HEXAGON TRANSPORTATION CONSULTANTS, INC.

1154 and 1170 Sonora Court Mixed-Use Development

Final Local Transportation Analysis

Prepared for:

City of Sunnyvale

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Executive Summary

This report presents the results of the local transportation analysis (LTA) conducted for the proposed 1154 and 1170 Sonora Court project in Sunnyvale, California. The project would build two residential and office mixed-use developments within the Lawrence Station Area Plan (LSAP) area on the south side of Sonora Court. For the 1154 Sonora Court site, the 1.887-acre site is currently developed with an office building with 33,362 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 142,270 square feet of office space on the first three levels and 174 apartment units on the fourth to seventh levels with two levels of underground parking. For the 1170 Sonora Court site, the 1.088-acre site is currently developed with an office building with 14,902 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 79,211 square feet of office space on the first three levels and 106 apartment units on the fourth to seventh levels with two levels of underground parking. Vehicle access to both sites would be via driveways on Sonora Court.

This study was conducted for the purpose of identifying the potential near-term adverse traffic effects related to the proposed development. The project is consistent with the Lawrence Station Area Plan (LSAP) Update, and the potential long-term adverse traffic effects are presented in the traffic study conducted for the LSAP-Update.

Project Trip Generation

Through empirical research, data has been collected to quantify the amount of traffic produced by many types of land uses. This research is compiled in the *Trip Generation Manual, 11th Edition (2021)* published by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. Trip generation rates for the proposed residential portion of the buildings are based on the average rates published for “Multifamily Housing (Mid-Rise)” (Land Use Code 221). Trip generation rates for the proposed office portion of the buildings are based on the average rates published for “General Office Building” (Land Use Code 710).

Trip Reductions

The VTA’s *Congestion Management Program Transportation Impact Analysis Guidelines* (October 2014) indicates that a 3% trip reduction can be applied to the smaller trip generator of mixed-used development projects with housing and employment. The guidelines also indicate that a trip reduction of 9% for housing and 6% for employment can be applied for projects located within a 2,000-foot walk of a Caltrain station.

In addition, the proposed project would receive trip credits for the trips generated by the existing on-site uses. Trip generation rates for the existing office buildings are based on the average rates published for "General Office Building" (Land Use Code 710).

Net Project Trips

After applying the ITE trip generation rates and the applicable trip reductions, the proposed project is estimated to generate a net increase of 209 vehicle trips during the AM peak hour (149 inbound and 60 outbound) and 206 vehicle trips during the PM peak hour (61 inbound and 145 outbound) at the 1154 Sonora Court site. At the 1170 Sonora Court site, the proposed project is estimated to generate a net increase of 125 vehicle trips during the AM peak hour (88 inbound and 37 outbound) and 122 vehicle trips during the PM peak hour (36 inbound and 86 outbound).

The trip generation for the proposed project is summarized in Tables ES-1 and ES-2.

Table ES- 1
1154 Sonora Court Trip Generation Summary

		Daily	AM Peak Hour						PM Peak Hour					
		Trip	Trip	Splits		Trips			Trip	Splits		Trips		
Land Use	Size	Rate	Trips	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Proposed Use															
Multifamily Housing[1]	174 du	4.54	790	0.37	23%	77%	15	49	64	0.39	61%	39%	41	27	68
- Residential/Office Internal Capture (3%)[3]			-24				0	-2	-2				-1	-1	-2
- Transit Reduction (9%)[4]			-69				-1	-5	-6				-4	-2	-6
Sub-Total Residential			*697*				*14*	*42*	*56*				*36*	*24*	*60*
Office[2]	142.270 ksf	10.84	1,542	1.52	88%	12%	190	26	216	1.44	17%	83%	35	170	205
- Office/Residential Internal Capture (3%)[3]			-24				-2	0	-2				-1	-1	-2
- Transit Reduction (6%)[4]			-91				-11	-2	-13				-2	-10	-12
Sub-Total Office			*1,427*				*177*	*24*	*201*				*32*	*159*	*191*
Gross Proposed Trips			***2,124***				***191***	***66***	***257***				***68***	***183***	***251***
Existing Use															
Office[2]	33.362 ksf	10.84	362	1.52	88%	12%	45	6	51	1.44	17%	83%	8	40	48
- Transit Reduction (6%)[4]			-22				-3	0	-3				-1	-2	-3
Gross Existing Trips			***340***				***42***	***6***	***48***				***7***	***38***	***45***
Net Project Trips			**1,784**				**149**	**60**	**209**				**61**	**145**	**206**

Source: ITE Trip Generation Manual, 11th Edition, 2021. VTA Transportation Impact Analysis (TIA) Guidelines, 2014.
1. Multifamily Housing (Mid-Rise) (ITE Land Use 221): average trip rates in trips per dwelling unit are used.
2. General Office Building (Land Use 710): average trip rates (in trips per 1,000 s.f.) are used.
3. Residential/office internal trip reduction was applied to the project per VTA TIA Guidelines.
4. Per VTA TIA Guidelines, a transit trip reduction is applied to the project that is within 2,000 feet of a Caltrain station.

