	20	10	0	10	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	11	0	11	21	11	0	11	11	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.3	7.4	7.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	33%	25%	50%
Vol Thru, %	33%	33%	50%	25%
Vol Right, %	33%	33%	25%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	30	40	40
LT Vol	10	10	10	20
Through Vol	10	10	20	10
RT Vol	10	10	10	10
Lane Flow Rate	32	32	42	42
Geometry Grp	1	1	1	1
Degree of Util (X)	0.036	0.036	0.048	0.049
Departure Headway (Hd)	4.095	4.095	4.121	4.171
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	869	869	864	855
Service Time	2.143	2.144	2.167	2.215
HCM Lane V/C Ratio	0.037	0.037	0.049	0.049
HCM Control Delay	7.3	7.3	7.4	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	20	10	10
Future Vol, veh/h	0	20	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	21	11	11
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	104	10	20	0	0	0	0	0	0	10	20
Future Vol, veh/h	0	104	10	20	0	0	0	0	0	0	10	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	109	11	21	0	0	0	0	0	0	11	21
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	8.4	7.3
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	78%	90%
Vol Thru, %	33%	7%	10%
Vol Right, %	67%	15%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	134	97
LT Vol	0	104	87
Through Vol	10	10	10
RT Vol	20	20	0
Lane Flow Rate	32	141	102
Geometry Grp	1	1	1
Degree of Util (X)	0.036	0.171	0.128
Departure Headway (Hd)	4.122	4.367	4.522
Convergence, Y/N	Yes	Yes	Yes
Cap	874	811	780
Service Time	2.122	2.453	2.621
HCM Lane V/C Ratio	0.037	0.174	0.131
HCM Control Delay	7.3	8.4	8.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.6	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	87	10	0
Future Vol, veh/h	0	87	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	92	11	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.3
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	10	10	87	0	10	104	0
Future Vol, veh/h	0	0	0	0	0	10	10	87	0	10	104	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	11	11	92	0	11	109	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	8	8.4
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	9%	9%	0%
Vol Thru, %	91%	9%	46%
Vol Right, %	0%	81%	54%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	107	191
LT Vol	10	10	0
Through Vol	104	10	87
RT Vol	0	87	104
Lane Flow Rate	120	113	201
Geometry Grp	1	1	1
Degree of Util (X)	0.152	0.135	0.231
Departure Headway (Hd)	4.545	4.305	4.144
Convergence, Y/N	Yes	Yes	Yes
Cap	791	835	873
Service Time	2.56	2.323	2.144
HCM Lane V/C Ratio	0.152	0.135	0.23
HCM Control Delay	8.4	8	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.5	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	87	104
Future Vol, veh/h	0	0	87	104
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	92	109
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	8.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	10	0	0	0	0	0	10	180	0
Future Vol, veh/h	0	10	10	10	0	0	0	0	0	10	180	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	11	0	0	0	0	0	11	189	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8	0	8.7
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	33%	0%	0%
Vol Thru, %	95%	33%	100%	100%
Vol Right, %	0%	33%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	30	0	180
LT Vol	10	10	0	0
Through Vol	180	10	0	180
RT Vol	0	10	0	0
Lane Flow Rate	200	32	0	189
Geometry Grp	1	1	1	1
Degree of Util (X)	0.238	0.042	0	0.225
Departure Headway (Hd)	4.278	4.805	4.985	4.276
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	830	750	0	830
Service Time	2.355	2.805	2.988	2.356
HCM Lane V/C Ratio	0.241	0.043	0	0.228
HCM Control Delay	8.7	8	8	8.6
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.9	0.1	0	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	180	0
Future Vol, veh/h	0	0	180	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	189	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.6
HCM LOS	A

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	150	40	140	0	10	20	0
Future Vol, veh/h	0	0	0	0	0	150	40	140	0	10	20	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	158	42	147	0	11	21	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	10.6	8.4
HCM LOS	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	33%	45%	0%
Vol Thru, %	67%	12%	18%
Vol Right, %	0%	42%	82%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	330	170
LT Vol	10	150	0
Through Vol	20	40	30
RT Vol	0	140	140
Lane Flow Rate	32	347	179
Geometry Grp	1	1	1
Degree of Util (X)	0.045	0.424	0.22
Departure Headway (Hd)	5.162	4.392	4.429
Convergence, Y/N	Yes	Yes	Yes
Cap	693	820	811
Service Time	3.198	2.417	2.455
HCM Lane V/C Ratio	0.046	0.423	0.221
HCM Control Delay	8.4	10.6	8.7
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.1	2.1	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	30	140
Future Vol, veh/h	0	0	30	140
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	32	147
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	8.7
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	30	0	0	0	0	0	0	20	0
Future Vol, veh/h	0	10	10	30	0	0	0	0	0	0	20	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	32	0	0	0	0	0	0	21	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

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

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	20%	6%
Vol Thru, %	100%	20%	94%
Vol Right, %	0%	60%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	50	180
LT Vol	0	10	10
Through Vol	20	10	170
RT Vol	0	30	0
Lane Flow Rate	21	53	189
Geometry Grp	1	1	1
Degree of Util (X)	0.025	0.062	0.221
Departure Headway (Hd)	4.306	4.226	4.19
Convergence, Y/N	Yes	Yes	Yes
Cap	822	853	855
Service Time	2.383	2.226	2.225
HCM Lane V/C Ratio	0.026	0.062	0.221
HCM Control Delay	7.5	7.5	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.2	0.8

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	10	170	0
Future Vol, veh/h	0	10	170	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	11	179	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	10	0	30	120	10	0	20	10	10
Future Vol, veh/h	0	0	10	10	0	30	120	10	0	20	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	11	11	0	32	126	11	0	21	11	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.7	9	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	0%	19%	5%
Vol Thru, %	25%	50%	75%	10%
Vol Right, %	25%	50%	6%	85%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	20	160	200
LT Vol	20	0	30	10
Through Vol	10	10	120	20
RT Vol	10	10	10	170
Lane Flow Rate	42	21	168	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.055	0.026	0.217	0.239
Departure Headway (Hd)	4.698	4.52	4.641	4.079
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	763	792	775	882
Service Time	2.719	2.547	2.663	2.093
HCM Lane V/C Ratio	0.055	0.027	0.217	0.239
HCM Control Delay	8	7.7	9	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.8	0.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	10	20	170
Future Vol, veh/h	0	10	20	170
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	11	21	179
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	10	0	10	130	10	0	10	10	10
Future Vol, veh/h	0	10	10	10	0	10	130	10	0	10	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	11	0	11	137	11	0	11	11	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	8.2	7.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	33%	7%	33%
Vol Thru, %	33%	33%	87%	0%
Vol Right, %	33%	33%	7%	67%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	30	150	30
LT Vol	10	10	10	10
Through Vol	10	10	130	0
RT Vol	10	10	10	20
Lane Flow Rate	32	32	158	32
Geometry Grp	1	1	1	1
Degree of Util (X)	0.039	0.037	0.183	0.037
Departure Headway (Hd)	4.397	4.166	4.177	4.198
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	849	854	858
Service Time	2.398	2.243	2.224	2.199
HCM Lane V/C Ratio	0.039	0.038	0.185	0.037
HCM Control Delay	7.6	7.4	8.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.7	0.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	10	0	20
Future Vol, veh/h	0	10	0	20
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	11	0	21
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	104	10	10	0	0	0	0	0	0	10	10
Future Vol, veh/h	0	104	10	10	0	0	0	0	0	0	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	109	11	11	0	0	0	0	0	0	11	11
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0

Approach	EB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	SB	EB
Conflicting Lanes Left	1	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	8.8	7.5
HCM LOS	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	84%	40%
Vol Thru, %	50%	8%	60%
Vol Right, %	50%	8%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	124	217
LT Vol	0	104	87
Through Vol	10	10	130
RT Vol	10	10	0
Lane Flow Rate	21	131	228
Geometry Grp	1	1	1
Degree of Util (X)	0.025	0.173	0.286
Departure Headway (Hd)	4.353	4.778	4.504
Convergence, Y/N	Yes	Yes	Yes
Cap	824	753	802
Service Time	2.37	2.793	2.515
HCM Lane V/C Ratio	0.025	0.174	0.284
HCM Control Delay	7.5	8.8	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.6	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	87	130	0
Future Vol, veh/h	0	87	130	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	92	137	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	
Conflicting Lanes Left	0
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.3
HCM LOS	A

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	130	10	97	0	10	104	0
Future Vol, veh/h	0	0	0	0	0	130	10	97	0	10	104	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	137	11	102	0	11	109	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	10	9
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	9%	55%	0%
Vol Thru, %	91%	4%	43%
Vol Right, %	0%	41%	57%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	237	201
LT Vol	10	130	0
Through Vol	104	10	87
RT Vol	0	97	114
Lane Flow Rate	120	249	212
Geometry Grp	1	1	1
Degree of Util (X)	0.165	0.326	0.264
Departure Headway (Hd)	4.947	4.704	4.495
Convergence, Y/N	Yes	Yes	Yes
Cap	724	763	798
Service Time	2.989	2.742	2.532
HCM Lane V/C Ratio	0.166	0.326	0.266
HCM Control Delay	9	10	9.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	1.4	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	87	114
Future Vol, veh/h	0	0	87	114
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	92	120
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	9.1
HCM LOS	A

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	10	10	0	10	0	0	0	10	190	0
Future Vol, veh/h	0	10	10	10	0	10	0	0	0	10	190	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	11	0	11	0	0	0	11	200	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.1	8.3	8.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	33%	100%	0%
Vol Thru, %	95%	33%	0%	100%
Vol Right, %	0%	33%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	30	10	180
LT Vol	10	10	10	0
Through Vol	190	10	0	180
RT Vol	0	10	0	0
Lane Flow Rate	211	32	11	189
Geometry Grp	1	1	1	1
Degree of Util (X)	0.251	0.043	0.015	0.226
Departure Headway (Hd)	4.295	4.849	5.214	4.301
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	743	690	820
Service Time	2.388	2.849	3.216	2.399
HCM Lane V/C Ratio	0.256	0.043	0.016	0.23
HCM Control Delay	8.9	8.1	8.3	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.1	0	0.9

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	10	10	40	0	213	10	0
Future Vol, veh/h	0	0	0	0	0	10	10	40	0	213	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	11	11	42	0	224	11	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	7.8	9.3
HCM LOS	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	96%	17%	0%
Vol Thru, %	4%	17%	17%
Vol Right, %	0%	67%	83%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	223	60	60
LT Vol	213	10	0
Through Vol	10	10	10
RT Vol	0	40	50
Lane Flow Rate	235	63	63
Geometry Grp	1	1	1
Degree of Util (X)	0.288	0.077	0.07
Departure Headway (Hd)	4.42	4.384	3.963
Convergence, Y/N	Yes	Yes	Yes
Cap	807	821	908
Service Time	2.474	2.388	1.97
HCM Lane V/C Ratio	0.291	0.077	0.069
HCM Control Delay	9.3	7.8	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.2	0.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	10	50
Future Vol, veh/h	0	0	10	50
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	11	53
Number of Lanes	0	0	1	0

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

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	10	10	125	0	0	0	0	0	0	213	20	0	10	10	0
Future Vol, veh/h	0	10	10	125	0	0	0	0	0	0	213	20	0	10	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	132	0	0	0	0	0	0	224	21	0	11	11	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.1	9.2	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	7%	50%
Vol Thru, %	91%	7%	50%
Vol Right, %	9%	86%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	233	145	20
LT Vol	0	10	10
Through Vol	213	10	10
RT Vol	20	125	0
Lane Flow Rate	245	153	21
Geometry Grp	1	1	1
Degree of Util (X)	0.293	0.177	0.028
Departure Headway (Hd)	4.304	4.184	4.774
Convergence, Y/N	Yes	Yes	Yes
Cap	824	862	752
Service Time	2.393	2.186	2.787
HCM Lane V/C Ratio	0.297	0.177	0.028
HCM Control Delay	9.2	8.1	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.2	0.6	0.1

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	10	20	30	0	65	20	213	0	20	10	26	0	105	20	10
Future Vol, veh/h	0	10	20	30	0	65	20	213	0	20	10	26	0	105	20	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	21	32	0	68	21	224	0	21	11	27	0	111	21	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	9.8	8.4	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	17%	22%	78%
Vol Thru, %	18%	33%	7%	15%
Vol Right, %	46%	50%	71%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	60	298	135
LT Vol	20	10	65	105
Through Vol	10	20	20	20
RT Vol	26	30	213	10
Lane Flow Rate	59	63	314	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.08	0.082	0.373	0.201
Departure Headway (Hd)	4.894	4.663	4.275	5.093
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	729	766	841	702
Service Time	2.946	2.704	2.303	3.139
HCM Lane V/C Ratio	0.081	0.082	0.373	0.202
HCM Control Delay	8.4	8.1	9.8	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	1.7	0.7

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	131	10	10	0	10	20	10	0	10	10	10	0	20	10	268
Future Vol, veh/h	0	131	10	10	0	10	20	10	0	10	10	10	0	20	10	268
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	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	138	11	11	0	11	21	11	0	11	11	11	0	21	11	282
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	8.3	8	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	87%	25%	7%
Vol Thru, %	33%	7%	50%	3%
Vol Right, %	33%	7%	25%	90%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	151	40	298
LT Vol	10	131	10	20
Through Vol	10	10	20	10
RT Vol	10	10	10	268
Lane Flow Rate	32	159	42	314
Geometry Grp	1	1	1	1
Degree of Util (X)	0.042	0.221	0.058	0.357
Departure Headway (Hd)	4.784	4.999	4.925	4.1
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	747	717	725	878
Service Time	2.82	3.037	2.968	2.121
HCM Lane V/C Ratio	0.043	0.222	0.058	0.358
HCM Control Delay	8	9.5	8.3	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.8	0.2	1.6

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	104	10	20	0	0	0	0	0	0	10	20	0	198	10	0
Future Vol, veh/h	0	104	10	20	0	0	0	0	0	0	10	20	0	198	10	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	109	11	21	0	0	0	0	0	0	11	21	0	208	11	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.8	7.5	9.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	78%	95%
Vol Thru, %	33%	7%	5%
Vol Right, %	67%	15%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	134	208
LT Vol	0	104	198
Through Vol	10	10	10
RT Vol	20	20	0
Lane Flow Rate	32	141	219
Geometry Grp	1	1	1
Degree of Util (X)	0.037	0.186	0.283
Departure Headway (Hd)	4.272	4.739	4.648
Convergence, Y/N	Yes	Yes	Yes
Cap	839	759	775
Service Time	2.293	2.755	2.662
HCM Lane V/C Ratio	0.038	0.186	0.283
HCM Control Delay	7.5	8.8	9.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.7	1.2

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	0	0	10	10	139	0	10	104	0	0	0	198	104
Future Vol, veh/h	0	0	0	0	0	10	10	139	0	10	104	0	0	0	198	104
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	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	11	11	146	0	11	109	0	0	0	208	109
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.8	8.8	10.2
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	0%
Vol Thru, %	91%	6%	66%
Vol Right, %	0%	87%	34%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	159	302
LT Vol	10	10	0
Through Vol	104	10	198
RT Vol	0	139	104
Lane Flow Rate	120	167	318
Geometry Grp	1	1	1
Degree of Util (X)	0.161	0.212	0.389
Departure Headway (Hd)	4.828	4.552	4.4
Convergence, Y/N	Yes	Yes	Yes
Cap	742	787	817
Service Time	2.866	2.587	2.43
HCM Lane V/C Ratio	0.162	0.212	0.389
HCM Control Delay	8.8	8.8	10.2
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.6	0.8	1.9

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	10	10	121	0	0	0	0	0	62	180	0	0	0	180	0
Future Vol, veh/h	0	10	10	121	0	0	0	0	0	62	180	0	0	0	180	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	5	11	127	0	0	0	0	0	65	189	0	0	0	189	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	0	10	9.3
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	7%	0%	0%
Vol Thru, %	74%	7%	100%	100%
Vol Right, %	0%	86%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	141	0	180
LT Vol	62	10	0	0
Through Vol	180	10	0	180
RT Vol	0	121	0	0
Lane Flow Rate	255	143	0	189
Geometry Grp	1	1	1	1
Degree of Util (X)	0.331	0.183	0	0.247
Departure Headway (Hd)	4.675	4.604	5.31	4.698
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	779	0	764
Service Time	2.708	2.639	3.361	2.733
HCM Lane V/C Ratio	0.332	0.184	0	0.247
HCM Control Delay	10	8.7	8.4	9.3
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	1.5	0.7	0	1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	153	345	13	28	65
Future Vol, veh/h	30	153	345	13	28	65
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, %	10	10	10	10	10	10
Mvmt Flow	32	161	363	14	29	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	377	0	-	0	594	370
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	224	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1139	-	-	-	455	658
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	795	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1139	-	-	-	441	658
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	770	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1139	-	-	-	573
HCM Lane V/C Ratio	0.028	-	-	-	0.171
HCM Control Delay (s)	8.3	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	6.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	92	0	0	43	0	0
Future Vol, veh/h	92	0	0	43	0	0
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, %	10	10	10	10	10	10
Mvmt Flow	97	0	0	45	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	24	23	0	0	45	0
Stage 1	23	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	972	1031	-	-	1513	-
Stage 1	979	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	972	1031	-	-	1513	-
Mov Cap-2 Maneuver	972	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	972	1513	-
HCM Lane V/C Ratio	-	-	0.1	-	-
HCM Control Delay (s)	-	-	9.1	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	100	168	8	17	39
Future Vol, veh/h	18	100	168	8	17	39
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, %	10	10	10	10	10	10
Mvmt Flow	19	105	177	8	18	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	185	0	-	0	324	181
Stage 1	-	-	-	-	181	-
Stage 2	-	-	-	-	143	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1343	-	-	-	654	841
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	865	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1343	-	-	-	644	841
Mov Cap-2 Maneuver	-	-	-	-	644	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1343	-	-	-	770
HCM Lane V/C Ratio	0.014	-	-	-	0.077
HCM Control Delay (s)	7.7	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	7.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	73	44	21	31	66	155
Future Vol, veh/h	73	44	21	31	66	155
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, %	10	10	10	10	10	10
Mvmt Flow	77	46	22	33	69	163

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	55	0	-	0	238	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	200	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1500	-	-	-	733	1012
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1500	-	-	-	694	1012
Mov Cap-2 Maneuver	-	-	-	-	694	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	SB
HCM Control Delay, s	4.7	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1500	-	-	-	890
HCM Lane V/C Ratio	0.051	-	-	-	0.261
HCM Control Delay (s)	7.5	0	-	-	10.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	180	0
Future Vol, veh/h	0	0	180	0
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	189	0
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.7
HCM LOS	A

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	150	40	140	0	319	20	0
Future Vol, veh/h	0	0	0	0	0	150	40	140	0	319	20	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	158	42	147	0	336	21	0
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0

Approach	WB	NB
Opposing Approach		SB
Opposing Lanes	0	1
Conflicting Approach Left	NB	
Conflicting Lanes Left	1	0
Conflicting Approach Right	SB	WB
Conflicting Lanes Right	1	1
HCM Control Delay	14	15
HCM LOS	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	94%	45%	0%
Vol Thru, %	6%	12%	18%
Vol Right, %	0%	42%	82%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	339	330	170
LT Vol	319	150	0
Through Vol	20	40	30
RT Vol	0	140	140
Lane Flow Rate	357	347	179
Geometry Grp	1	1	1
Degree of Util (X)	0.547	0.516	0.255
Departure Headway (Hd)	5.521	5.347	5.131
Convergence, Y/N	Yes	Yes	Yes
Cap	653	674	700
Service Time	3.549	3.377	3.164
HCM Lane V/C Ratio	0.547	0.515	0.256
HCM Control Delay	15	14	9.9
HCM Lane LOS	B	B	A
HCM 95th-tile Q	3.3	3	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	0	30	140
Future Vol, veh/h	0	0	30	140
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10
Mvmt Flow	0	0	32	147
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	
Conflicting Lanes Right	0
HCM Control Delay	9.9
HCM LOS	A

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	10	10	138	0	0	0	0	0	0	329	0	0	10	170	0
Future Vol, veh/h	0	10	10	138	0	0	0	0	0	0	329	0	0	10	170	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	145	0	0	0	0	0	0	346	0	0	11	179	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	11.6	9.6
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	6%	6%
Vol Thru, %	100%	6%	94%
Vol Right, %	0%	87%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	329	158	180
LT Vol	0	10	10
Through Vol	329	10	170
RT Vol	0	138	0
Lane Flow Rate	346	166	189
Geometry Grp	1	1	1
Degree of Util (X)	0.452	0.222	0.257
Departure Headway (Hd)	4.703	4.808	4.888
Convergence, Y/N	Yes	Yes	Yes
Cap	762	743	731
Service Time	2.747	2.86	2.94
HCM Lane V/C Ratio	0.454	0.223	0.259
HCM Control Delay	11.6	9.2	9.6
HCM Lane LOS	B	A	A
HCM 95th-tile Q	2.4	0.8	1