Table ES- 2
1170 Sonora Court Trip Generation Summary

Land Use	Size	Daily Trip Rate	Daily Trips	AM Peak Hour Trip Rate	AM Splits In	AM Splits Out	AM Trips In	AM Trips Out	AM Trips Total	PM Peak Hour Trip Rate	PM Splits In	PM Splits Out	PM Trips In	PM Trips Out	PM Trips Total
Proposed Use															
Multifamily Housing[1]	106 du	4.54	481	0.37	23%	77%	9	30	39	0.39	61%	39%	25	16	41
- Residential/Office Internal Capture (3%)[3]			-14				0	-1	-1				-1	0	-1
- Transit Reduction (9%)[4]			-42				-1	-2	-3				-2	-2	-4
Sub-Total Residential			*425*				*8*	*27*	*35*				*22*	*14*	*36*
Office[2]	79.211 ksf	10.84	859	1.52	88%	12%	106	14	120	1.44	17%	83%	19	95	114
- Office/Residential Internal Capture (3%)[3]			-14				-1	0	-1				0	-1	-1
- Transit Reduction (6%)[4]			-51				-6	-1	-7				-1	-6	-7
Sub-Total Office			*794*				*99*	*13*	*112*				*18*	*88*	*106*
Gross Proposed Trips			***1,219***				***107***	***40***	***147***				***40***	***102***	***142***
Existing Use															
Office[2]	14.902 ksf	10.84	162	1.52	88%	12%	20	3	23	1.44	17%	83%	4	17	21
- Transit Reduction (6%)[4]			-10				-1	0	-1				0	-1	-1
Gross Existing Trips			***152***				***19***	***3***	***22***				***4***	***16***	***20***
Net Project Trips			**1,067**				**88**	**37**	**125**				**36**	**86**	**122**

Source: ITE Trip Generation Manual, 11th Edition, 2021. VTA Transportation Impact Analysis (TIA) Guidelines, 2014.
1. Multifamily Housing (Mid-Rise) (ITE Land Use 221): average trip rates in trips per dwelling unit are used.
2. General Office Building (Land Use 710): average trip rates (in trips per 1,000 s.f.) are used.
3. Residential/office internal trip reduction was applied to the project per VTA TIA Guidelines.
4. Per VTA TIA Guidelines, a transit trip reduction is applied to the project that is within 2,000 feet of a Caltrain station.

Intersection Level of Service Results

The intersection level of service analysis (see Table ES-3) showed that based on City of Sunnyvale and CMP intersection impact criteria, the project would generate adverse intersection effects at two signalized intersections during one peak period.

Potential Improvements Strategies for Adverse Intersection Effects

Improvement options were studied for the two affected signalized intersections. An adverse intersection effect can be satisfactorily addressed by implementing measures that would restore intersection conditions to the LOS standard *or* to an average delay equal to without-project conditions or better.

Lawrence Expressway & Kifer Road (#3)

Under background conditions, the LOS would be an unacceptable LOS F during the PM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet the City of Sunnyvale's adverse intersection effect criteria.

> **Potential Improvement:** The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Lawrence Expressway & Reed Avenue/Monroe Street (#4) [CMP]

Under background conditions, the LOS would be an unacceptable LOS F during the AM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet VTA's CMP adverse intersection effect criteria.

> **Potential Improvement:** The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Freeway Analysis

The results of the freeway analysis show that both study freeway segments on US 101 are operating at LOS F in the northbound direction in the morning and LOS F in the southbound direction in the evening. However, the results show that the project would not have an adverse effect on any freeway segments.

Freeway Ramp Analysis

The results of the ramp analysis show that the study freeway ramps currently have sufficient capacity to service the existing traffic volumes and the ramps would continue to have sufficient capacity to serve the project traffic volumes under project conditions.

Other Transportation Issues

Hexagon conducted a site plan review, queuing analysis, pedestrian, bicycle and transit facility analysis and parking analysis for the proposed project. Our recommendation is listed below.

Recommendation

- Red curbs should be painted for 25 feet on both sides of the project driveways to ensure adequate sight distance.
- Prior to final design, the project should provide the number of bicycle parking spaces required by the LSAP.

Table ES- 3
Intersection Level of Service Summary

#	Intersection	Control [1]	Peak Hour	Count Date	LOS Std.	Existing Conditions Avg. Delay (sec)	Existing Conditions LOS	Background Conditions Avg. Delay (sec)	Background Conditions LOS	Background + Project Conditions Avg. Delay (sec)	Background + Project Conditions LOS	Background + Project Conditions In Crit. Delay (sec)	Background + Project Conditions Incr. In Crit. V/C
1	Lawrence Expressway & Duane Avenue/Oakmead Parkway (County)	Signal	AM	02/05/20	E	38.5	D+	48.8	D	48.6	D	-0.1	0.006
			PM	02/05/20		48.3	D	50.5	D	50.8	D	0.6	0.008
2	Lawrence Expressway & Arques Avenue (County*)	Signal	AM	02/06/20	E	55.3	E+	59.0	E+	58.7	E+	-1.4	0.015
			PM	11/13/18		71.6	E	77.0	E-	77.8	E-	1.8	0.006
3	Lawrence Expressway & Kifer Road (County)	Signal	AM	03/07/18	E	54.4	D-	71.1	E	74.1	E	4.4	0.042
			PM	03/07/18		**101.6**	**F**	**>120**	**F**	**>120**	**F**	**43.5**	**0.067**
4	Lawrence Expressway & Reed Avenue/Monroe Street (County*)	Signal	AM	03/07/18	E	**114.8**	**F**	**>120**	**F**	**>120**	**F**	**5.2**	**0.010**
			PM	11/13/18		61.8	E	64.8	E	64.7	E	0.1	0.005
5	Lawrence Expressway Ramps & El Camino Real (◊*)	Signal	AM	11/14/17	E	34.5	C-	37.7	D+	38.2	D+	0.7	0.014
			PM	11/15/18		28.8	C	31.7	C	32.5	C-	1.1	0.017
6	Oakmead Parkway/Corvin Drive & Central Expressway (County*)	Signal	AM	02/06/20	E	49.7	D	62.9	E	64.3	E	2.1	0.012
			PM	11/13/18		46.9	D	58.0	E+	58.2	E+	0.0	0.000
7	Bowers Avenue & Central Expressway (County*)	Signal	AM	11/15/17	E	46.6	D	48.3	D	48.3	D	0.1	0.005
			PM	11/13/18		53.8	D-	56.0	E+	56.1	E+	0.2	0.004
8	San Zeno Way & Sonora Court	SSSC	AM	04/25/23	D	9.5	A	9.6	A	13.2	B	-	-
			PM	04/25/23		11.3	B	11.9	B	20.2	C	-	-
9	1154 Sonora Court Driveway & Sonora Court	SSSC	AM	-	D	-	-	-	-	8.8	A	-	-
			PM	-		-	-	-	-	9.4	A	-	-
10	1170 Sonora Court Driveway & Sonora Court	SSSC	AM	-	D	-	-	-	-	9.0	A	-	-
			PM	-		-	-	-	-	10.1	B	-	-

Notes:

** = CMP, ◊ = Caltrans, County = County of Santa Clara*

SSSC = Side-Street Stop-Controlled

">120" indicates this intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM 2000 methodology.

[1] Delay, LOS and volume-to-capacity ratio reported for side-street stop-controlled intersections represent the movement with the worst delay.

BOLD indicates an unacceptable level of service

BOLD and boxed indicates an adverse intersection effect

1. Introduction

This report presents the results of the local transportation analysis (LTA) conducted for the proposed 1154 and 1170 Sonora Court project in Sunnyvale, California. The project would build two residential and office mixed-use developments within the Lawrence Station Area Plan (LSAP) area on the south side of Sonora Court (see Figure 1). For the 1154 Sonora Court site, the 1.887-acre site is currently developed with an office building with 33,362 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 142,270 square feet of office space on the first three levels and 174 apartment units on the fourth to seventh levels with two levels of underground parking. For the 1170 Sonora Court site, the 1.088-acre site is currently developed with an office building with 14,902 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 79,211 square feet of office space on the first three levels and 106 apartment units on the fourth to seventh levels with two levels of underground parking. Vehicle access to both sites would be via driveways on Sonora Court (see Figure 2).

Scope of Study

This study was conducted for the purpose of satisfying the requirements of the City of Sunnyvale and the Congestion Management Program (CMP) of the Santa Clara Valley Transportation Authority (VTA). The LTA identifies the transportation operational effects of the proposed development on the key intersections, freeway ramps, and freeway segments in the vicinity of the site during the weekday AM and PM peak hours. The LTA also includes an evaluation of the project's on-site access and circulation, pedestrian and bicycle operations, transit service, and parking.

Since the project is estimated to generate more than 100 peak hour trips, the potential impacts of the project were evaluated in accordance with the standards set forth by the City of Sunnyvale and the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP). The traffic study includes an analysis of AM and PM peak hour traffic conditions for 10 intersections in the vicinity of the project site. Five of the study intersections are CMP intersections. Three of the study intersections are unsignalized intersections under existing conditions. The study intersections were selected to include locations where the proposed project is expected to generate 10 or more peak-hour trips per lane.

The Santa Clara County VTA CMP guidelines require that the CMP freeway segments be evaluated to determine the effect of added traffic for projects that generate trips equal to or greater than one percent of the freeway segment's capacity. The proposed project is expected to generate added traffic volume on two freeway segments along US 101. The LTA also includes a capacity analysis for four freeway ramps.