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	0	10	10	0	114	120	319	0	20	10	40	0	118	20	170
Future Vol, veh/h	0	0	10	10	0	114	120	319	0	20	10	40	0	118	20	170
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	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	11	11	0	120	126	336	0	21	11	42	0	124	21	179
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	24.8	9.8	14
HCM LOS	A	C	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	0%	21%	38%
Vol Thru, %	14%	50%	22%	6%
Vol Right, %	57%	50%	58%	55%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	20	553	308
LT Vol	20	0	114	118
Through Vol	10	10	120	20
RT Vol	40	10	319	170
Lane Flow Rate	74	21	582	324
Geometry Grp	1	1	1	1
Degree of Util (X)	0.122	0.034	0.8	0.499
Departure Headway (Hd)	5.953	5.813	4.946	5.539
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	601	613	733	652
Service Time	4.008	3.872	2.978	3.579
HCM Lane V/C Ratio	0.123	0.034	0.794	0.497
HCM Control Delay	9.8	9.1	24.8	14
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.4	0.1	8.2	2.8

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	148	10	10	0	10	130	10	0	10	10	10	0	10	0	413
Future Vol, veh/h	0	148	10	10	0	10	130	10	0	10	10	10	0	10	0	413
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	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	156	11	11	0	11	137	11	0	11	11	11	0	11	0	435
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.8	10.2	8.8	12.8
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	88%	7%	2%
Vol Thru, %	33%	6%	87%	0%
Vol Right, %	33%	6%	7%	98%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	168	150	423
LT Vol	10	148	10	10
Through Vol	10	10	130	0
RT Vol	10	10	10	413
Lane Flow Rate	32	177	158	445
Geometry Grp	1	1	1	1
Degree of Util (X)	0.048	0.276	0.241	0.547
Departure Headway (Hd)	5.497	5.625	5.494	4.426
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	653	642	657	806
Service Time	3.518	3.632	3.502	2.506
HCM Lane V/C Ratio	0.049	0.276	0.24	0.552
HCM Control Delay	8.8	10.8	10.2	12.8
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.2	1.1	0.9	3.4

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	104	10	10	0	0	0	0	0	0	10	10	0	256	130	0
Future Vol, veh/h	0	104	10	10	0	0	0	0	0	0	10	10	0	256	130	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	109	11	11	0	0	0	0	0	0	11	10	0	269	137	0
Number of Lanes	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.5	7.7	12.4
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	84%	66%
Vol Thru, %	50%	8%	34%
Vol Right, %	50%	8%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	20	124	386
LT Vol	0	104	256
Through Vol	10	10	130
RT Vol	10	10	0
Lane Flow Rate	21	131	406
Geometry Grp	1	1	1
Degree of Util (X)	0.026	0.189	0.517
Departure Headway (Hd)	4.578	5.212	4.58
Convergence, Y/N	Yes	Yes	Yes
Cap	781	689	788
Service Time	2.614	3.243	2.6
HCM Lane V/C Ratio	0.027	0.19	0.515
HCM Control Delay	7.7	9.5	12.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.1	0.7	3

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	0	0	0	0	130	10	156	0	10	104	0	0	0	256	114
Future Vol, veh/h	0	0	0	0	0	130	10	156	0	10	104	0	0	0	256	114
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	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	0	0	0	0	137	11	164	0	11	109	0	0	0	269	120
Number of Lanes	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	12.1	9.7	13.3
HCM LOS	B	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	9%	44%	0%
Vol Thru, %	91%	3%	69%
Vol Right, %	0%	53%	31%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	114	296	370
LT Vol	10	130	0
Through Vol	104	10	256
RT Vol	0	156	114
Lane Flow Rate	120	312	389
Geometry Grp	1	1	1
Degree of Util (X)	0.183	0.438	0.525
Departure Headway (Hd)	5.489	5.065	4.854
Convergence, Y/N	Yes	Yes	Yes
Cap	658	704	736
Service Time	3.489	3.158	2.935
HCM Lane V/C Ratio	0.182	0.443	0.529
HCM Control Delay	9.7	12.1	13.3
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.7	2.2	3.1

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕				↕	
Traffic Vol, veh/h	0	10	10	179	0	10	0	0	0	69	190	0	0	0	180	0
Future Vol, veh/h	0	10	10	179	0	10	0	0	0	69	190	0	0	0	180	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	10	10	10	2	10	10	10	2	10	10	10	2	10	10	10
Mvmt Flow	0	11	11	188	0	11	0	0	0	73	200	0	0	0	189	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	8.9	10.8	9.7
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	5%	100%	0%
Vol Thru, %	73%	5%	0%	100%
Vol Right, %	0%	90%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	259	199	10	180
LT Vol	69	10	10	0
Through Vol	190	10	0	180
RT Vol	0	179	0	0
Lane Flow Rate	273	209	11	189
Geometry Grp	1	1	1	1
Degree of Util (X)	0.37	0.272	0.017	0.259
Departure Headway (Hd)	4.88	4.668	5.686	4.928
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	733	765	624	724
Service Time	2.938	2.723	3.768	2.991
HCM Lane V/C Ratio	0.372	0.273	0.018	0.261
HCM Control Delay	10.8	9.5	8.9	9.7
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	1.1	0.1	1

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	172	463	15	42	98
Future Vol, veh/h	34	172	463	15	42	98
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, %	10	10	10	10	10	10
Mvmt Flow	36	181	487	16	44	103

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	503	0	-	0	748	495
Stage 1	-	-	-	-	495	-
Stage 2	-	-	-	-	253	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1021	-	-	-	369	559
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	771	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1021	-	-	-	355	559
Mov Cap-2 Maneuver	-	-	-	-	355	-
Stage 1	-	-	-	-	596	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1021	-	-	-	477
HCM Lane V/C Ratio	0.035	-	-	-	0.309
HCM Control Delay (s)	8.7	0	-	-	15.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.3

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	141	0	0	49	0	0
Future Vol, veh/h	141	0	0	49	0	0
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, %	10	10	10	10	10	10
Mvmt Flow	148	0	0	52	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	27	26	0	0	52	0
Stage 1	26	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.5	6.3	-	-	4.2	-
Critical Hdwy Stg 1	5.5	-	-	-	-	-
Critical Hdwy Stg 2	5.5	-	-	-	-	-
Follow-up Hdwy	3.59	3.39	-	-	2.29	-
Pot Cap-1 Maneuver	968	1027	-	-	1504	-
Stage 1	976	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	968	1027	-	-	1504	-
Mov Cap-2 Maneuver	968	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1504	-
HCM Lane V/C Ratio	-	-	0.153	-	-
HCM Control Delay (s)	-	-	9.4	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	125	251	9	25	59
Future Vol, veh/h	21	125	251	9	25	59
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, %	10	10	10	10	10	10
Mvmt Flow	22	132	264	9	26	62

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	274	0	-	0	445	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	176	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1244	-	-	-	556	751
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	545	751
Mov Cap-2 Maneuver	-	-	-	-	545	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	820	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1244	-	-	-	675
HCM Lane V/C Ratio	0.018	-	-	-	0.131
HCM Control Delay (s)	7.9	0	-	-	11.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	83	67	24	35	101	236
Future Vol, veh/h	83	67	24	35	101	236
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, %	10	10	10	10	10	10
Mvmt Flow	87	71	25	37	106	248

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	62	0	-	0	289	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	245	-
Critical Hdwy	4.2	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.29	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1491	-	-	-	685	1004
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	777	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1491	-	-	-	643	1004
Mov Cap-2 Maneuver	-	-	-	-	643	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	730	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1491	-	-	-	859
HCM Lane V/C Ratio	0.059	-	-	-	0.413
HCM Control Delay (s)	7.6	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	2

APPENDIX C- SIGNAL WARRANTS

FEHR PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

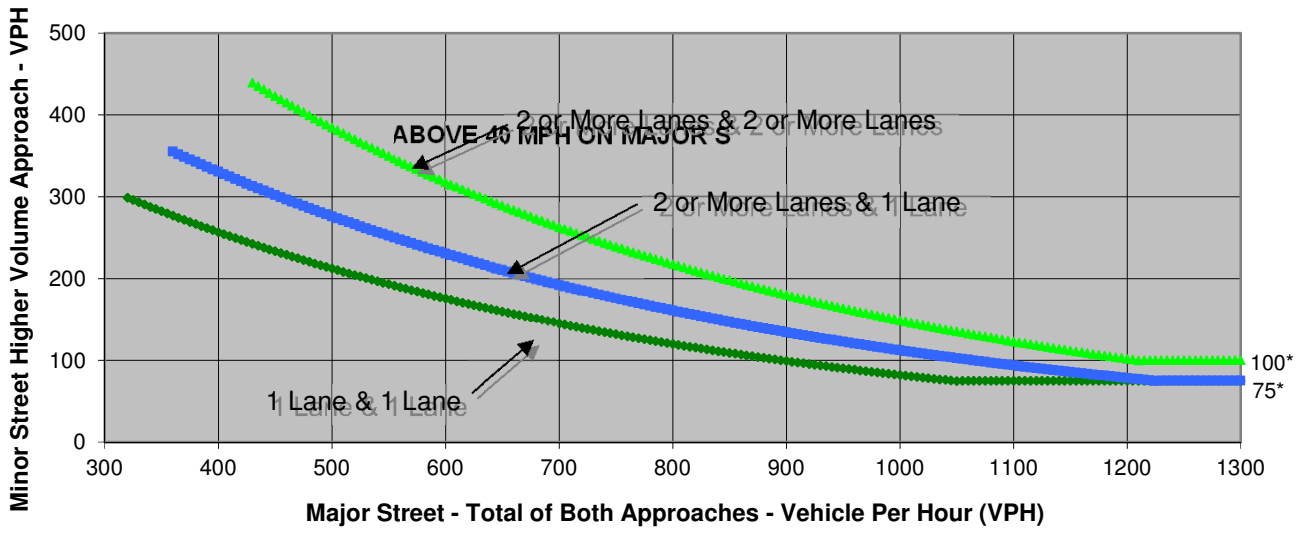
Turn Movement Volumes

	NB	SB	EB	WB
Left	209	0	0	3
Through	5	5	0	4
Right	0	41	0	35
Total	214	46	0	42

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Minneola Road	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**260**	**42**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

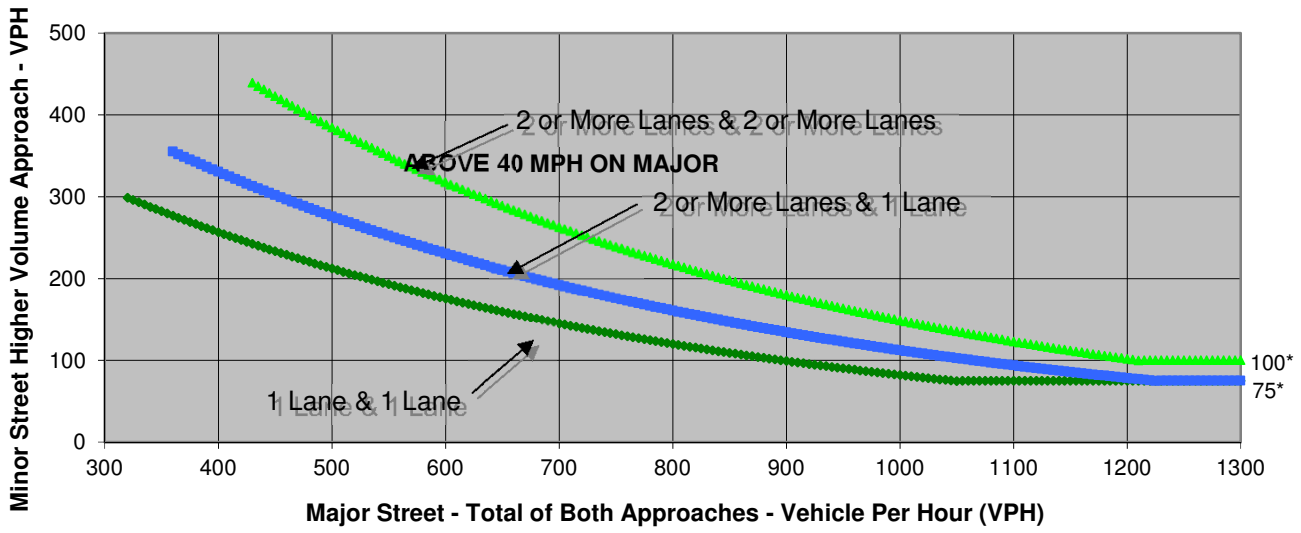
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	3	0
Through	207	9	2	0
Right	2	0	116	0
Total	209	13	121	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**222**	**121**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

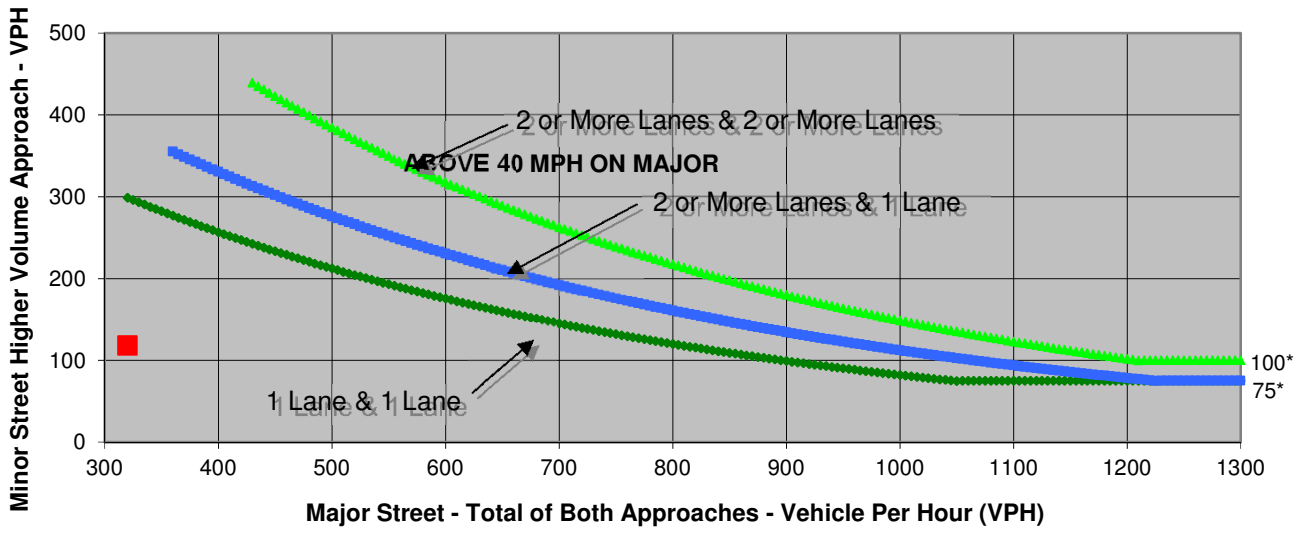
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	100	1	56
Through	4	13	17	16
Right	26	5	24	206
Total	47	118	42	278

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Minneola Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**320**	**118**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

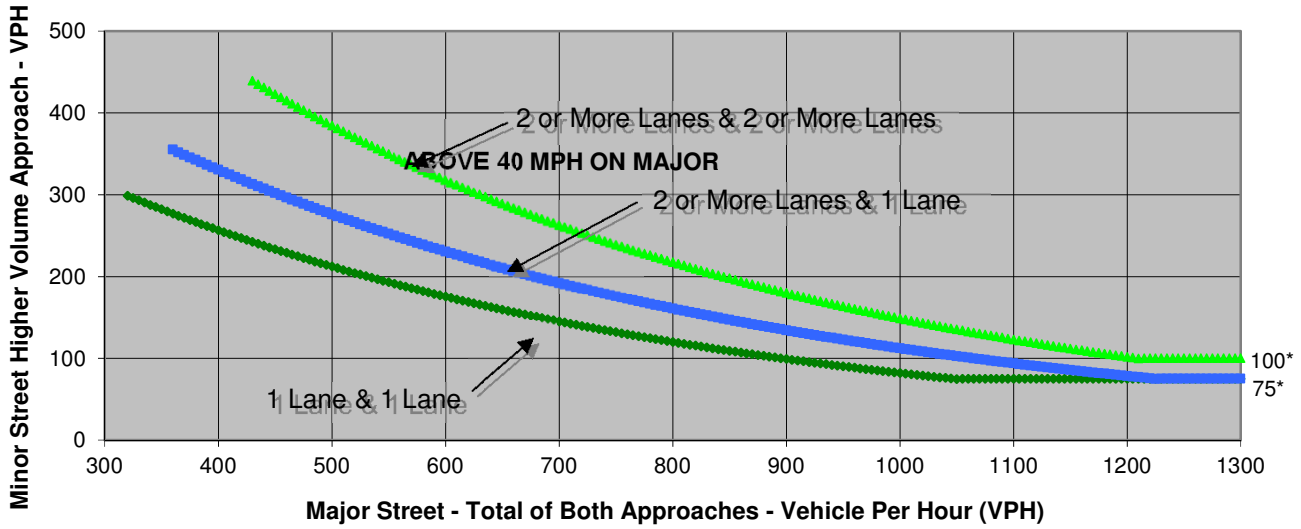
Turn Movement Volumes

	NB	SB	EB	WB
Left	7	0	126	0
Through	1	1	9	6
Right	0	263	7	0
Total	8	264	142	6

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**148**	**264**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

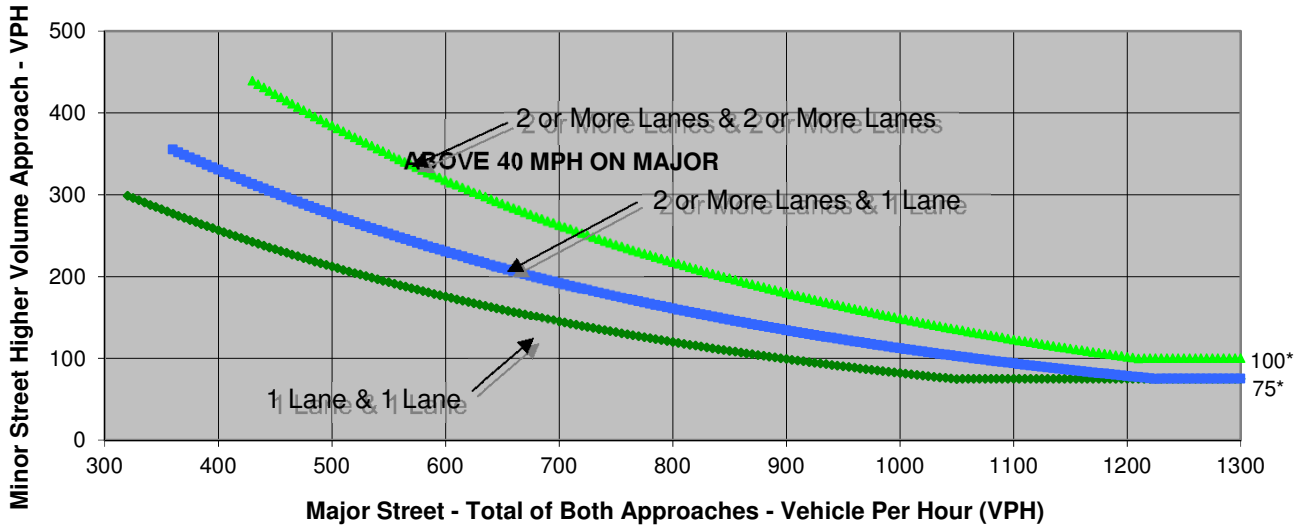
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	112	2	0
Through	3	9	2	0
Right	11	0	15	0
Total	14	121	19	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 NB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**135**	**19**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

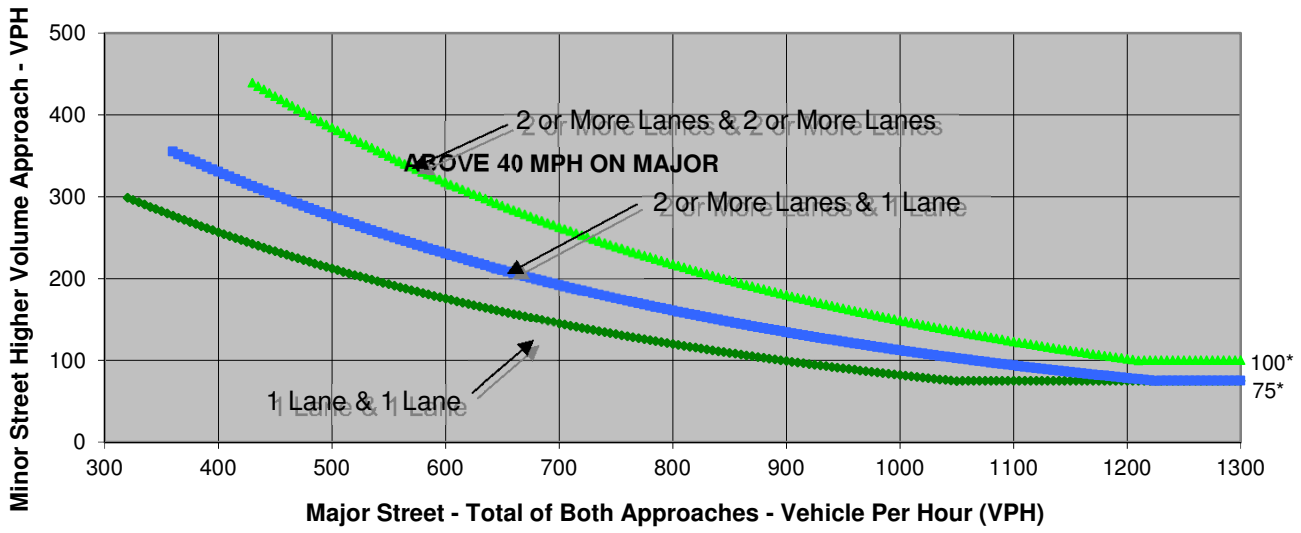
Turn Movement Volumes

	NB	SB	EB	WB
Left	5	0	0	7
Through	1	114	0	3
Right	0	2	0	53
Total	6	116	0	63

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	I-15 SB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**122**	**63**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