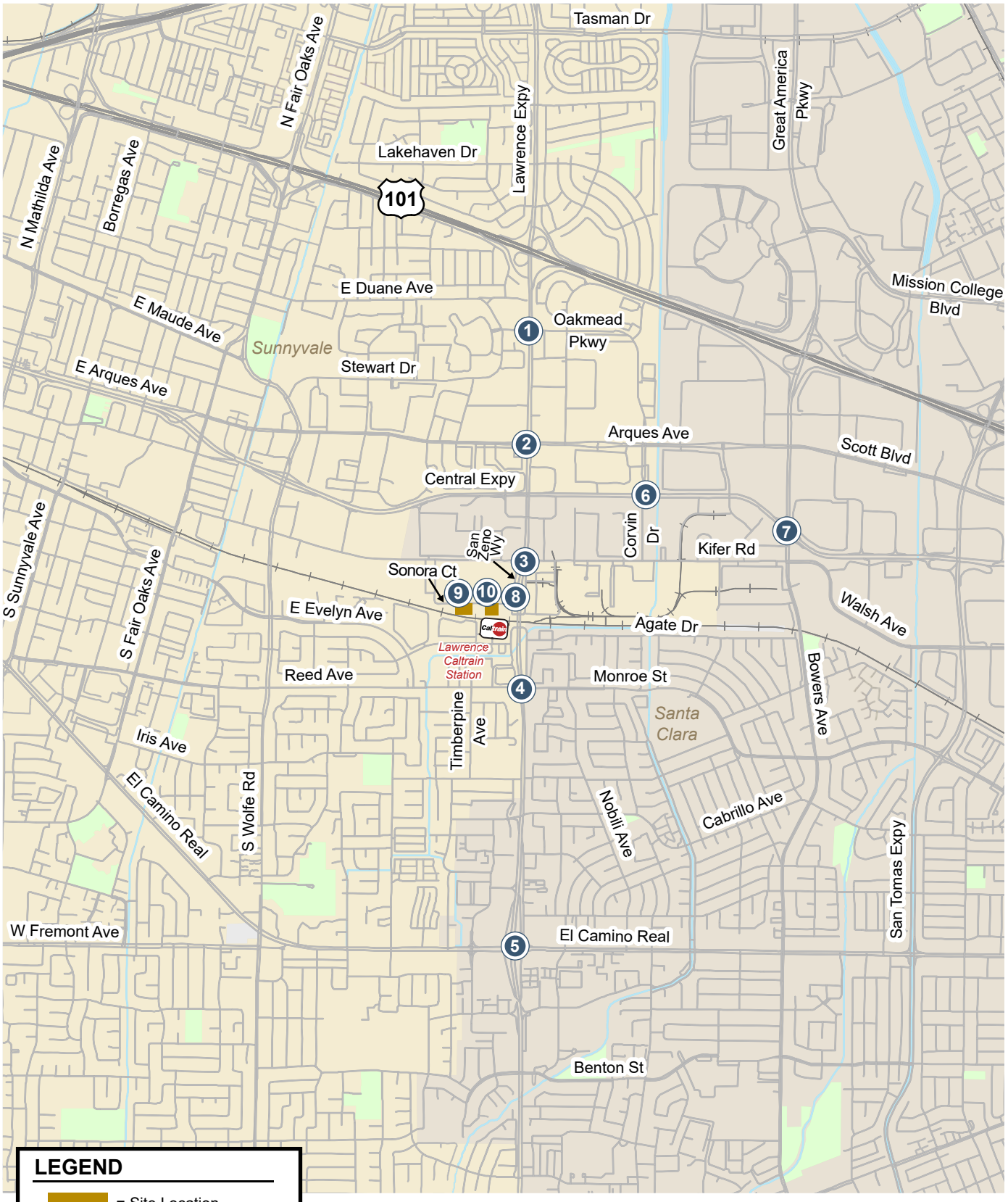
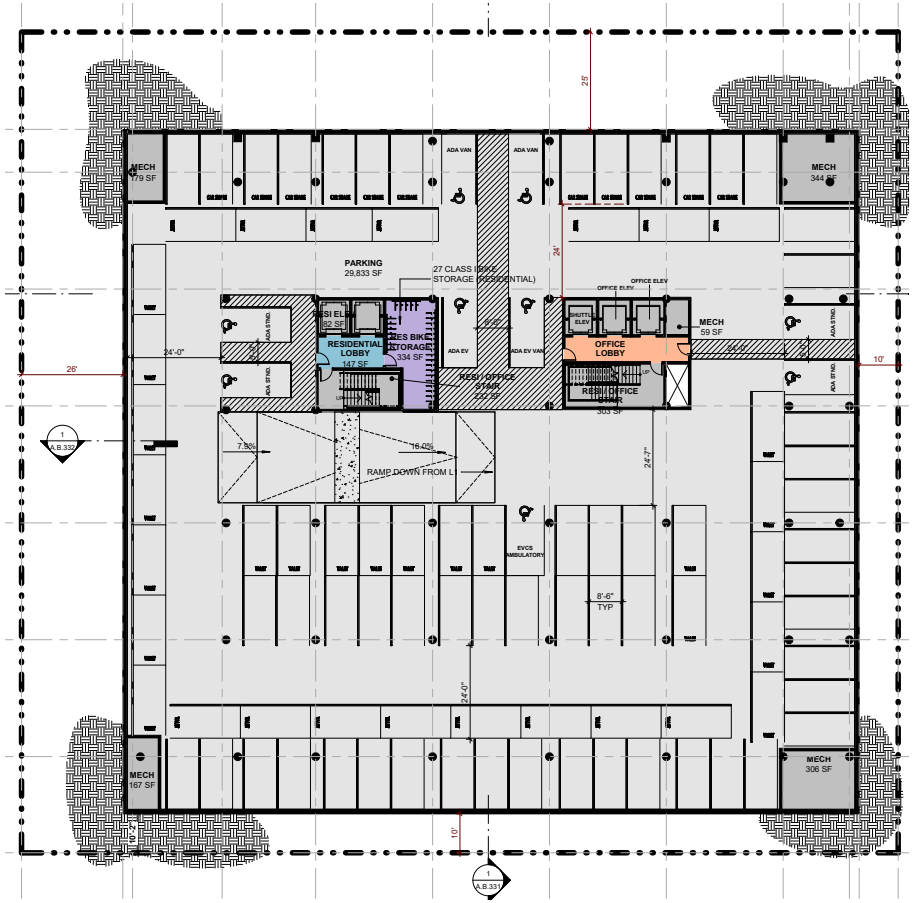


Figure 1
Site Location and Study Intersections

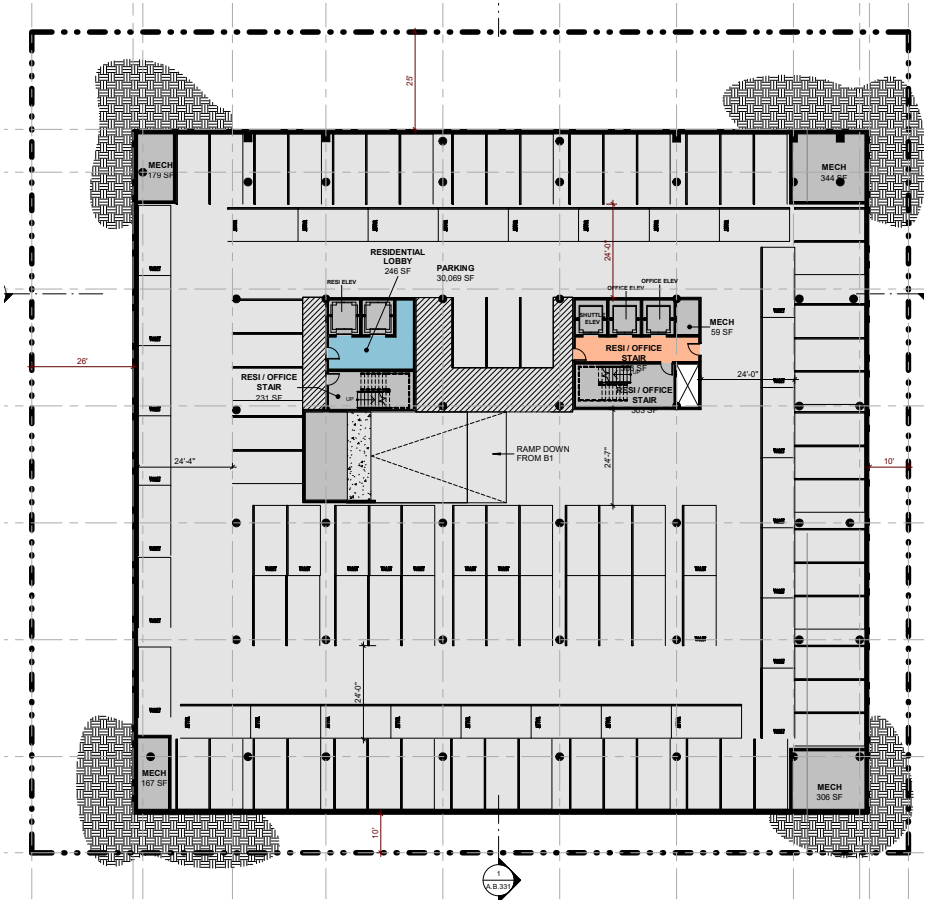
BUILDING A - FLOOR PLAN - LEVEL B1

BUILDING A - FLOOR PLAN - LEVEL B2

Figure 2A
Site Plan for 1154 Sonora Court



BUILDING B - FLOOR PLAN - LEVEL B1



BUILDING B - FLOOR PLAN - LEVEL B2

Figure 2B
Site Plan for 1170 Sonora Court

NORTH
Not to Scale

The study intersections, freeway segments, and freeway ramps are listed below.