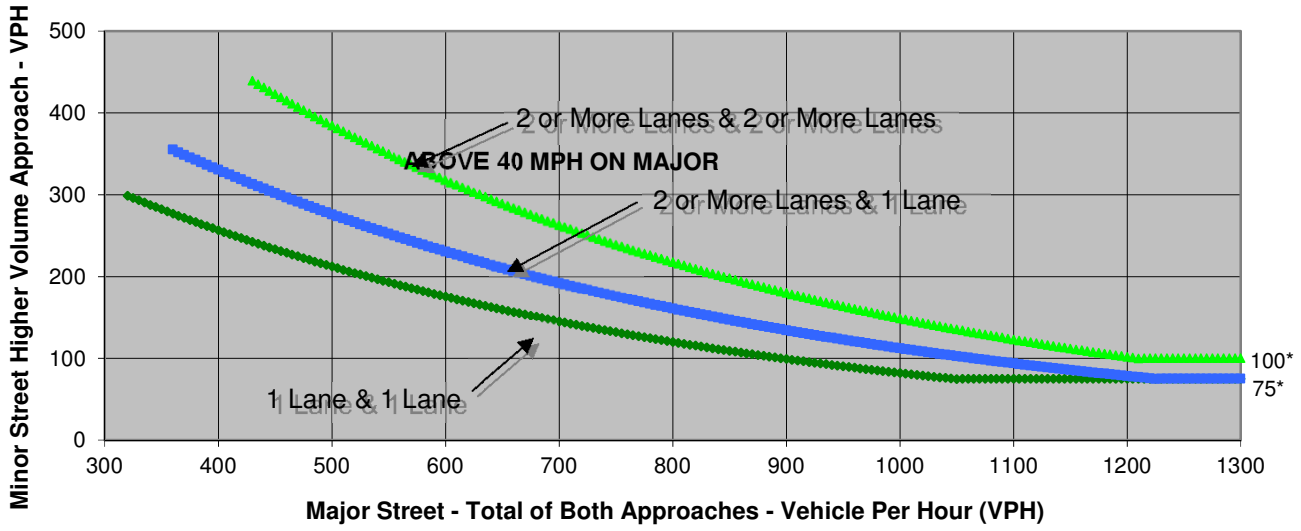
Turn Movement Volumes

	NB	SB	EB	WB
Left	56	0	0	0
Through	0	1	0	0
Right	0	0	115	0
Total	56	1	115	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**57**	**115**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Hacienda Road
Minor Street	Bragdon Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

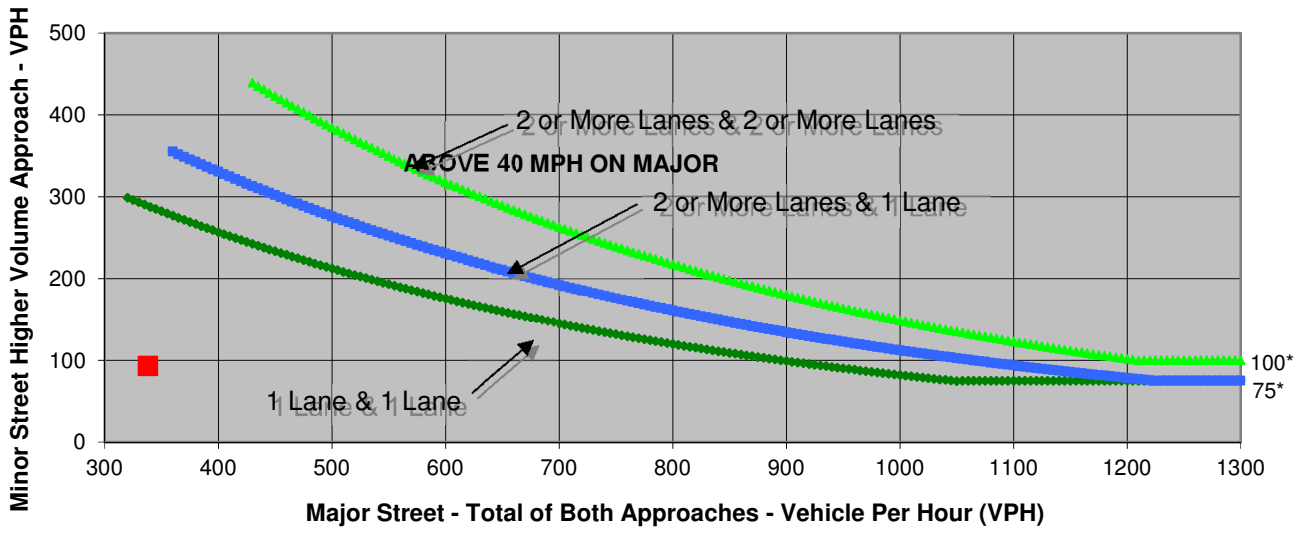
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	28	30	0
Through	0	0	95	200
Right	0	65	0	13
Total	0	93	125	213

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Hacienda Road	Minor Street Bragdon Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**338**	**93**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 1

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

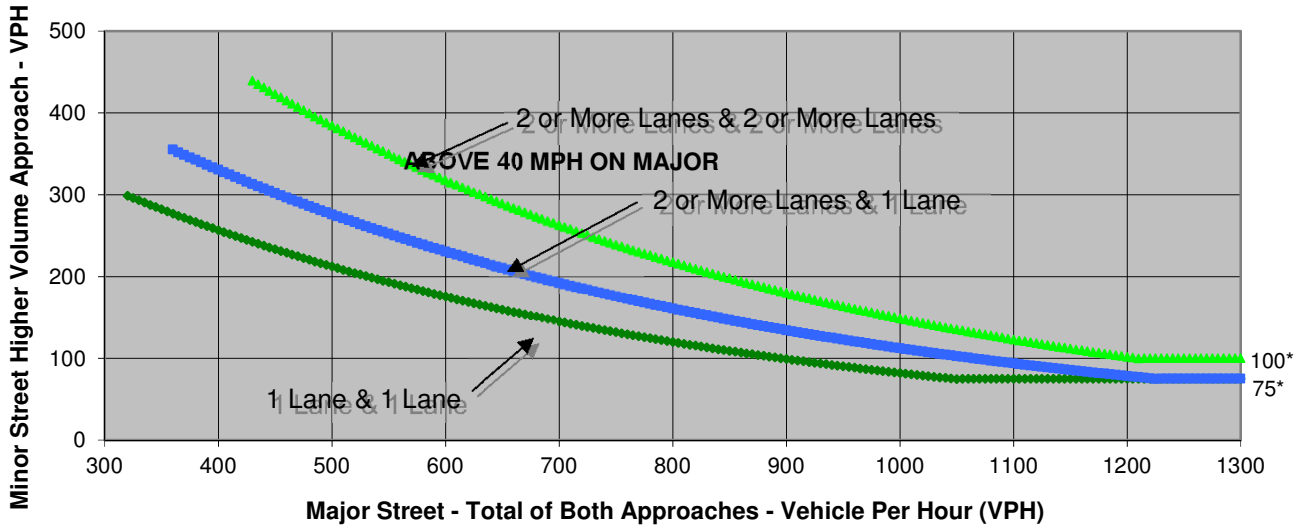
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	92
Through	0	0	0	0
Right	43	0	0	0
Total	43	0	0	92

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 1	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**43**	**92**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 2

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	PM Peak Hour

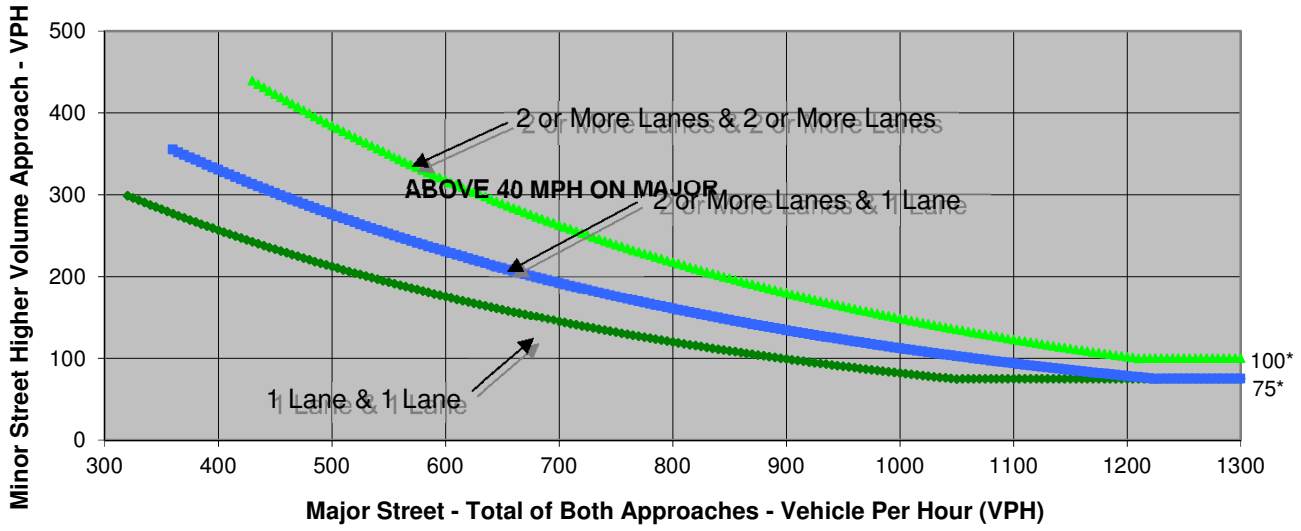
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	18	0
Through	0	0	100	168
Right	0	39	0	8
Total	0	56	118	176

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 2	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**56**	**176**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Project Dolores Lake TIA
Scenario Existing (2017) Plus Project
Peak Hour PM Peak Hour

Major Street Bragdon Road
Minor Street Project Driveway 3

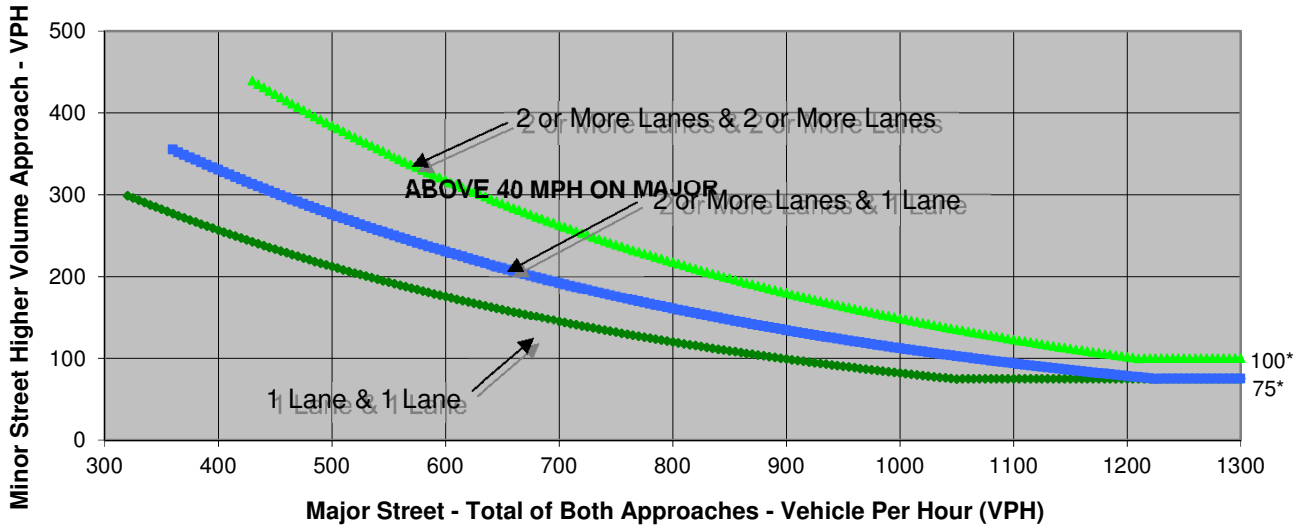
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	66	73	0
Through	0	0	44	21
Right	0	155	0	31
Total	0	221	117	52

Major Street Direction

x North/South
East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 3	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**221**	**117**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

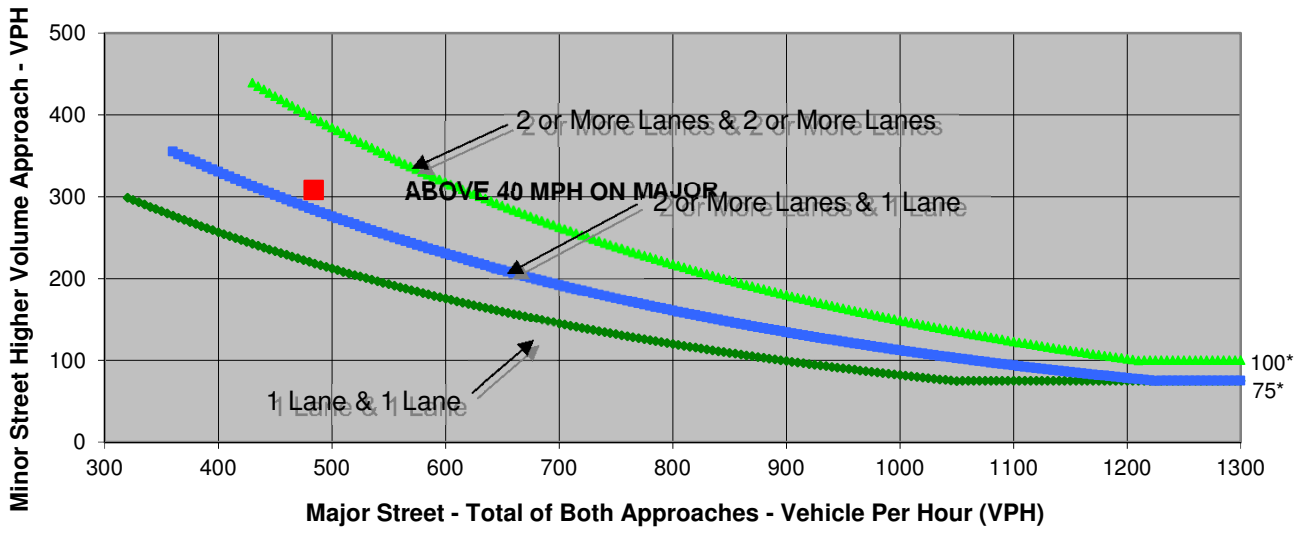
Turn Movement Volumes

	NB	SB	EB	WB
Left	318	0	0	143
Through	7	27	0	31
Right	0	132	0	134
Total	325	159	0	308

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 SB Ramps	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**484**	**308**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

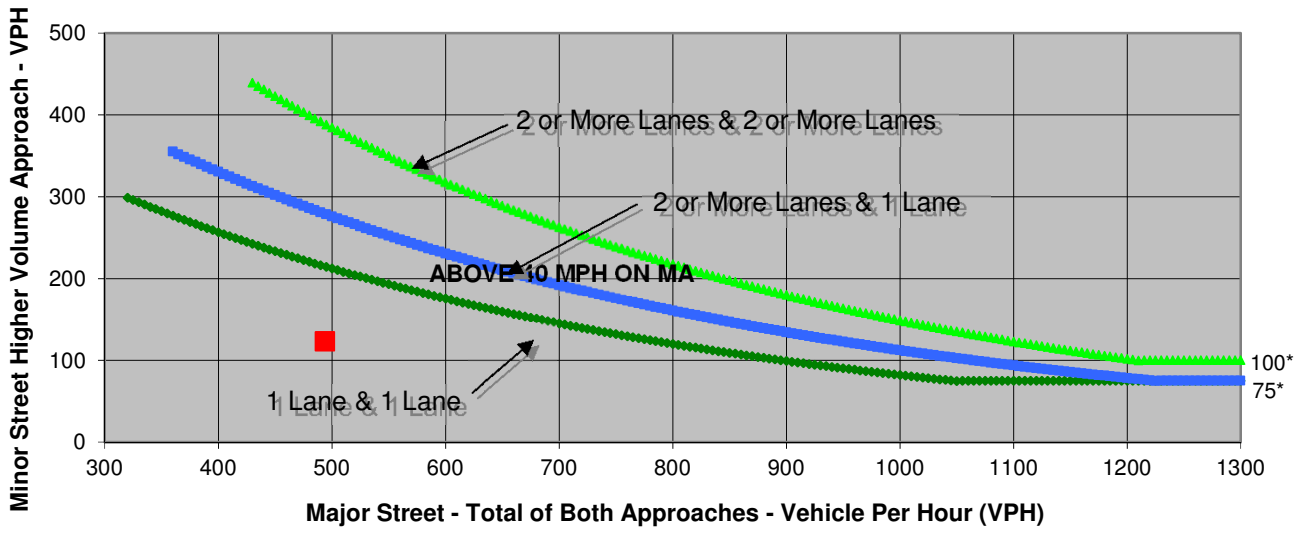
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	1	0
Through	324	169	1	0
Right	0	0	121	0
Total	324	170	123	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Minneola Road	Minor Street I-15 NB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**494**	**123**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

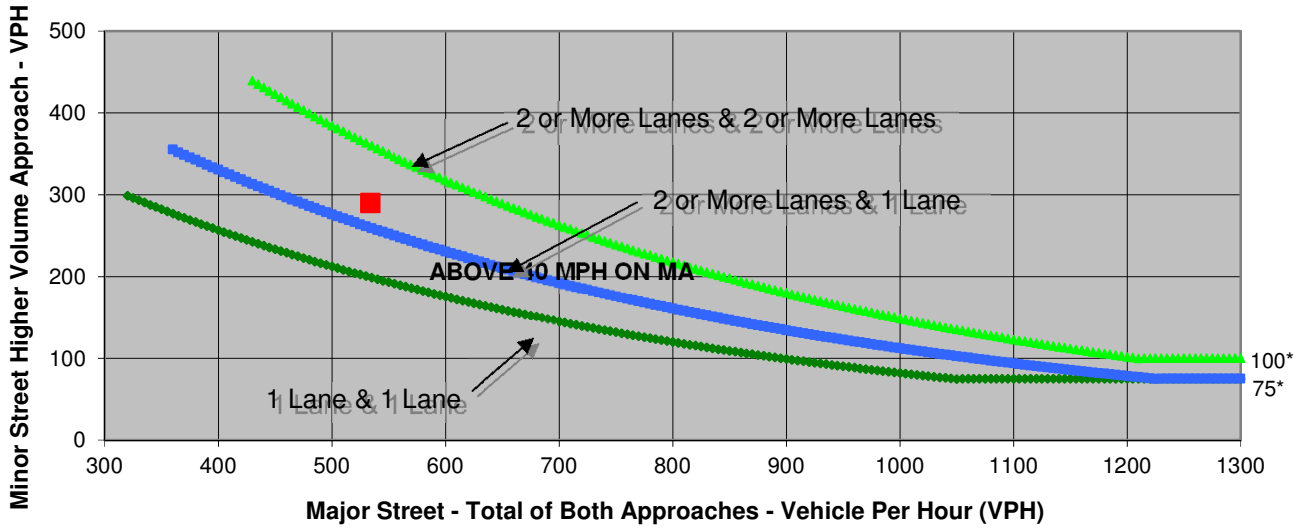
Turn Movement Volumes

	NB	SB	EB	WB
Left	13	113	0	88
Through	5	15	10	110
Right	30	162	8	318
Total	48	290	18	516

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Yermo Road	Minor Street Minneola Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**534**	**290**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