Study Intersections

1. Lawrence Expressway & Duane Avenue/Oakmead Parkway
2. Lawrence Expressway & Arques Avenue (CMP)
3. Lawrence Expressway & Kifer Road
4. Lawrence Expressway & Reed Avenue/Monroe Street (CMP)
5. Lawrence Expressway & El Camino Real Ramps (CMP)
6. Oakmead Parkway & Central Expressway (CMP)
7. Bowers Avenue & Central Expressway (CMP)
8. San Zeno Way & Sonora Court (unsignalized)
9. 1154 Sonora Court Driveway & Sonora Court (unsignalized)
10. 1170 Sonora Court Driveway & Sonora Court (unsignalized)

Study Freeway Segments

US 101

1. Between Fair Oaks Avenue and Lawrence Expressway
2. Between Lawrence Expressway and Bowers Avenue/Great America Parkway

Study Freeway Ramps

US 101 and Lawrence Expressway Interchange

1. Northbound Off-Ramp to Lawrence Expressway
2. Southbound On-Ramp from Northbound Lawrence Expressway
3. Northbound On-Ramp from Northbound Lawrence Expressway
4. Southbound Off-Ramp to Lawrence Expressway

Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour is expected to occur between 7:00 AM and 10:00 AM, and the PM peak hour is expected to occur between 4:00 PM and 7:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.

Traffic conditions were evaluated for the scenarios described below.

Scenario 1: *Existing Conditions.* Existing traffic volumes at study intersections were obtained from previous studies, peak hour traffic counts collected in 2023, and the 2018 CMP TRAFFIX database. Existing traffic count data are provided in Appendix A.

Scenario 2: *Background Conditions.* Background conditions were estimated by adding to existing traffic volumes the project traffic from approved but not yet completed and occupied developments in the study area. Approved projects and approved project trip information were obtained from the City of Sunnyvale and the City of Santa Clara. In addition, roadway improvements associated with the approved developments were assumed as directed by City Staff.

Scenario 3: *Background Plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

According to VTA's CMP TIA guidelines, a scenario analyzing project impacts under cumulative conditions is also required. Because the project is consistent with the Lawrence Station Area Plan

(LSAP) Update, adopted in 2021, the cumulative project impacts are included in the *Lawrence Station Area Plan Update Transportation Impact Analysis*.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from the City of Sunnyvale, the City of Santa Clara, the VTA CMP TRAFFIX database, county records for freeways and expressways, Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition (2021)*, and previous traffic studies. The following data were collected from these sources:

- Existing traffic volumes
- Existing lane configurations
- Signal timing and phasing
- Applicable trip generation rates
- Approved projects information

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The level of service analysis was supplemented with a queuing analysis for selected movements at the study intersections and an analysis of freeway segments and freeway ramps in the study area. In addition, the unsignalized intersections were evaluated to determine if the intersections would meet the peak hour signal warrant. The various analysis methods are described in further detail below.

Signalized Study Intersections

The City of Sunnyvale and County of Santa Clara use the Highway Capacity Manual (HCM) 2000 operations method for level of service analysis at signalized intersections. This methodology is applied using the TRAFFIX software. The HCM 2000 operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated traffic impact analysis tool, the City of Sunnyvale employs the CMP default values for the analysis parameters within the software.

The City of Sunnyvale level of service standards for signalized intersections are LOS D or better. Within the City of Sunnyvale, intersections on roadways considered to be "regionally significant" have a standard of LOS E. In the study area, signalized intersections within Sunnyvale along Central Expressway and Lawrence Expressway are considered regionally significant. The correlation between average control delay and level of service is shown in Table 1.

CMP Intersections

The designated level of service analysis methodology for the CMP is also the HCM 2000 operations method for signalized intersections, using TRAFFIX. The CMP level of service standard for signalized intersections under the jurisdictions of the City of Sunnyvale and Caltrans is LOS E or better.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec/veh)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+ B B-	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0 12.1 to 18.0 18.1 to 20.0
C+ C C-	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 23.0 23.1 to 32.0 32.1 to 35.0
D+ D D-	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0 39.1 to 51.0 51.1 to 55.0
E+ E E-	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur	55.1 to 60.0 60.1 to 75.0 75.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0
Source:	Transportation Research Board, 2000 Highway Capacity Manual (Washington, D.C., 2000) p10-16. VTA Traffic Level of Service Analysis Guidelines (June 2003), Table 2.	

Unsignalized Study Intersections

The level of service for the unsignalized intersections was evaluated using the HCM 2000 methodology. Level of service for unsignalized (stop-controlled and yield controlled) intersections is evaluated based on the delay experienced by vehicles on the controlled approaches. For side-street stop-controlled intersections, operations are defined by the delay experienced by the worst movement. The City of Sunnyvale General Plan level of service standard for unsignalized intersections is LOS D or better.

The correlation between delay and level of service for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Based on Delay

Level of Service	Description	Average Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

Traffic Signal Warrant Analysis

An assessment of the need for signalization was conducted for unsignalized study intersections. For this study, the need for signalization was assessed on the basis of the peak hour volume signal warrant (Warrant #3) described in the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD). This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify the installation of a traffic signal. It should be noted that it is just one of the factors/warrants used to indicate whether installation of a traffic control signal is justified.

Freeway Segments

Within Santa Clara County, freeway segments are analyzed as prescribed in the Santa Clara County CMP technical guidelines. The level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

D = V / (N*S)

Where:

D = density, in vehicles per mile per lane (vpmpl)

V = peak hour volume, in vehicle per hour (vph)

N = number of travel lanes

S = average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table 3. The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from high-occupancy vehicle (HOV) lanes (otherwise known as carpool lanes). The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments three lanes or wider in one direction, and a capacity of 2,200 vphpl be used for segments two lanes wide in one direction. HOV lanes are specified as having a capacity of 1,650 vphpl. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Table 3
Freeway Segment Level of Service Definition

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	11.0 or less
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	11.0 to 18.0
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	18.0 to 26.0
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	26.0 to 46.0
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	46.0 to 58.0
F	Vehicular flow breakdowns occurs. Large queues form behind breakdown points.	greater than 58.0
Source:	Santa Clara County Valley Transportation Authority, Transportation Impact Analysis Guidelines, Updated March 2009 (Based on the Highway Capacity Manual (2000), Washington, D.C.)	

Freeway Ramps

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the study interchanges. The ramp capacities were obtained from the Highway Capacity Manual 2000, and considered the free-flow speed, number of lanes on the ramp, and ramp metering.

Vehicle Queuing

For selected high-demand movements at the study intersections, the estimated maximum vehicle queues were compared to the existing or planned storage capacity. The queuing analysis is presented for informational purposes only. The City of Sunnyvale does not have impact criteria for intersection queuing. However, in the City of Sunnyvale, a project is said to create an operational deficiency if the background plus project conditions increases the 95th percentile queue by one vehicle for a movement that is already over capacity compared to the background conditions.

Vehicle queues were calculated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

$P(x = n)$ = probability of "n" vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement.

For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. The 95th percentile queue length is also known as the "design queue length."

Adverse Effect Criteria

Criteria are used to establish what constitutes an adverse effect on the transportation system. For this analysis, the criteria used to determine adverse effects on signalized and unsignalized intersections as well as freeway facilities are based on the City of Sunnyvale and VTA's CMP level of service standards.

The effects of the project on other transportation facilities, such as bicycle facilities and transit service, were determined on the basis of engineering judgment.

Definition of Adverse Effects at Signalized Intersections

The project is said to create an adverse effect on traffic conditions at a signalized intersection in the City of Sunnyvale if for the study peak hour:

1. The level of service at the intersection drops below its respective level of service standard when project traffic is added; or
2. An intersection that operates below its level of service standard under no project conditions experiences an increase in critical-movement delay of four (4) or more seconds, *and* the critical volume-to-capacity ratio (v/c) is increased by 0.01 or more when project traffic is added.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements is negative. In this case, the threshold is when the project increases the critical V/C value by 0.01 or more.

An adverse effect by the City of Sunnyvale and CMP standards is said to be satisfactorily addressed when measures are implemented that would restore intersection conditions to its LOS standard *or* to an average delay equal to without-project conditions or better.

Definition of Adverse Effects at Unsignalized Intersections

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in type of intersection control (i.e. all-way stop or signalization). As part of this evaluation, traffic volumes, delays, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Per City of Sunnyvale guidelines, for determining the level of service for unsignalized intersections, the average intersection delay is used for all-way stop controlled intersections, and the worst movement delay is used for side-street stop-controlled intersections. Project impacts at the City's unsignalized intersections would be considered an adverse intersection operation effect if Criteria 1 or 2 are met in conjunction with Criteria 3:

1. If an unsignalized intersection operates at an acceptable LOS (i.e. D or better) without the project and degrades to an unacceptable LOS (i.e. LOS E or F) with the addition of project traffic.
2. If an unsignalized intersection operates at an unacceptable LOS (i.e. LOS E or F) without the project and the addition of project traffic increases:
    a. The average intersection delay by four (4) seconds or more, and the volume-to-capacity value by 0.01 or more for all-way stop controlled intersections; or
    b. The worst movement delay by four (4) seconds or more, and the volume-to-capacity value by 0.01 or more for side-street stop controlled.
3. Intersection meets the warrant(s) for installation of a traffic signal as per the latest edition of California Manual on Uniform Traffic Control Devices.