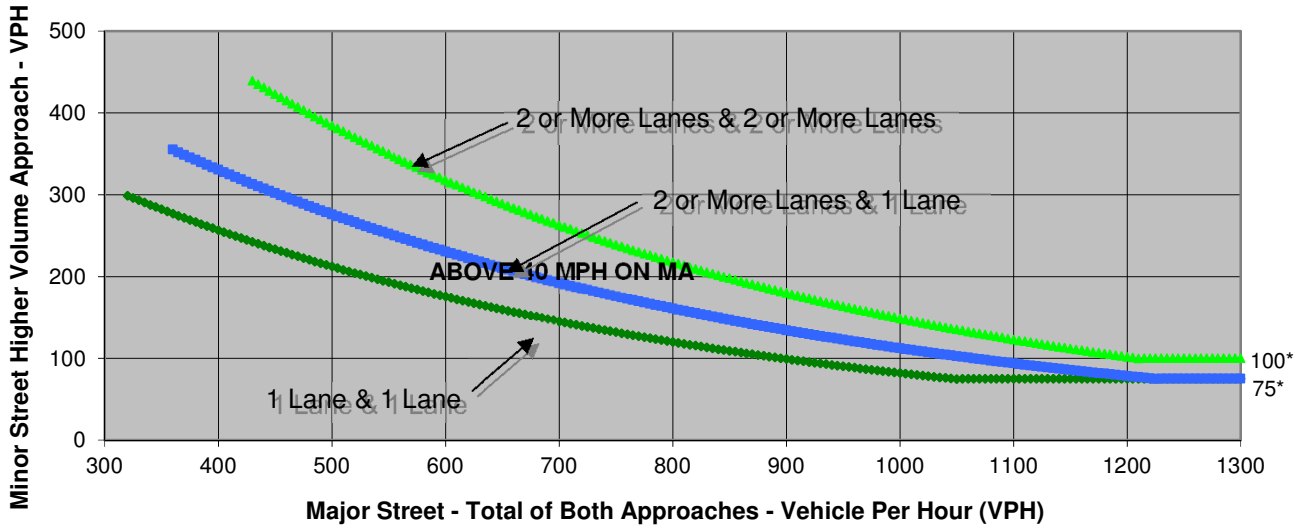
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	0	140	2
Through	0	0	3	124
Right	0	408	7	2
Total	6	408	150	128

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**278**	**408**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

Turn Movement Volumes

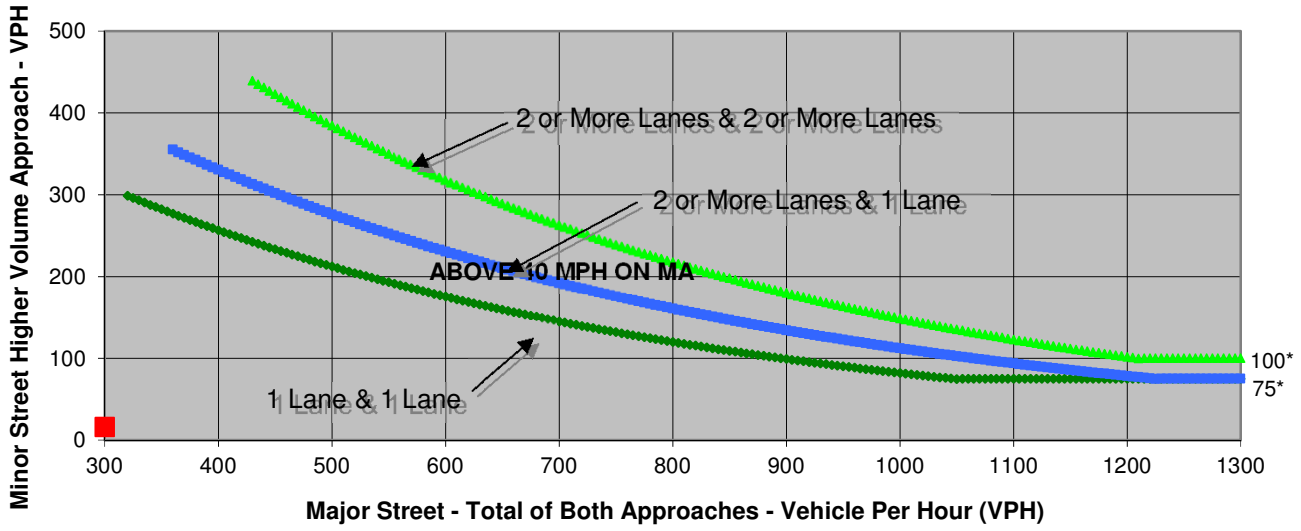
	NB	SB	EB	WB
Left	0	172	4	0
Through	2	124	6	0
Right	2	0	6	0
Total	4	296	16	0

Major Street Direction

x North/South

East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**300**	**16**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

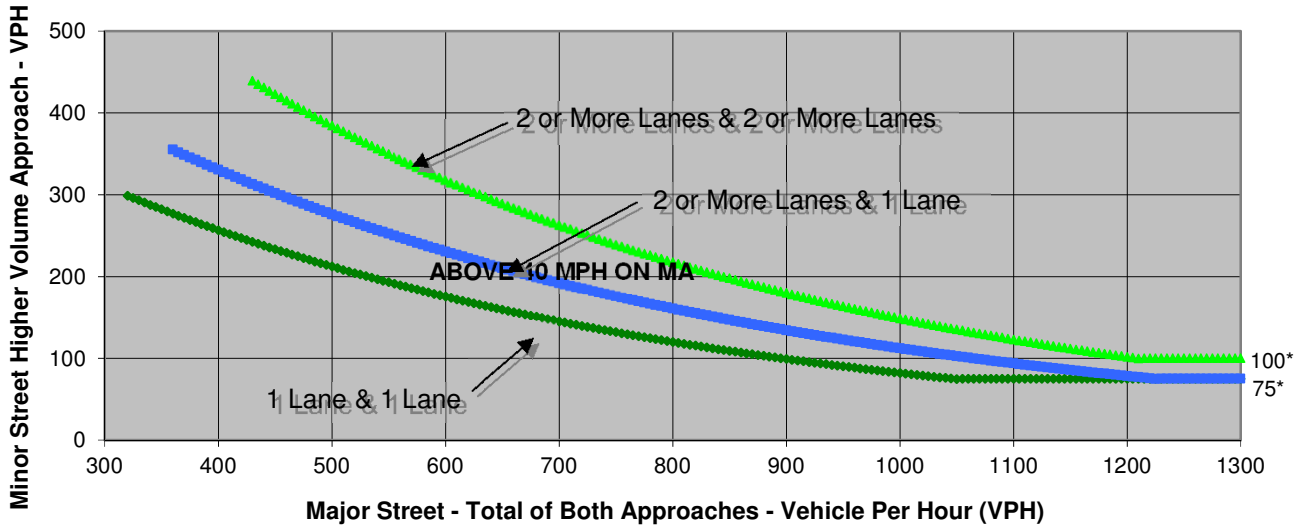
Turn Movement Volumes

	NB	SB	EB	WB
Left	2	0	0	117
Through	4	177	0	7
Right	0	12	0	76
Total	6	189	0	200

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**195**	**200**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

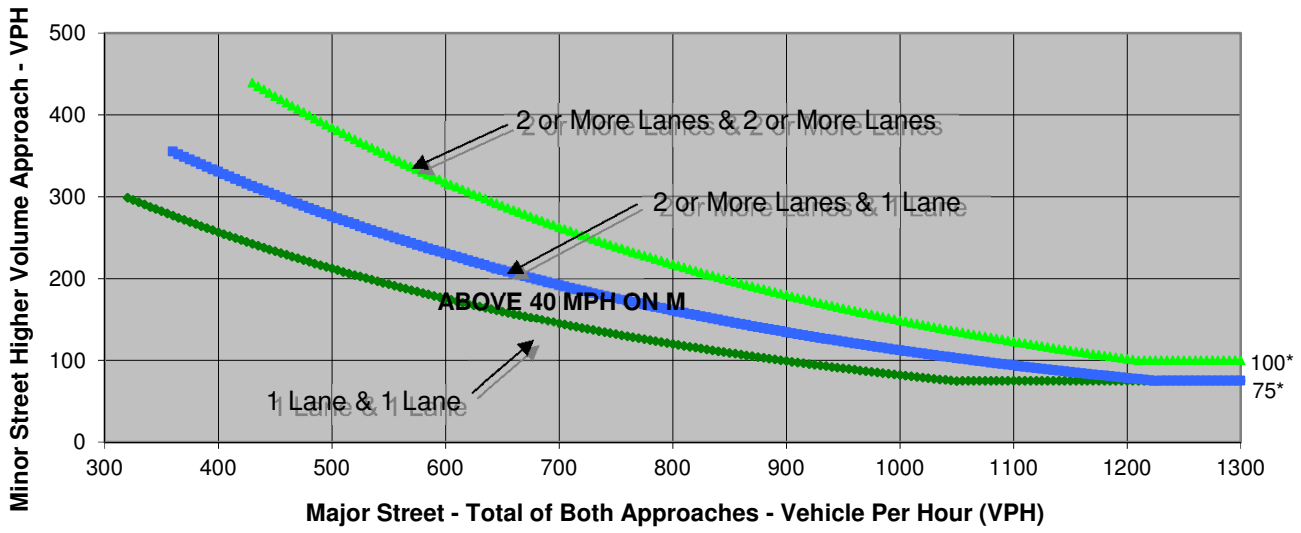
Turn Movement Volumes

	NB	SB	EB	WB
Left	66	0	0	4
Through	0	0	0	0
Right	0	0	172	0
Total	66	0	172	4

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**66**	**172**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Hacienda Road
Minor Street	Bragdon Road
Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

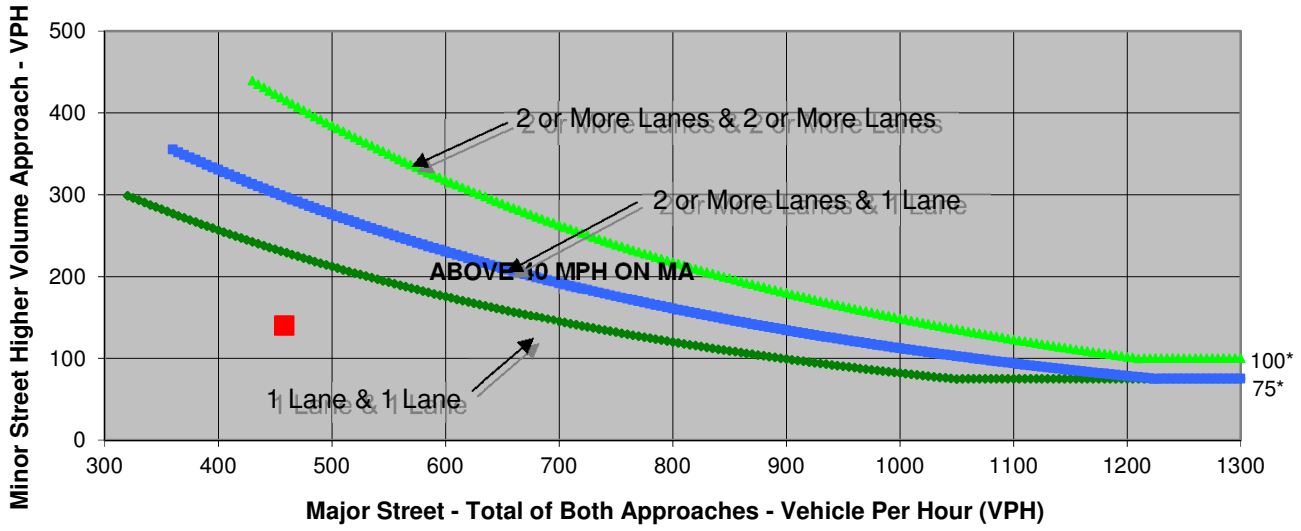
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	42	34	0
Through	0	0	110	299
Right	0	98	0	15
Total	0	140	144	314

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Hacienda Road	Minor Street Bragdon Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**458**	**140**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 1

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

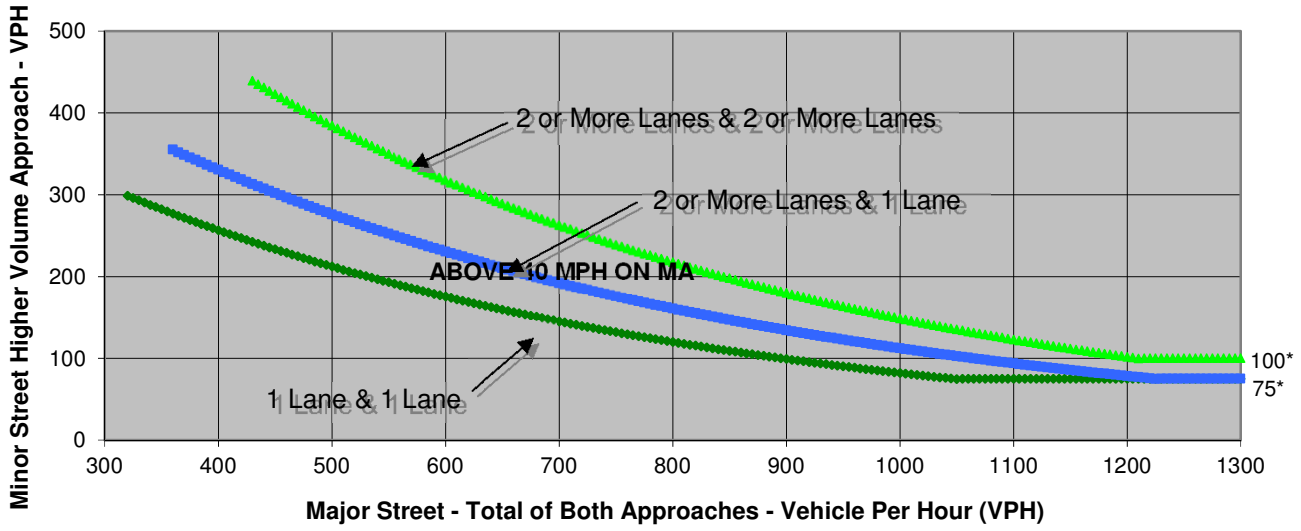
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	141
Through	0	0	0	0
Right	49	0	0	0
Total	49	0	0	141

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 1	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**49**	**141**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 2

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

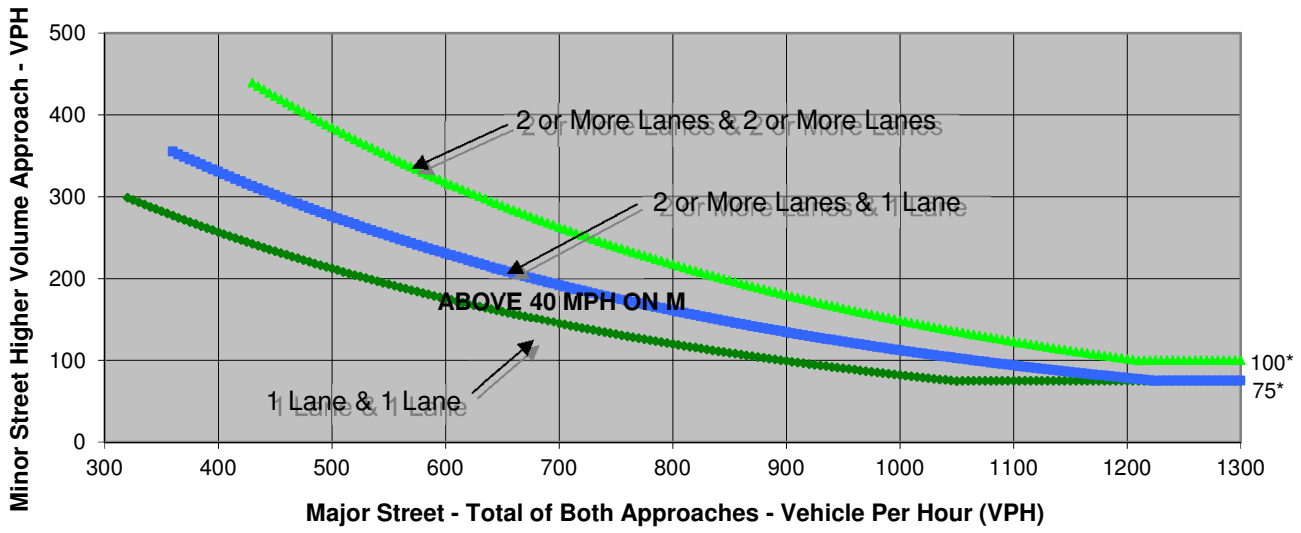
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	25	21	0
Through	0	0	125	251
Right	0	59	0	9
Total	0	84	146	260

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 2	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**84**	**260**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 3

Project	Dolores Lake TIA
Scenario	Existing (2017) Plus Project
Peak Hour	Weekend Peak Hour

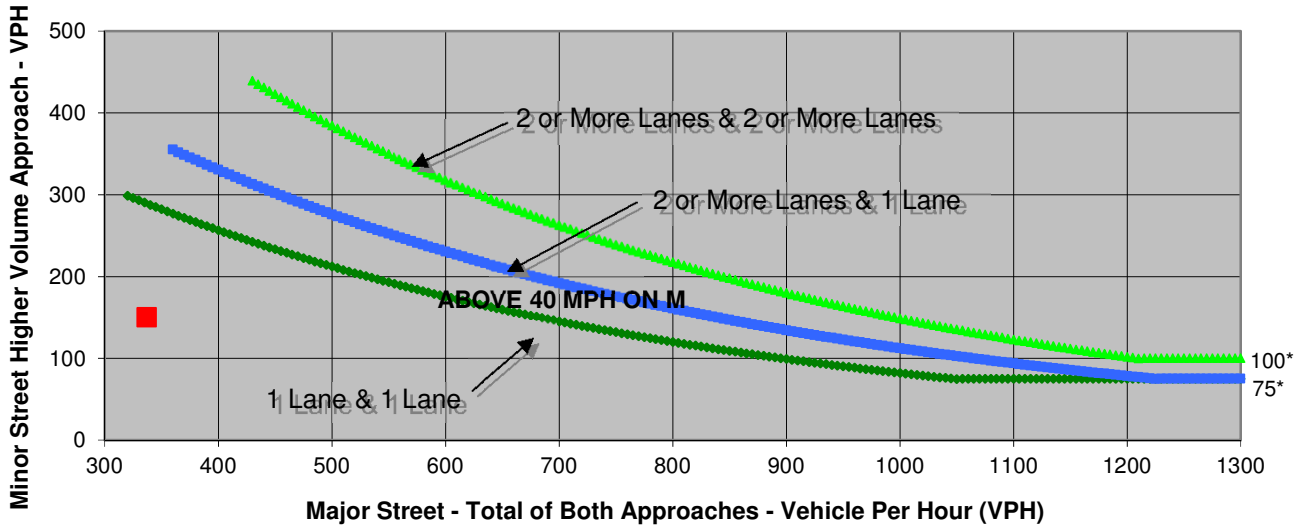
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	101	83	0
Through	0	0	67	24
Right	0	236	0	35
Total	0	337	150	59

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 3	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**337**	**150**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Project Dolores Lake TIA
Scenario Cumulative Plus Related Projects
Peak Hour PM Peak Hour

Major Street Minneola Road
Minor Street I-15 SB Ramps

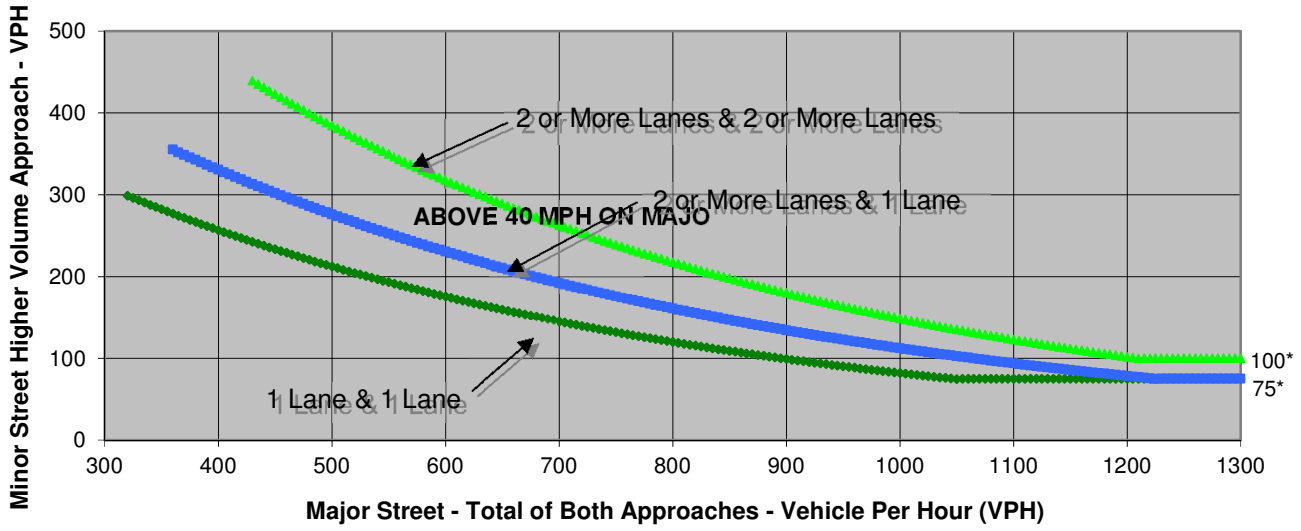
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	10	10	0	10
Right	0	50	0	40
Total	20	60	0	60

Major Street Direction

x North/South
East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 SB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**80**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

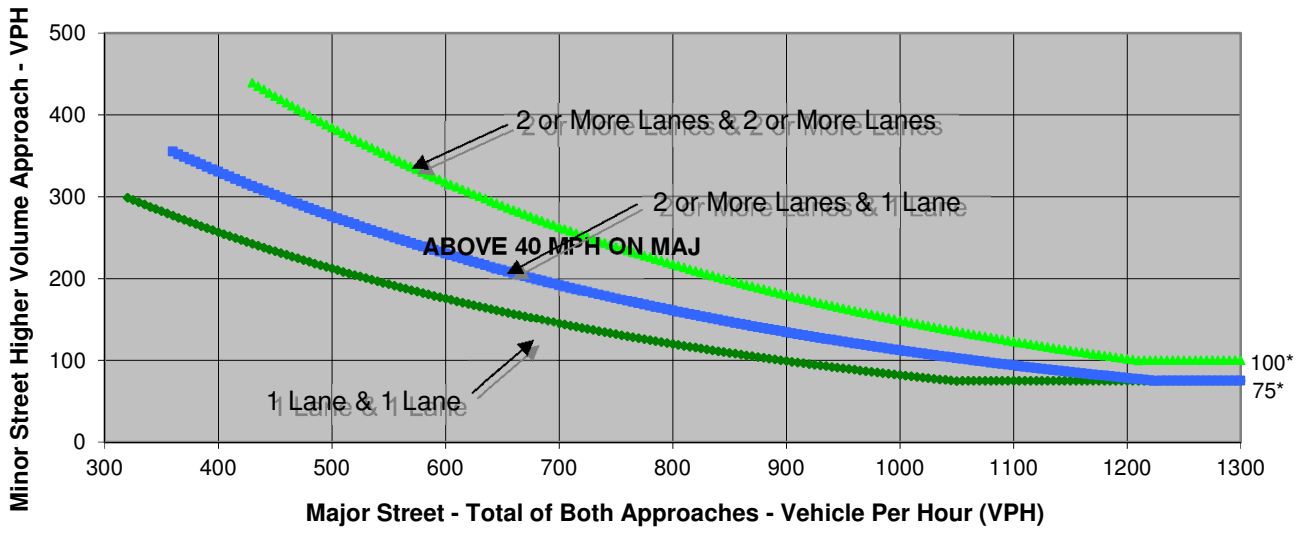
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	10	0
Through	10	10	10	0
Right	20	0	30	0
Total	30	20	50	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**50**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

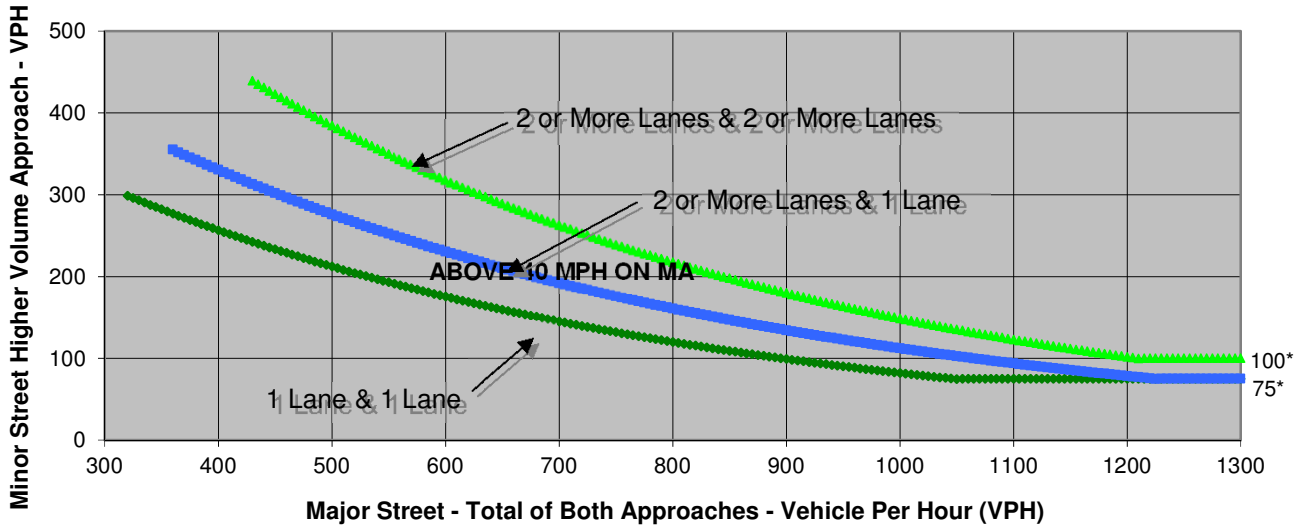
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	10	10	10
Through	10	20	20	20
Right	0	10	30	10
Total	30	40	60	40

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Yermo Road	Minor Street Minneola Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**100**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

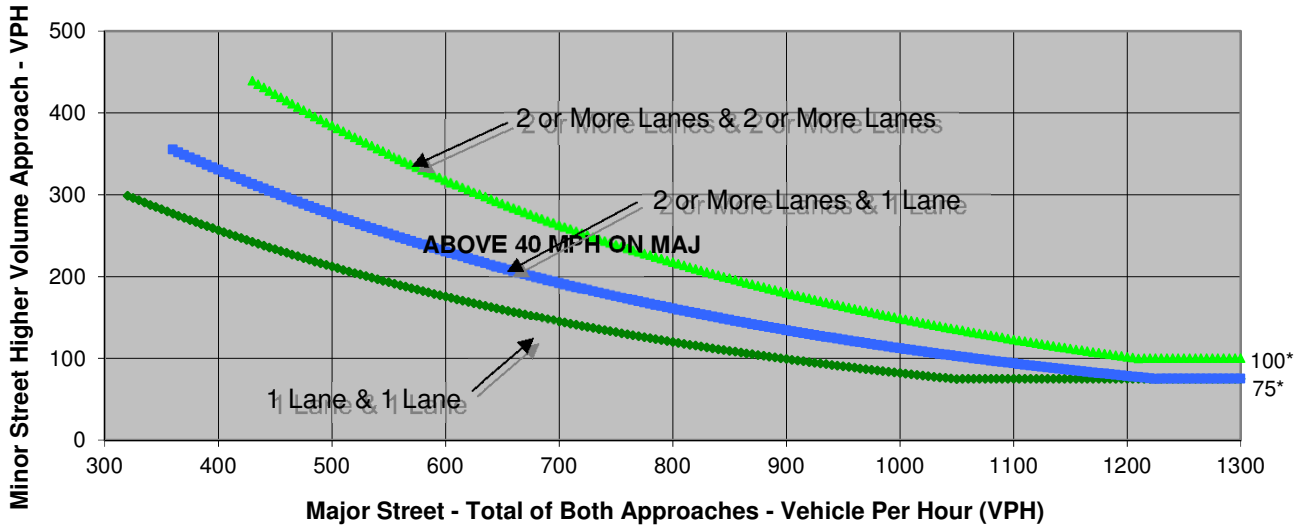
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	10	10
Through	10	10	10	20
Right	10	10	10	10
Total	30	40	30	40

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**70**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

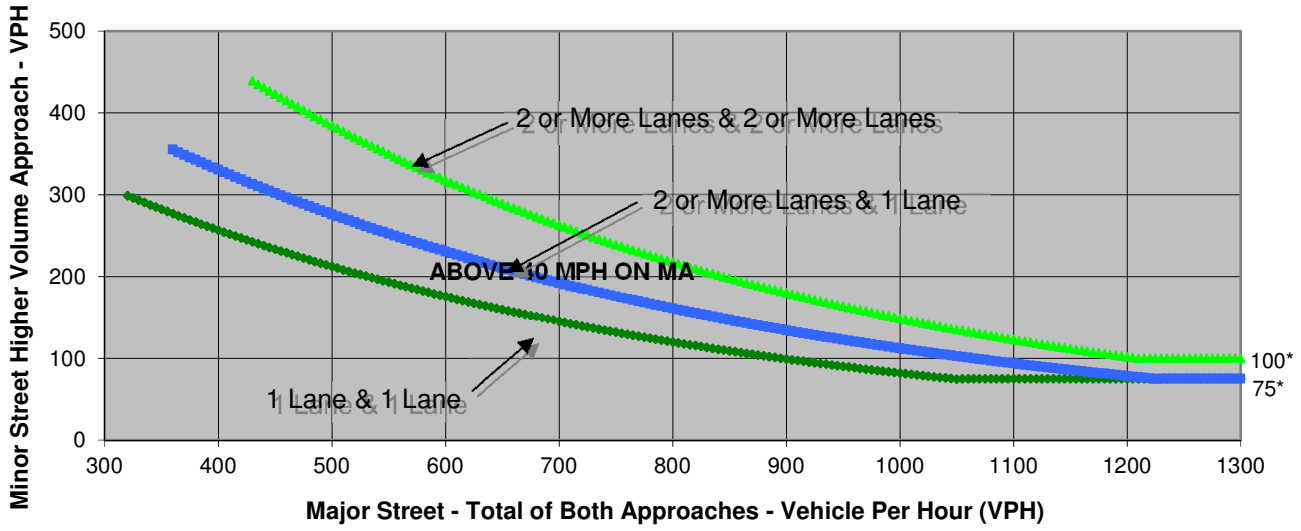
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	87	104	0
Through	10	10	10	0
Right	20	0	20	0
Total	30	97	134	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 NB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**127**	**134**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

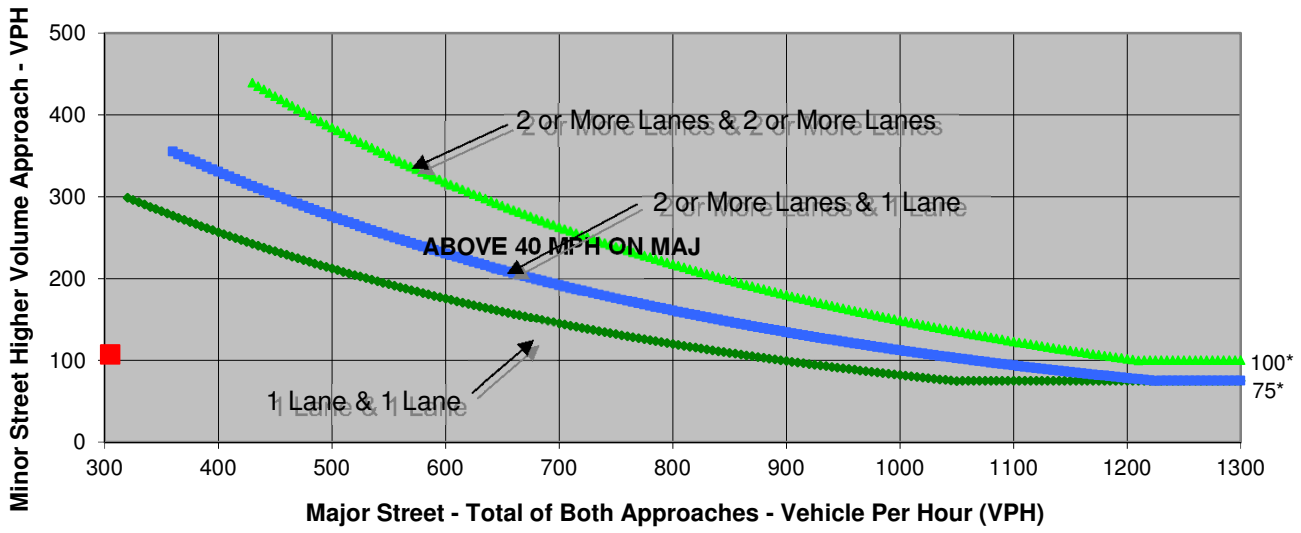
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	104	87	0	10
Right	0	104	0	87
Total	114	191	0	107

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**305**	**107**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road

Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	PM Peak Hour

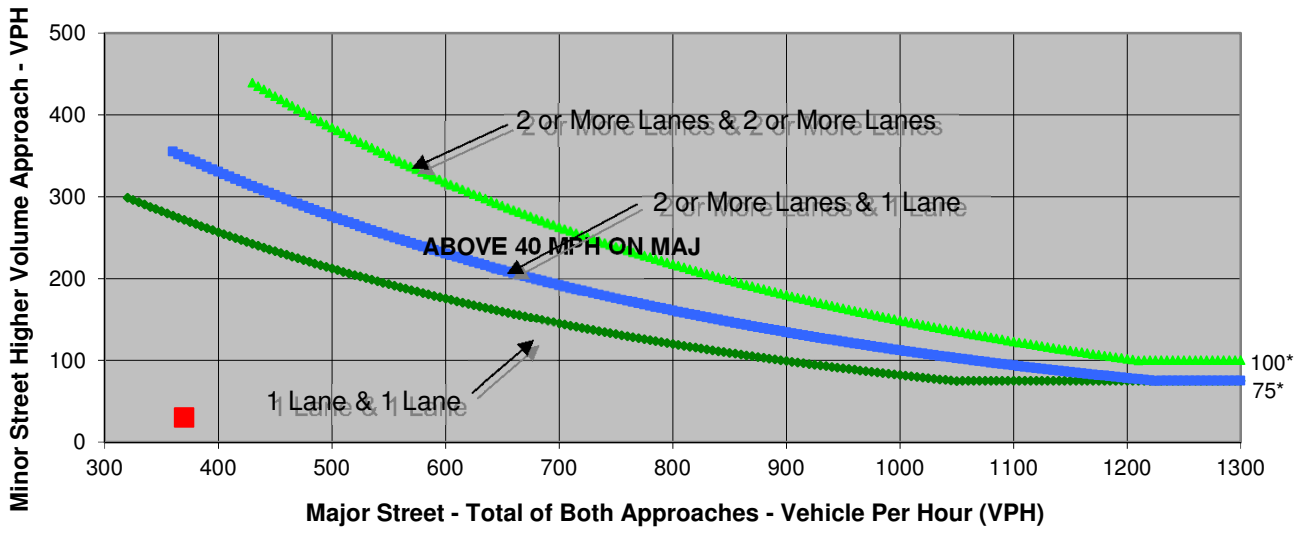
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	10	0
Through	180	180	10	0
Right	0	0	10	0
Total	190	180	30	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**370**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

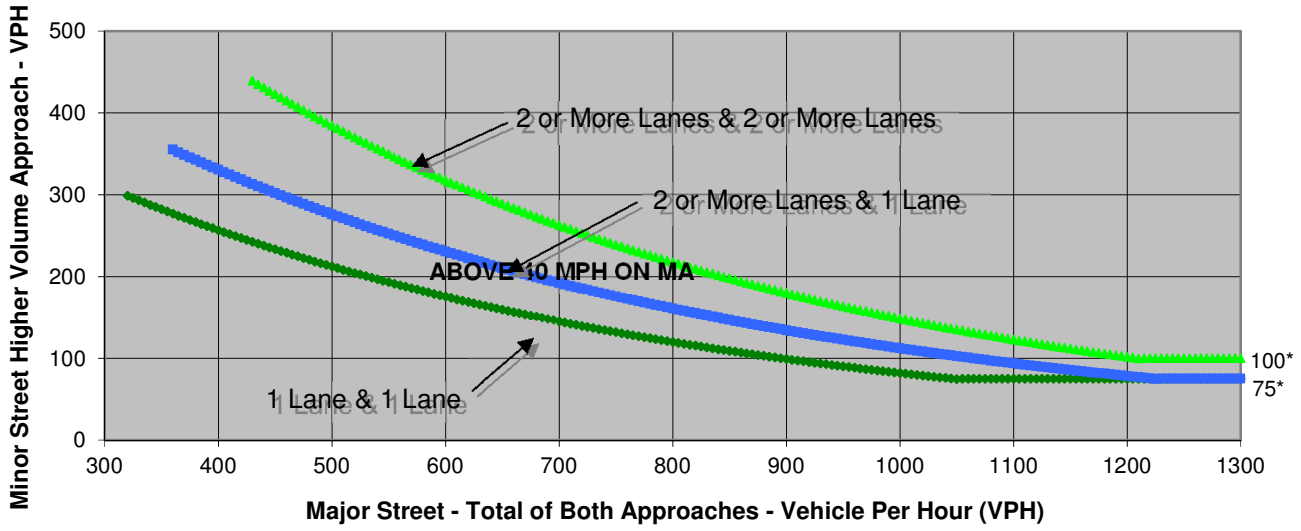
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	150
Through	20	30	0	40
Right	0	140	0	140
Total	30	170	0	330

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 SB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**200**	**330**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps

Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

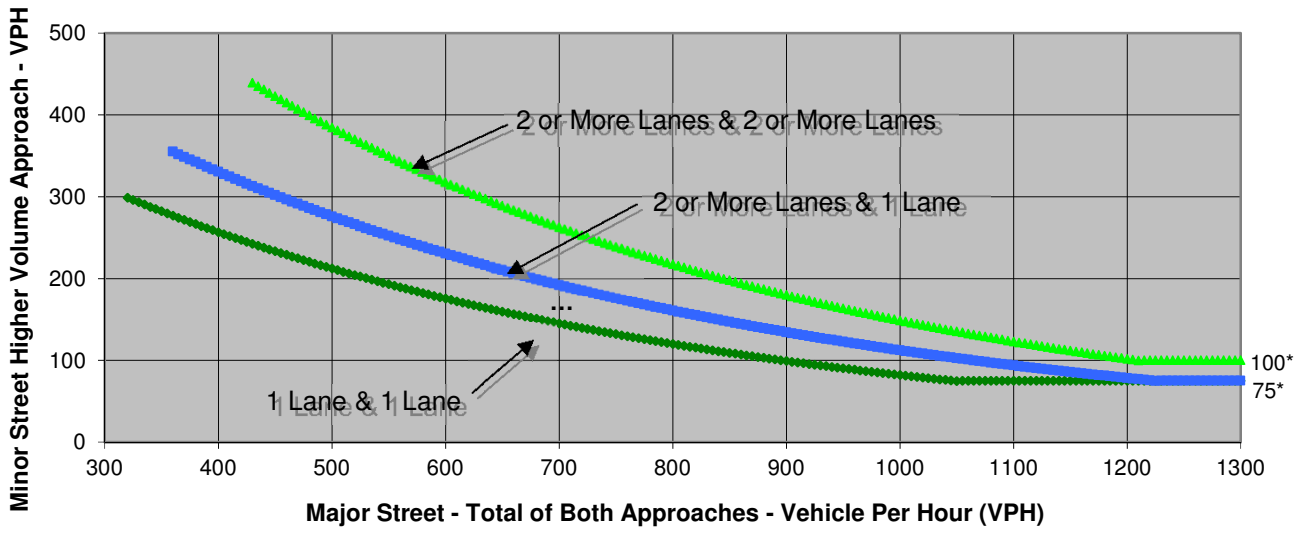
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	10	0
Through	20	170	10	0
Right	0	0	30	0
Total	20	180	50	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**200**	**50**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road

Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

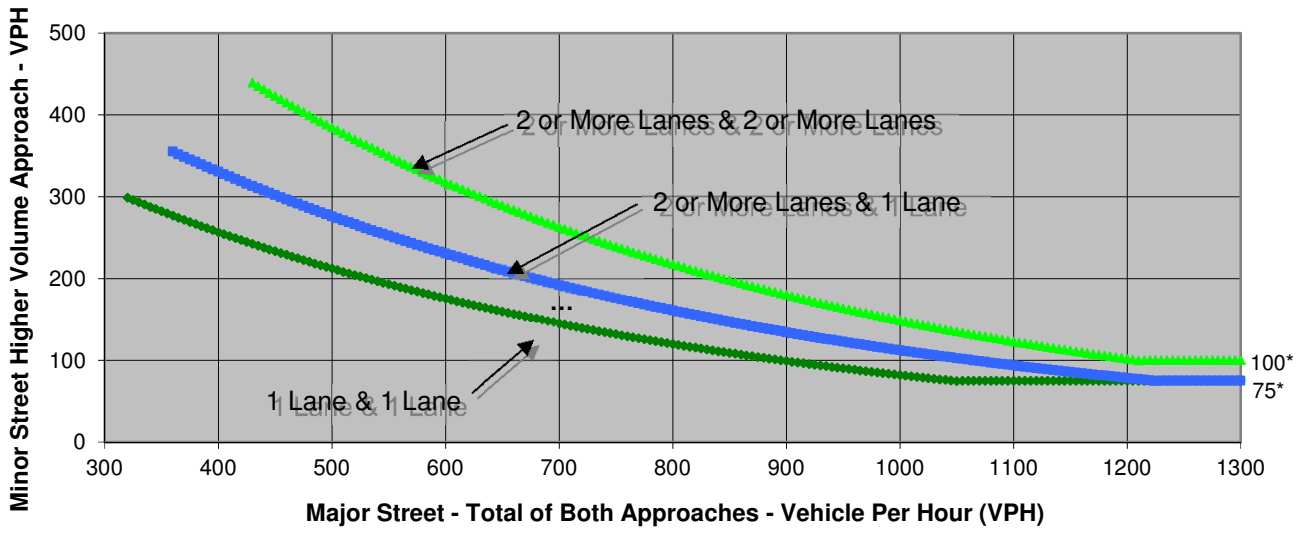
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	10	0	30
Through	10	20	10	120
Right	10	170	10	10
Total	40	200	20	160

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Minneola Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**180**	**200**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road

Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

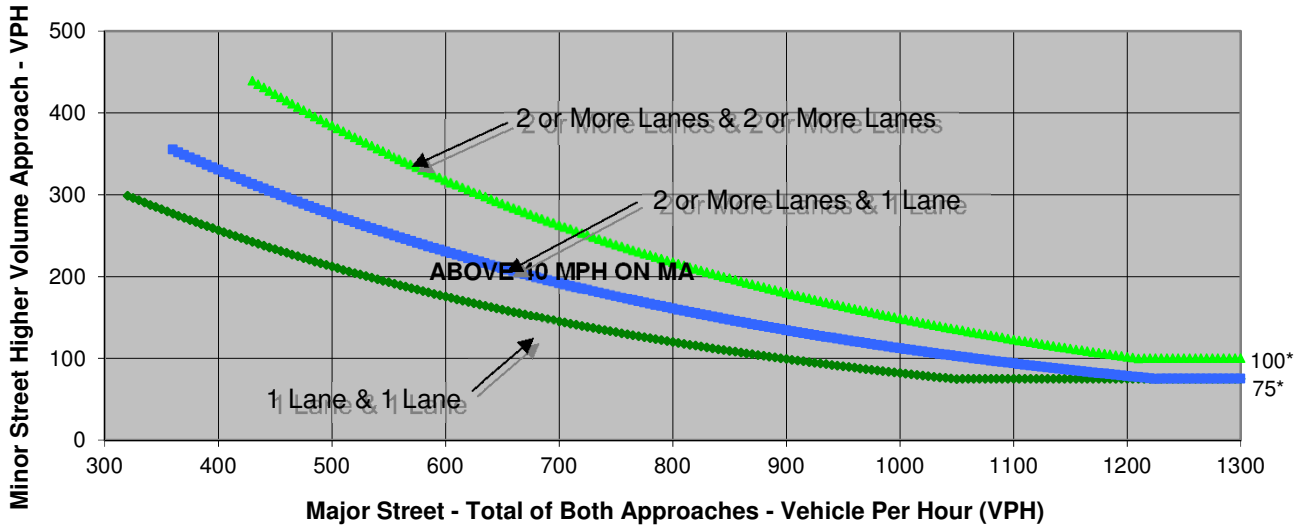
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	10	10
Through	10	0	10	130
Right	10	20	10	10
Total	30	30	30	150

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**180**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

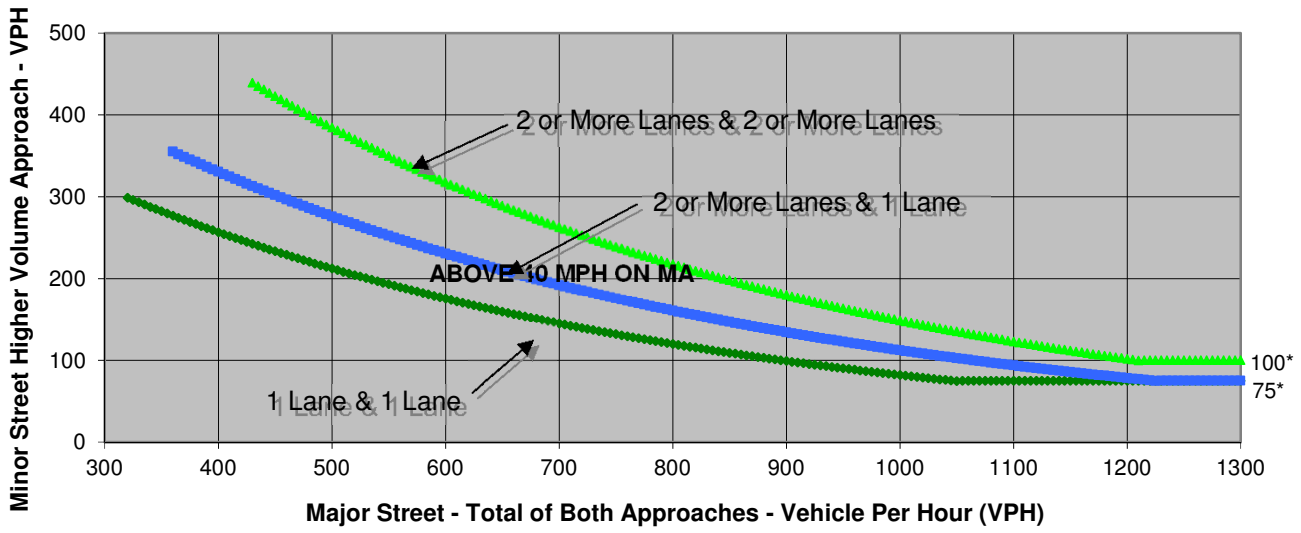
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	87	104	0
Through	10	130	10	0
Right	10	0	10	0
Total	20	217	124	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 NB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**237**	**124**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Project Dolores Lake TIA
Scenario Cumulative Plus Related Projects
Peak Hour Weekend Peak Hour

Major Street Harvard Rd
Minor Street I-15 SB Ramps

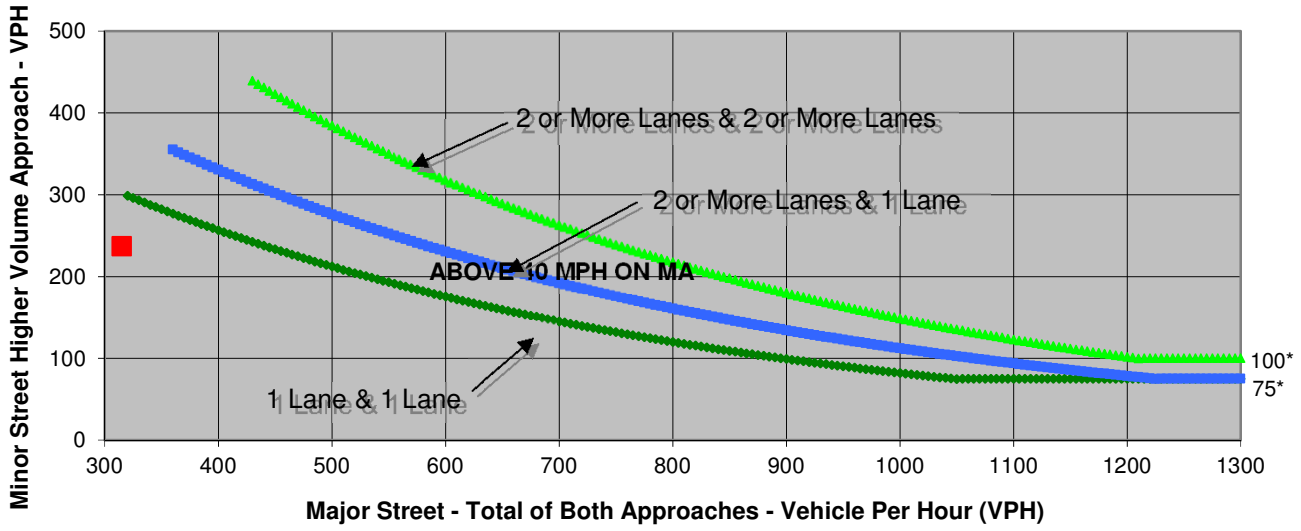
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	130
Through	104	87	0	10
Right	0	114	0	97
Total	114	201	0	237

Major Street Direction

x North/South
East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**315**	**237**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road

Project	Dolores Lake TIA
Scenario	Cumulative Plus Related Projects
Peak Hour	Weekend Peak Hour

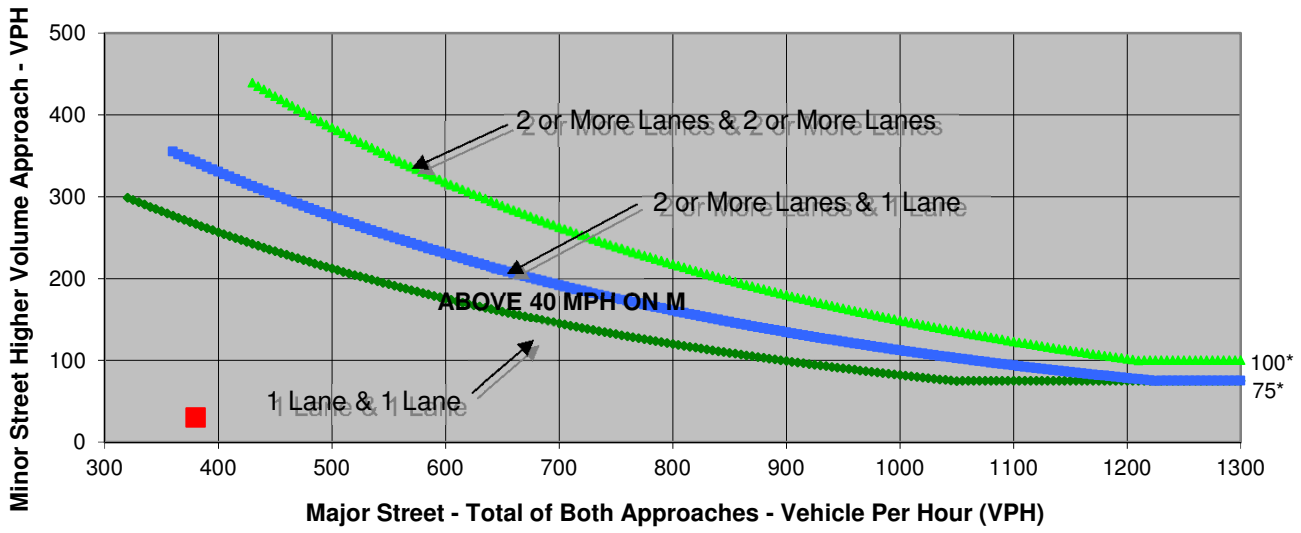
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	10	10
Through	190	180	10	0
Right	0	0	10	0
Total	200	180	30	10

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**380**	**30**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

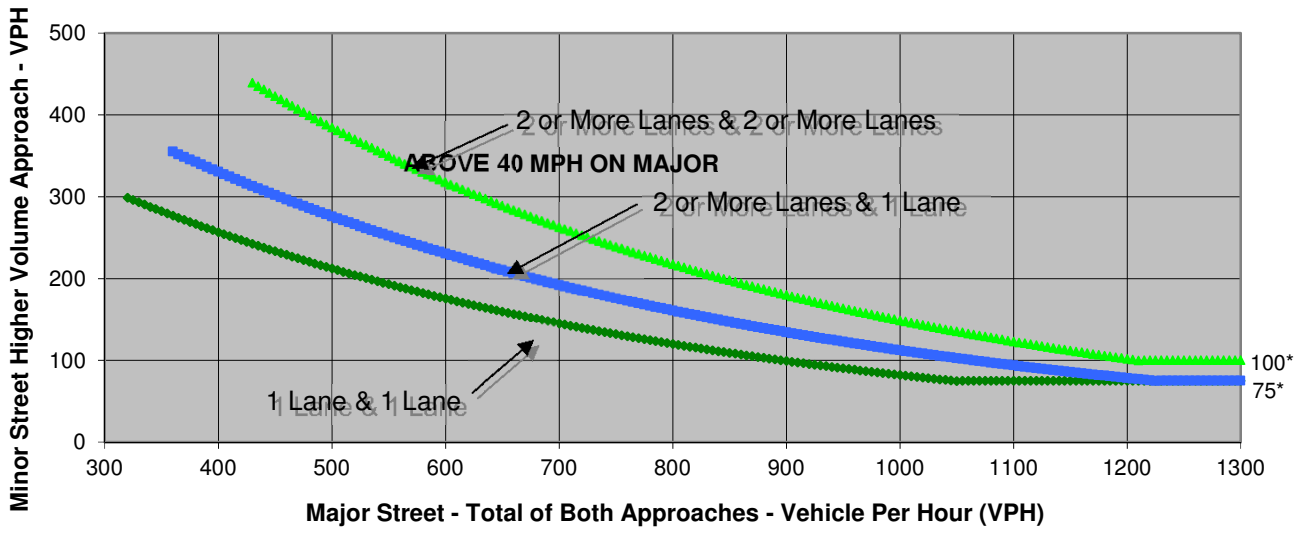
Turn Movement Volumes

	NB	SB	EB	WB
Left	213	0	0	10
Through	10	10	0	10
Right	0	50	0	40
Total	223	60	0	60

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Minneola Road	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**283**	**60**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

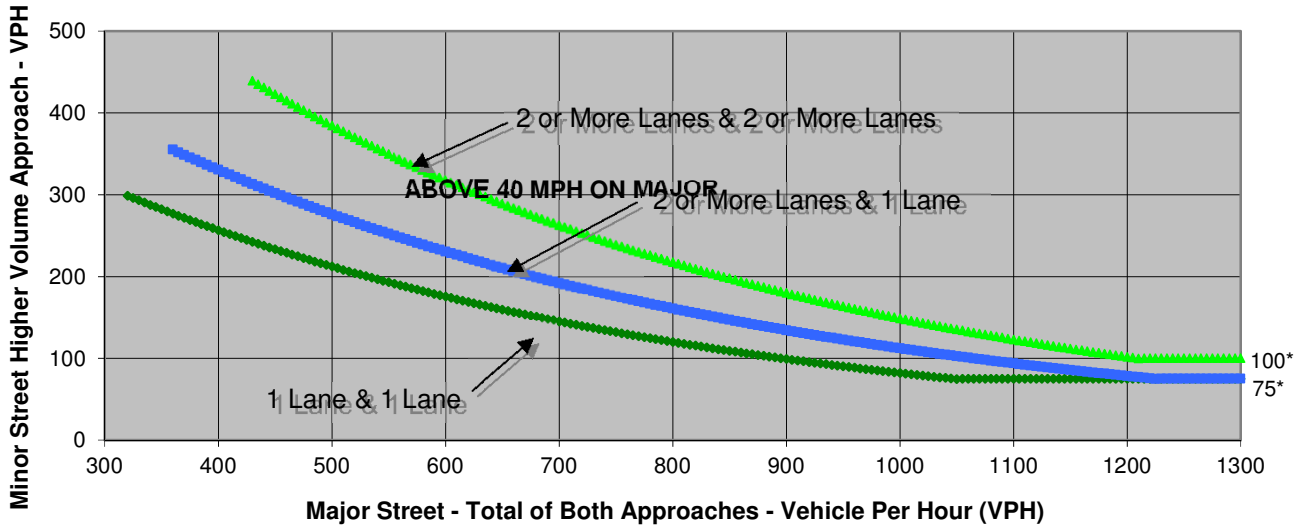
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	10	0
Through	213	10	10	0
Right	20	0	125	0
Total	233	20	145	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**253**	**145**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

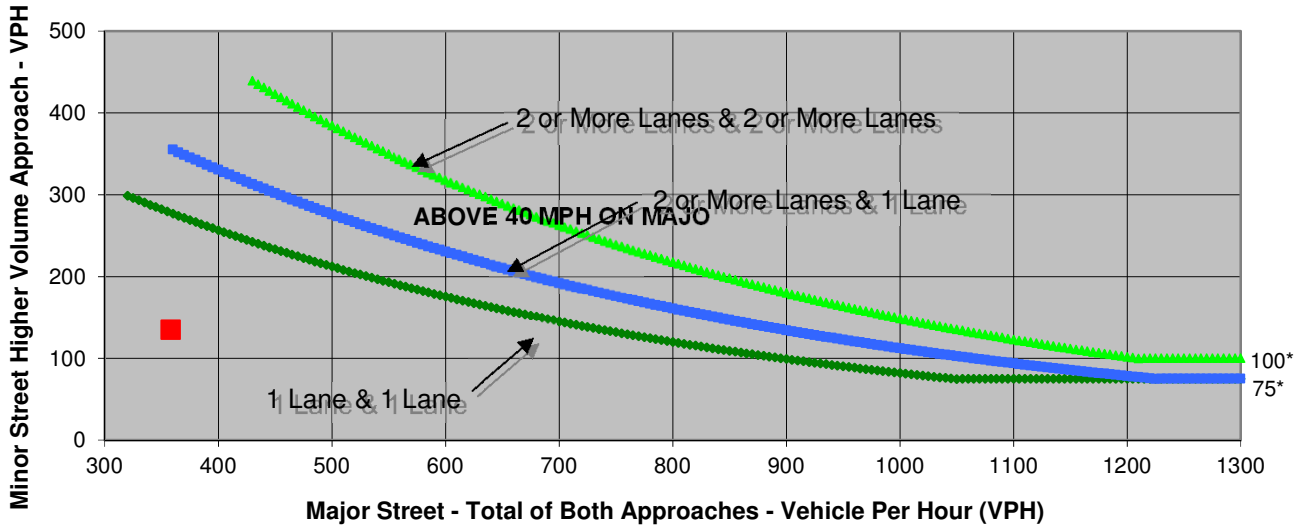
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	105	10	65
Through	10	20	20	20
Right	26	10	30	213
Total	56	135	60	298

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Yermo Road	Minor Street Minneola Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**358**	**135**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

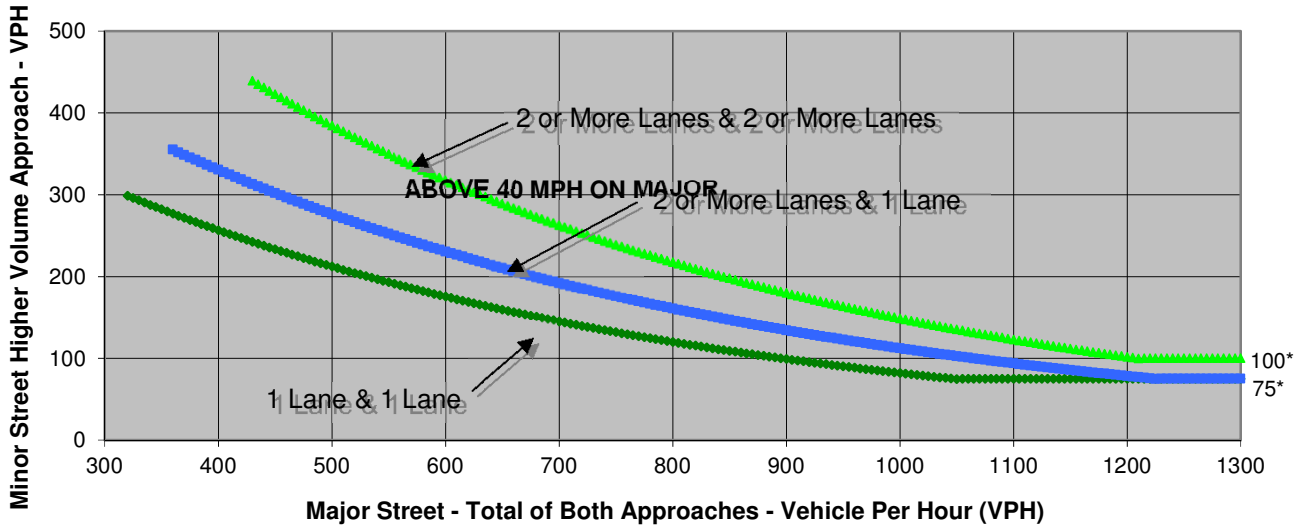
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	20	131	10
Through	10	10	10	20
Right	10	268	10	10
Total	30	298	151	40

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**191**	**298**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

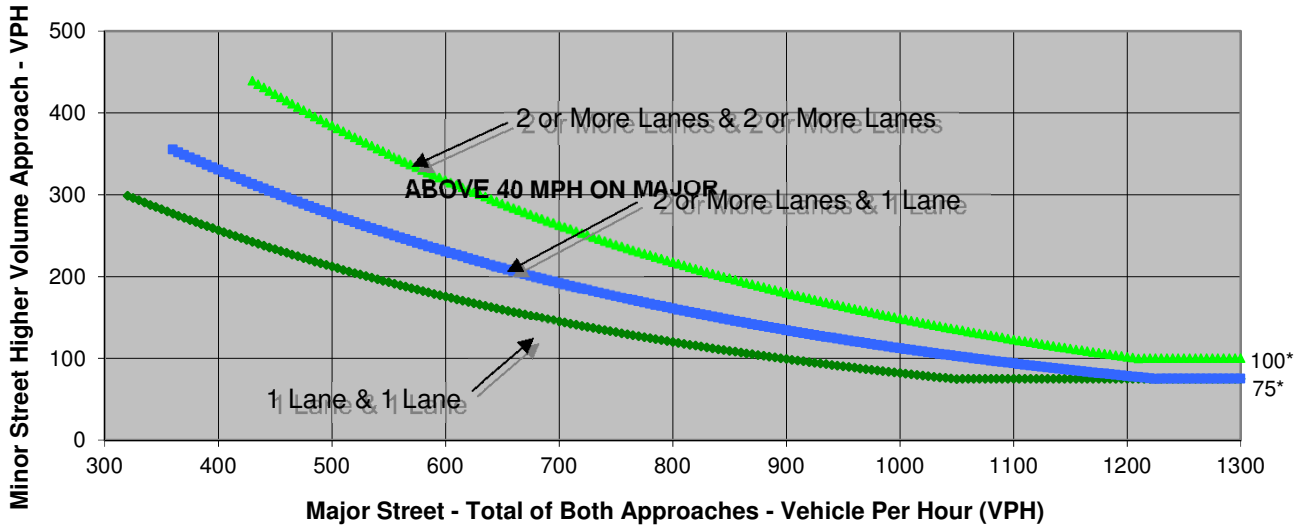
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	198	104	0
Through	10	10	10	0
Right	20	0	20	0
Total	30	208	134	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**238**	**134**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

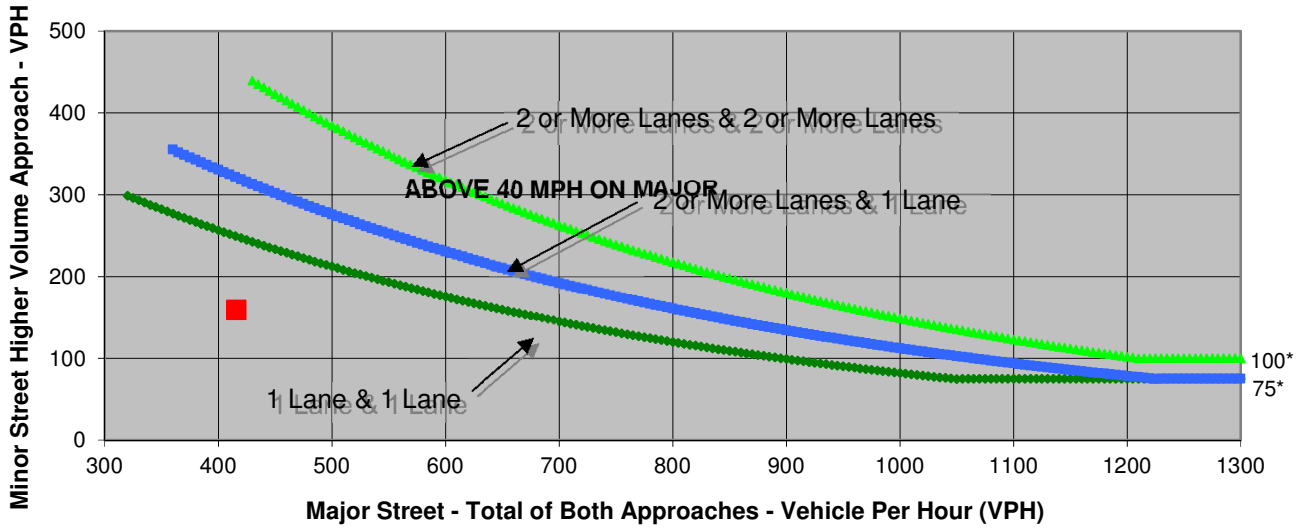
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	10
Through	104	198	0	10
Right	0	104	0	139
Total	114	302	0	159

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**416**	**159**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

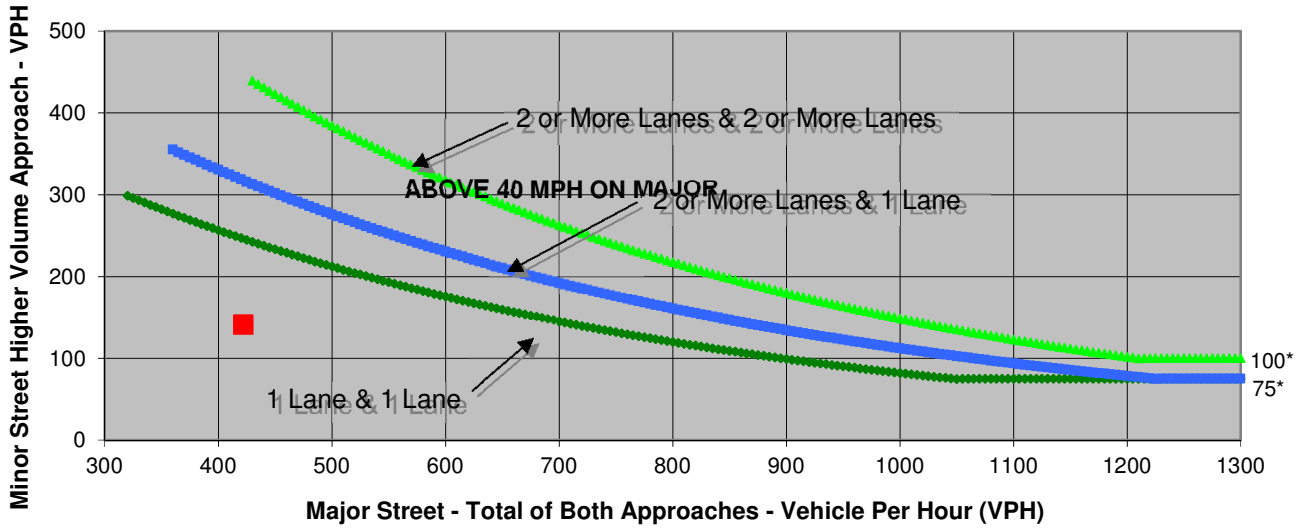
Turn Movement Volumes

	NB	SB	EB	WB
Left	62	0	10	0
Through	180	180	10	0
Right	0	0	121	0
Total	242	180	141	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**422**	**141**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Hacienda Road
Minor Street	Bragdon Road
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

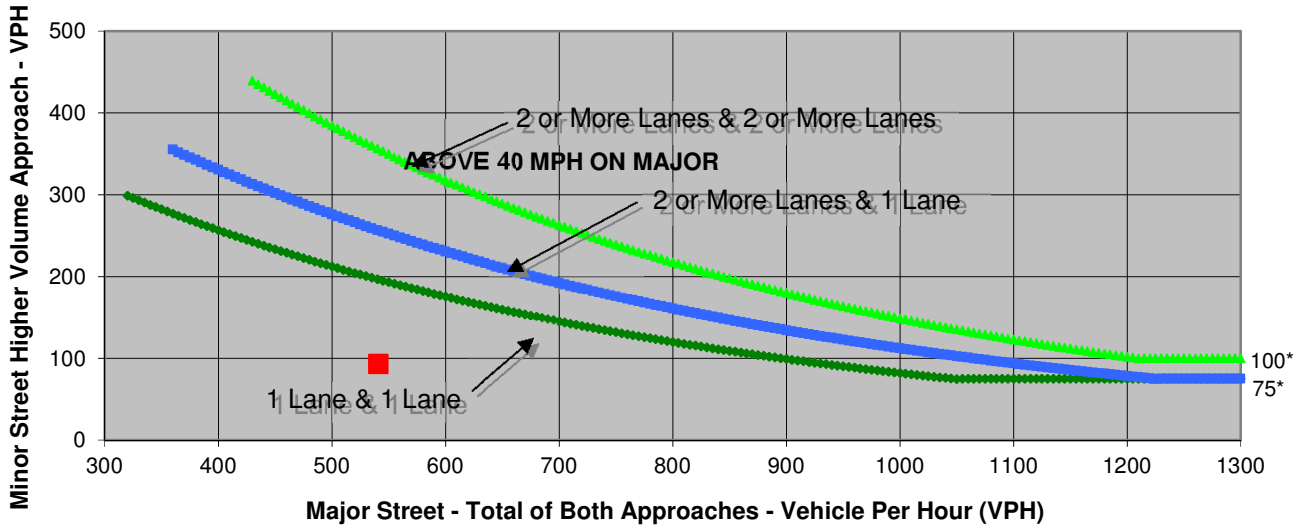
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	28	30	0
Through	0	0	153	345
Right	0	65	0	13
Total	0	93	183	358

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Hacienda Road	Minor Street Bragdon Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**541**	**93**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Project Dolores Lake TIA
Scenario Cumulative (2040) Plus Project
Peak Hour PM Peak Hour

Major Street Bragdon Road
Minor Street Project Driveway 1

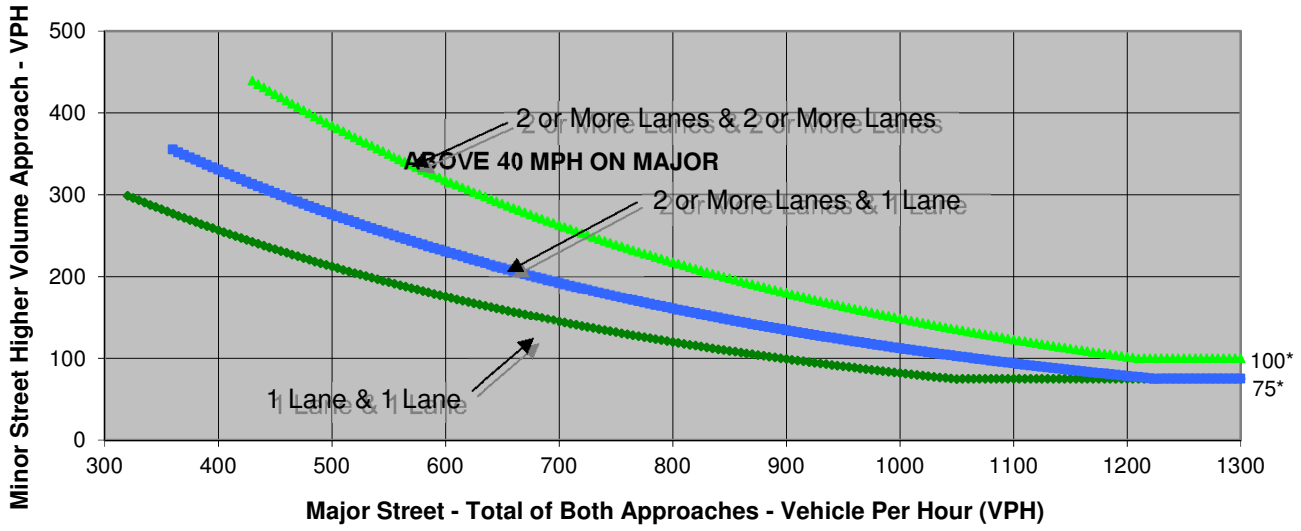
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	92
Through	0	0	0	0
Right	43	0	0	0
Total	43	0	0	92

Major Street Direction

x North/South
East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 1	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**43**	**92**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 2

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

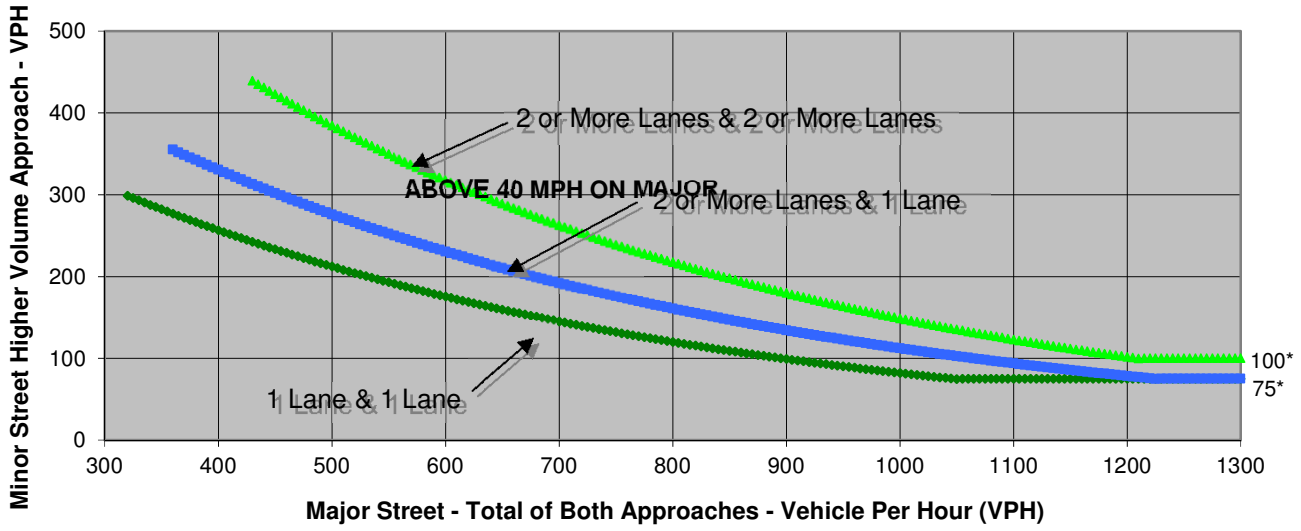
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	17	18	0
Through	0	0	100	168
Right	0	39	0	8
Total	0	56	118	176

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 2	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**56**	**176**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 3

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	PM Peak Hour

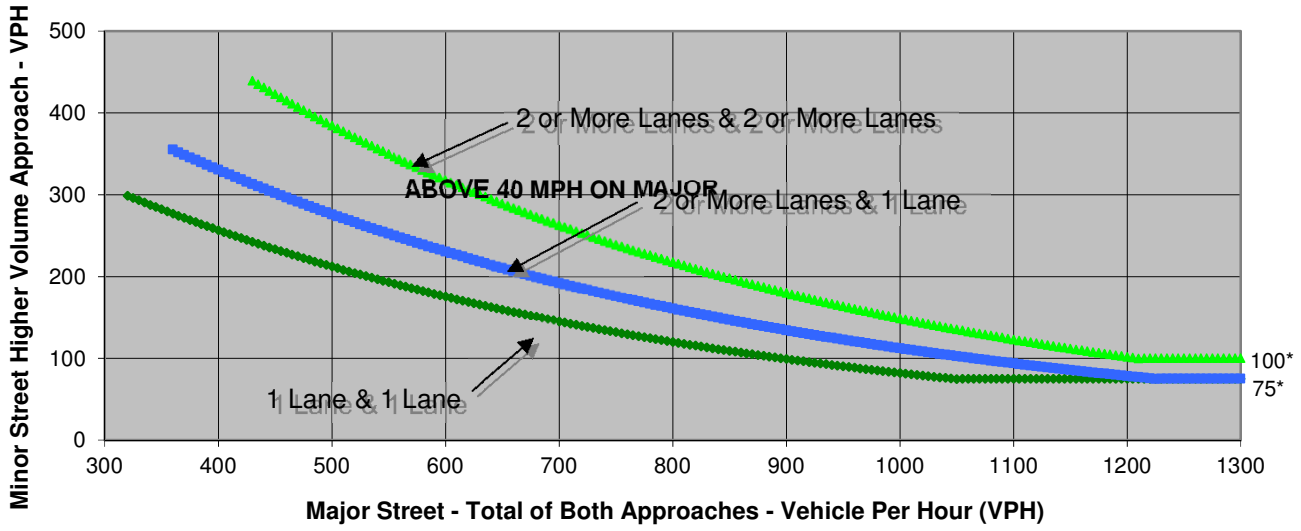
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	66	73	0
Through	0	0	44	21
Right	0	155	0	31
Total	0	221	117	52

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 3	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**221**	**117**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 SB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

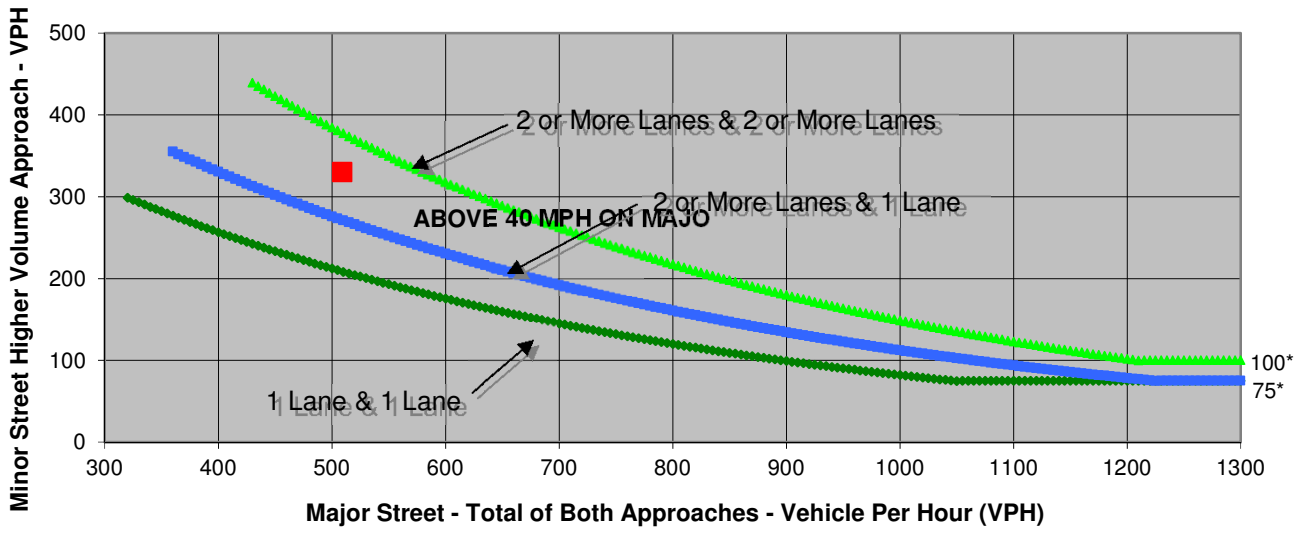
Turn Movement Volumes

	NB	SB	EB	WB
Left	319	0	0	150
Through	20	30	0	40
Right	0	140	0	140
Total	339	170	0	330

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 SB Ramps	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**509**	**330**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Minneola Road
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

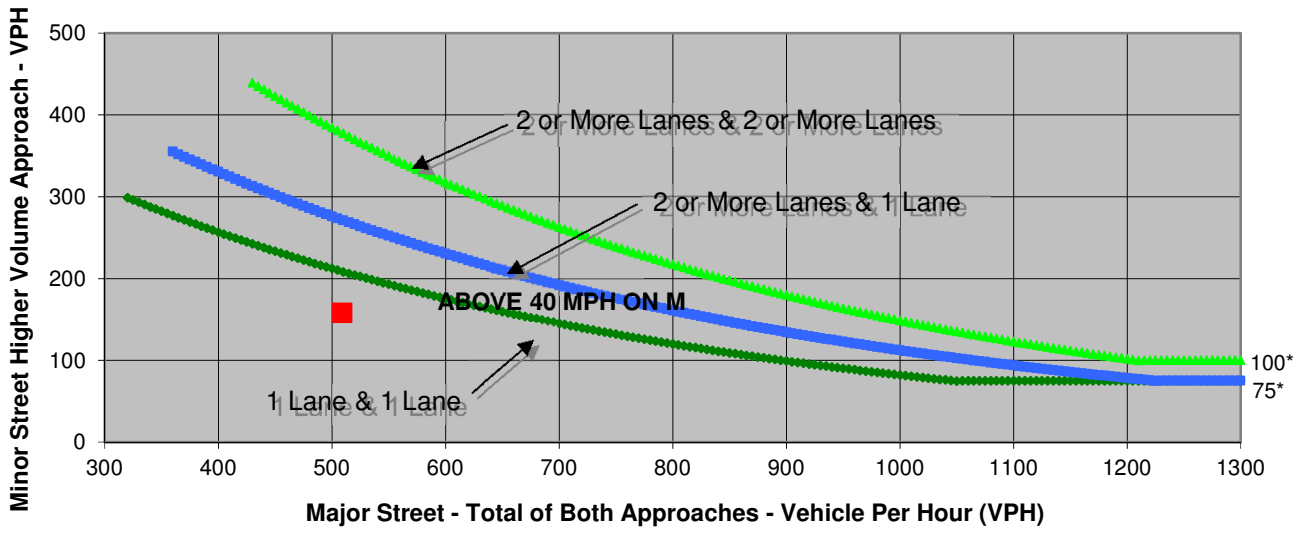
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	10	10	0
Through	329	170	10	0
Right	0	0	138	0
Total	329	180	158	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Minneola Road	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**509**	**158**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Minneola Road

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

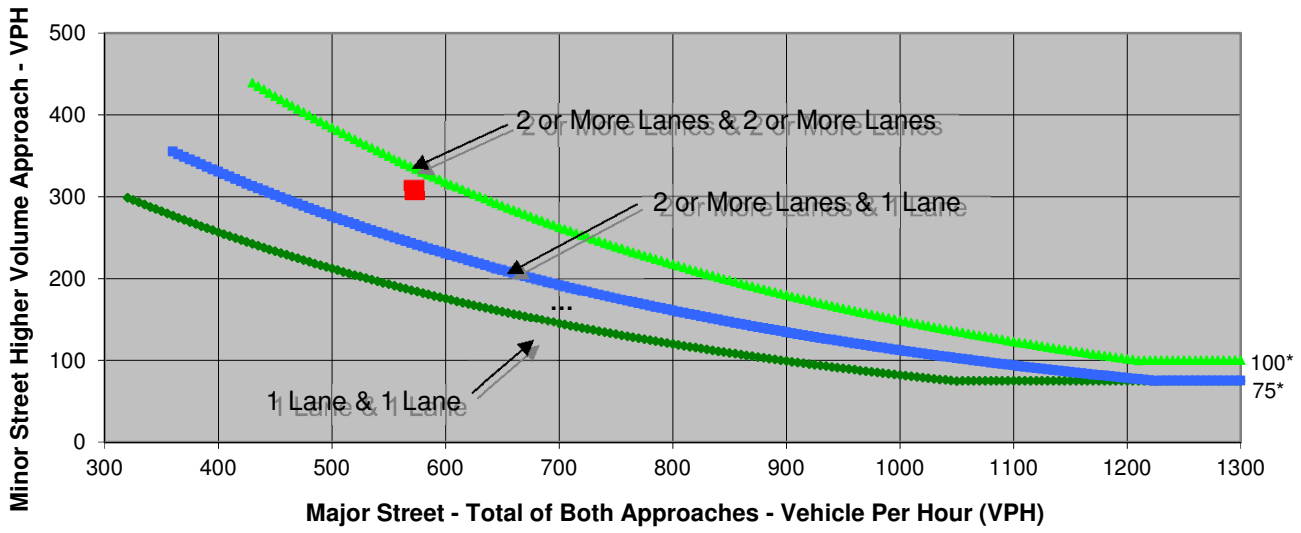
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	118	0	114
Through	10	20	10	120
Right	40	170	10	319
Total	70	308	20	553

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Minneola Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**573**	**308**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Yermo Road
Minor Street	Coyote Lake Road

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

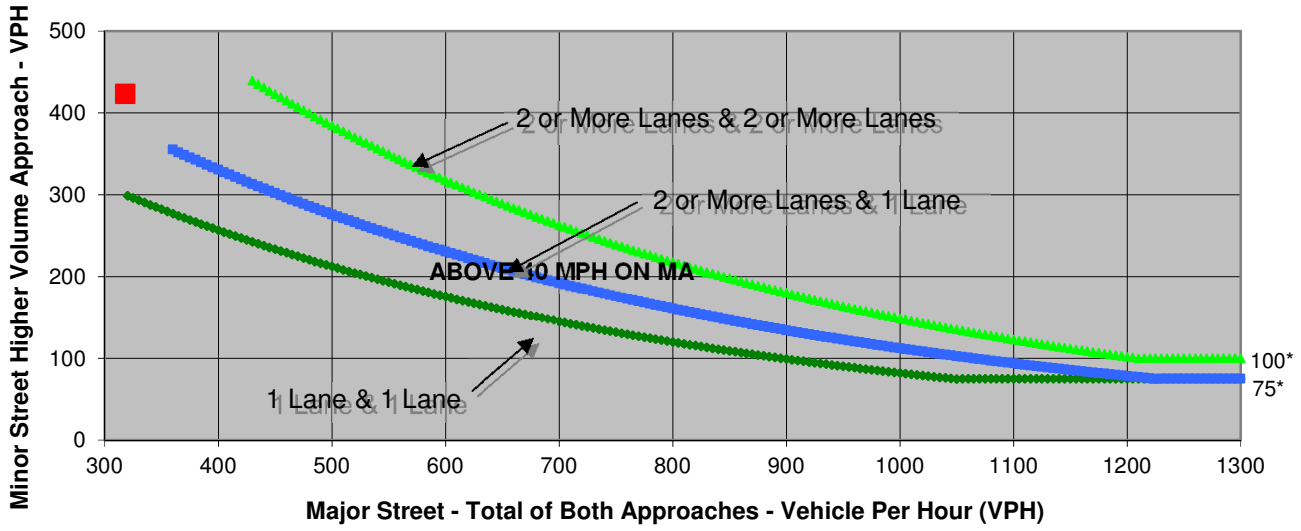
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	10	148	10
Through	10	0	10	130
Right	10	413	10	10
Total	30	423	168	150

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Yermo Road	Coyote Lake Road	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**318**	**423**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	I-15 NB Ramps
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

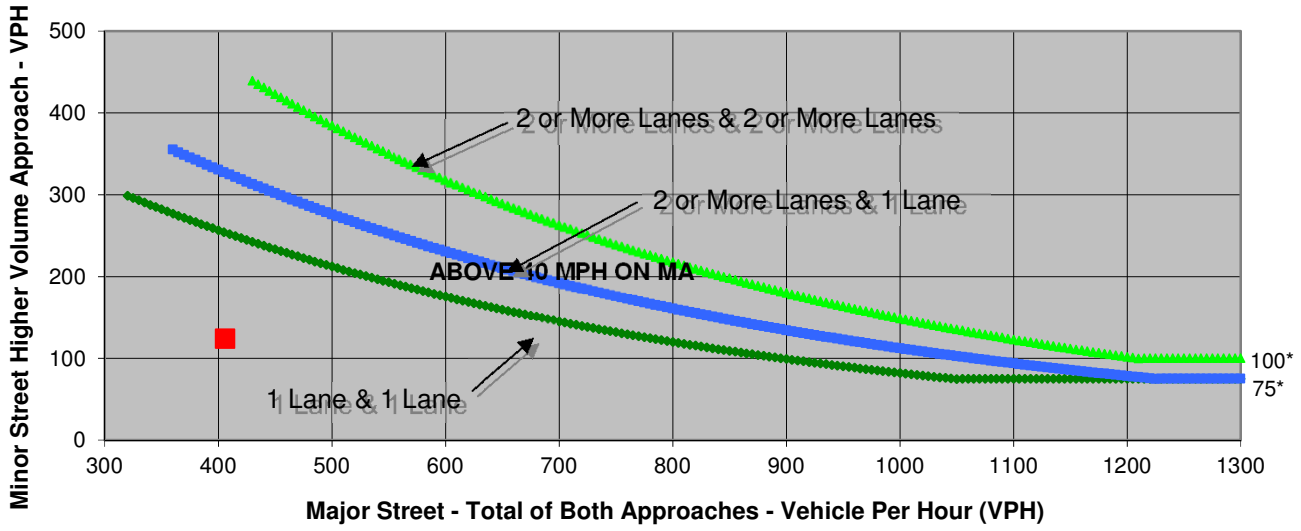
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	256	104	0
Through	10	130	10	0
Right	10	0	10	0
Total	20	386	124	0

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	I-15 NB Ramps	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**406**	**124**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Project Dolores Lake TIA
Scenario Cumulative (2040) Plus Project
Peak Hour Weekend Peak Hour

Major Street Harvard Rd
Minor Street I-15 SB Ramps

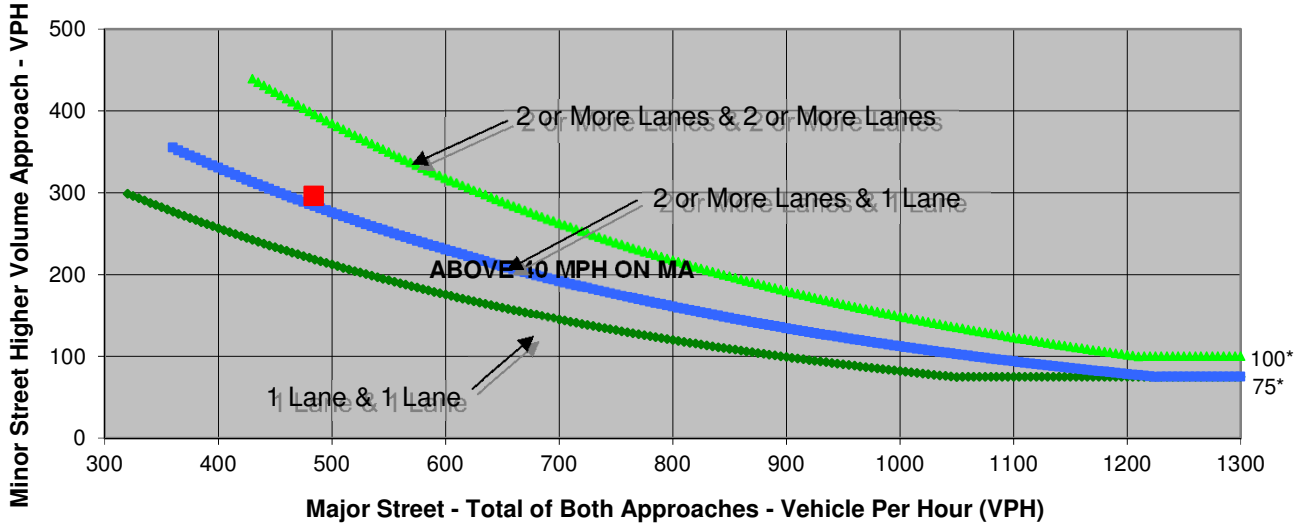
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	0	130
Through	104	256	0	10
Right	0	114	0	156
Total	114	370	0	296

Major Street Direction

x North/South
East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Harvard Rd	Minor Street I-15 SB Ramps	Warrant Met
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**484**	**296**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Harvard Rd
Minor Street	Barrettt Road & Hacienda Road
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

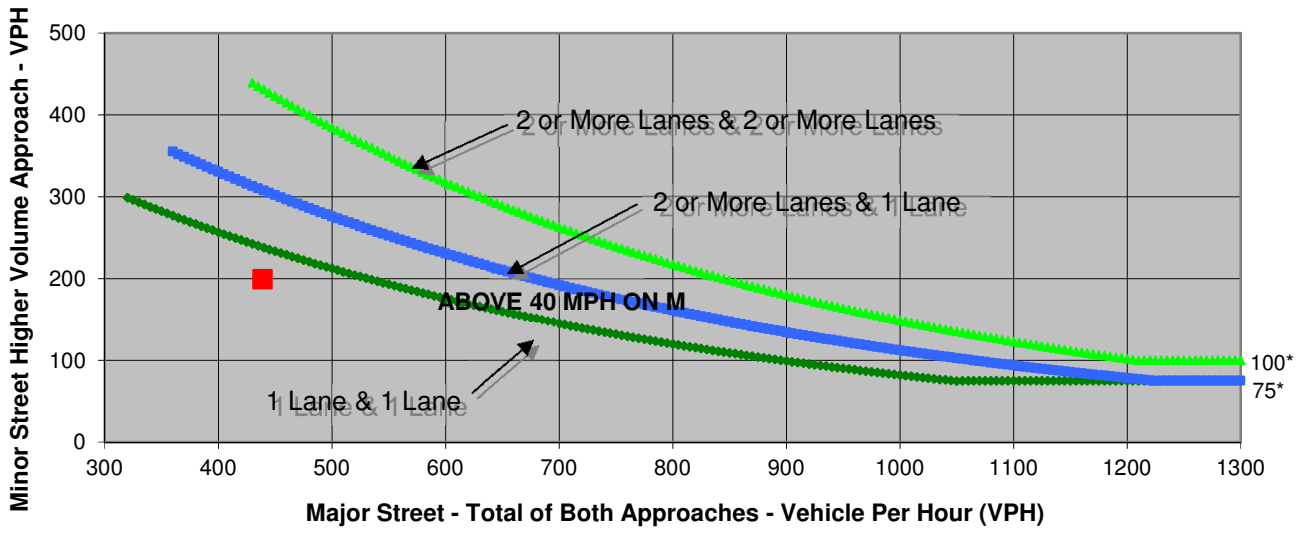
Turn Movement Volumes

	NB	SB	EB	WB
Left	69	0	10	10
Through	190	180	10	0
Right	0	0	179	0
Total	259	180	199	10

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Harvard Rd	Barrettt Road & Hacienda Road	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**439**	**199**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Hacienda Road
Minor Street	Bragdon Road
Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

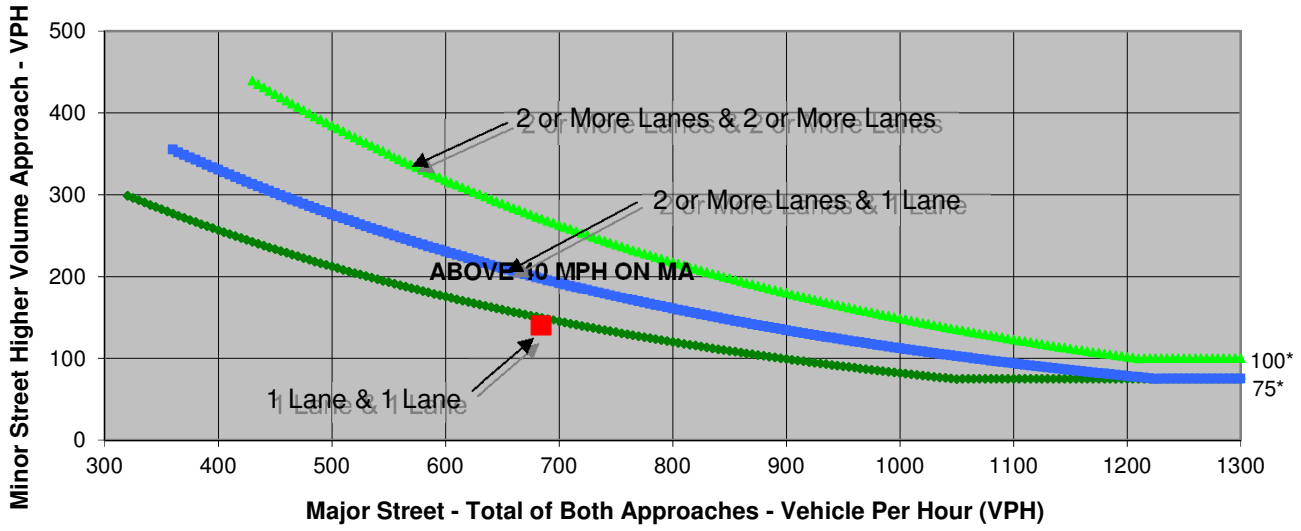
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	42	34	0
Through	0	0	172	463
Right	0	98	0	15
Total	0	140	206	478

Major Street Direction

	North/South
x	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street Hacienda Road	Minor Street Bragdon Road	Warrant Met
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**684**	**140**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 1

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

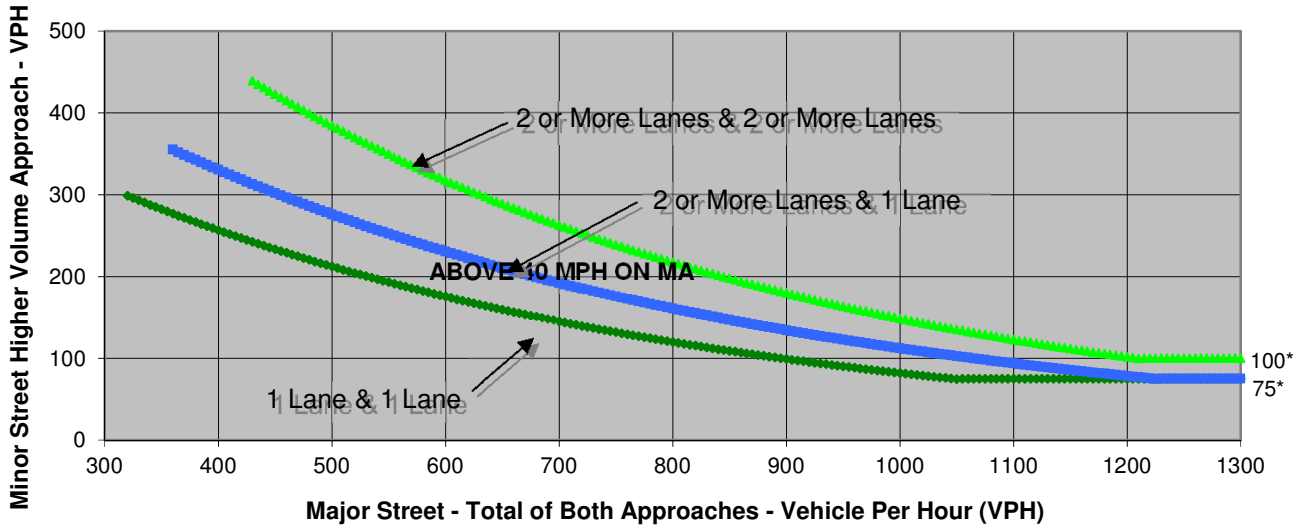
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	141
Through	0	0	0	0
Right	49	0	0	0
Total	49	0	0	141

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 1	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**49**	**141**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 2

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

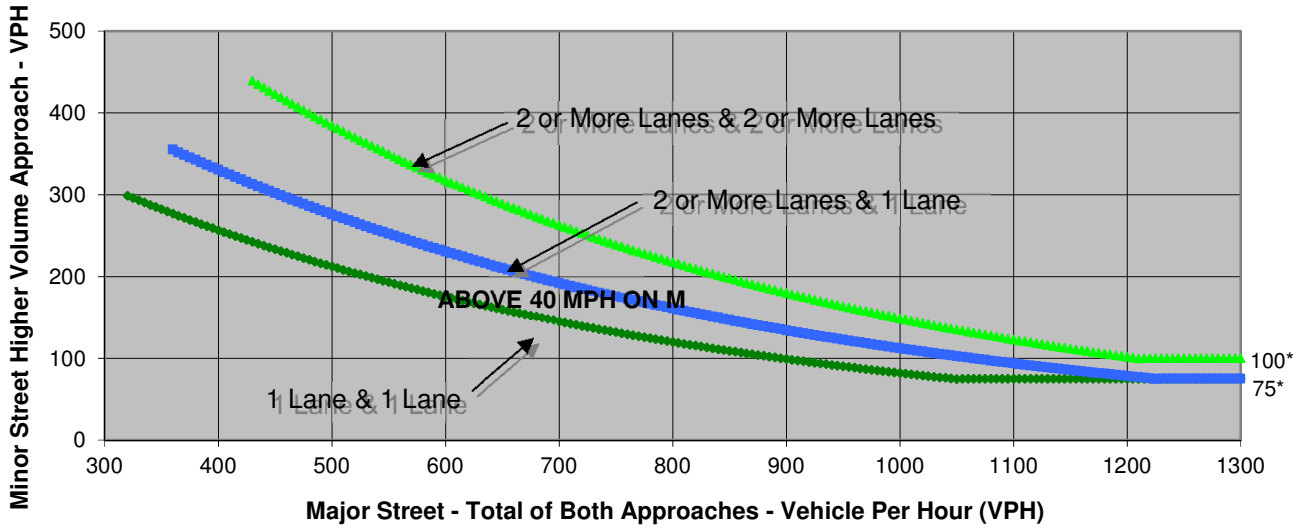
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	25	21	0
Through	0	0	125	251
Right	0	59	0	9
Total	0	84	146	260

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 2	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**84**	**260**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS

Sheet No 1 of 1

Major Street	Bragdon Road
Minor Street	Project Driveway 3

Project	Dolores Lake TIA
Scenario	Cumulative (2040) Plus Project
Peak Hour	Weekend Peak Hour

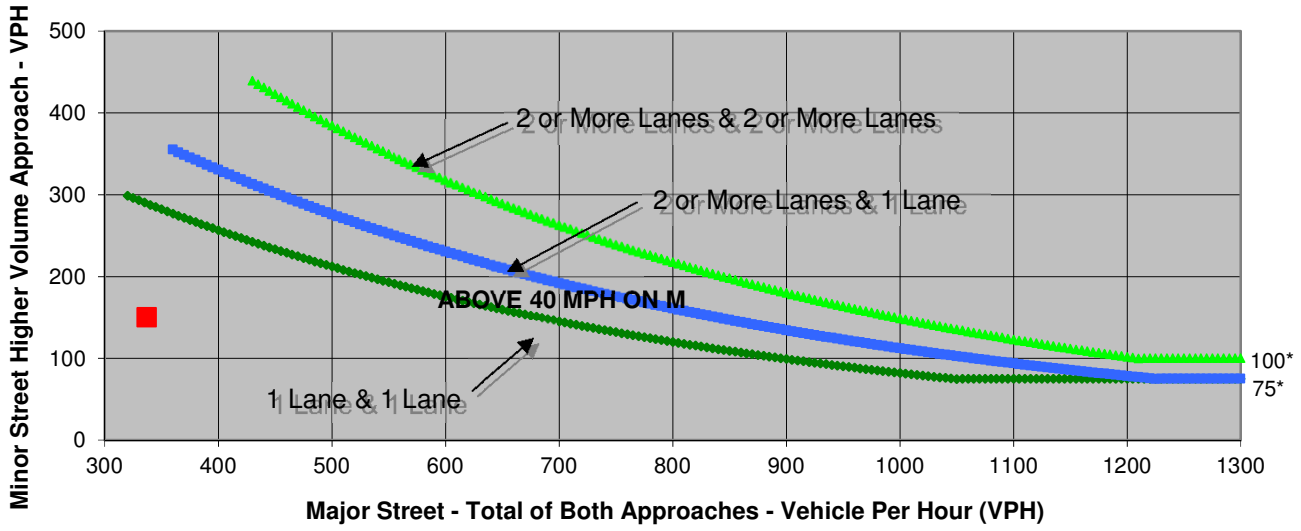
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	101	83	0
Through	0	0	67	24
Right	0	236	0	35
Total	0	337	150	59

Major Street Direction

x	North/South
	East/West

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR



* Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Bragdon Road	Project Driveway 3	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**337**	**150**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.