Definition of Adverse Freeway Effects

For this analysis, the criteria used to determine adverse effects on freeway segments are based on CMP standards. Per CMP requirements, adverse freeway effects are measured relative to existing conditions (i.e. there is no evaluation of freeways under background conditions). The project is said to create an adverse effect on traffic conditions on a freeway segment if for either peak hour:

1. The level of service of the freeway segment drops below the LOS E standard when project traffic is added; or
2. The level of service of the freeway segment is LOS F under existing conditions and the number of new trips added by the project is more than one percent of the freeway capacity.

Definition of Adverse Freeway Ramp Effects

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. For the purpose of this study, the project is said to create an adverse effect on a freeway ramp if its implementation:

1. Causes the volume-to-capacity (v/c) ratio of the freeway ramp to exceed 1.0; or
2. Increases the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent (1%) of the ramp's capacity.

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 3 presents the traffic conditions in the study area under background conditions. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under background plus project conditions. Also included in Chapter 4 are the freeway segment and freeway ramp analyses. Chapter 5 provides an evaluation of other transportation related issues for the proposed project, such as vehicle queuing, potential project impacts on transit, pedestrian, and bicycle facilities, site access and circulation, and parking. Chapter 6 presents the traffic study conclusions, including a summary of any recommended improvement measures.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities.

Existing Roadway Network

Regional access to the study area is provided by US 101.

US 101 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the site. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the project area is provided via full interchanges at Lawrence Expressway.

Major roadways within or near the project area include: Lawrence Expressway, Central Expressway, Kifer Road, Reed Avenue/Monroe Street, San Zeno Way/Lawrence Station Road, and Sonora Court. These roads are described below.

Lawrence Expressway is a north-south, eight-lane expressway with a raised median and a posted speed limit of 50 miles per hour (mph) in the project vicinity. It begins at Saratoga Avenue in the south, crosses through Sunnyvale, extends northward and transitions into Caribbean Drive. Lawrence Expressway connects with US 101 via a full-access freeway interchange. Lawrence Expressway includes sidewalks along both sides on most segments and crosswalks at signalized intersections. There are no bike lanes on Lawrence Expressway, but bikes are allowed to ride on the shoulders. On-street parking is not permitted on this roadway. Lawrence Expressway provides regional access to the project site via its interchanges with US 101 and Central Expressway, and the at-grade intersection at Kifer Road.

Central Expressway is an east-west, four-lane to six-lane expressway. It begins at Trimble Road in the east, crosses Sunnyvale, extends westward and transitions into Alma Street. In the study area, Central Expressway has two eastbound lanes and two westbound lanes and a posted speed limit of 50 mph. On-street parking is prohibited on Central Expressway and no sidewalks are provided. There are no bike lanes along Central Expressway, but bikes are allowed to ride on the shoulders. Central Expressway connects to Commercial Street, Lawrence Expressway, and Oakmead Parkway/Corvin Drive in the project vicinity.

Kifer Road is an east-west, four-lane roadway within the project vicinity with a posted speed limit of 40 mph. Kifer Road begins west at Fair Oaks Avenue and extends east towards Bowers Avenue, where it transitions into Walsh Avenue. Kifer Road has a center two-way left-turn median along the entirety of the roadway. On-street parking is prohibited on both sides of Kifer Road within the project vicinity. In the study area, Kifer Road includes sidewalks along most segments of the roadway and crosswalks at

the nearby signalized intersections. Bike lanes or bike routes are provided on both sides of Kifer Road between Fair Oaks Avenue and Uranium Drive.

Reed Avenue/Monroe Street is a two-lane to four-lane roadway with a posted speed limit of 35 mph in the project vicinity. Reed Avenue/Monroe Street begins west at Wolfe Road as Reed Avenue and extends southeast towards its terminus at Tisch Way in the City of San Jose. Reed Avenue is within the City of Sunnyvale, and transitions to Monroe Street in the City of Santa Clara at its intersection with Lawrence Expressway (Sunnyvale-Santa Clara city boundary). Reed Avenue/Monroe Street has a center two-way left-turn lane that runs along the entirety of the roadway. In the study area, on-street parking is permitted on the north side of Reed Avenue between Wolfe Road and Sitka Terrace and along portions of both sides between Evelyn Avenue and Willow Avenue. On Monroe Street, on-street parking is permitted on both sides east of Nobili Avenue. Sidewalks are present along both sides of the street. Bike lanes are provided on both sides of Reed Avenue between Sunnyvale Avenue and Lawrence Expressway and on the north side of Monroe Street between Lawrence Expressway and Nobili Avenue.

San Zeno Way/Lawrence Station Road is a two-lane roadway with a posted speed limit of 25 mph in the project vicinity. San Zeno Way begins at Kifer Road, immediately west of the Lawrence Expressway/Kifer Road intersection, extends south and transitions into Lawrence Station Road at the Lawrence Expressway overcrossing where it then extends north and ends immediately east of the Lawrence Expressway/Kifer Road intersection. Parking is not permitted on either side of the street. Sidewalks are provided along the west side of San Zeno Way and the east side of Lawrence Station Road. Bike lanes are not present. San Zeno Way provides access to the project sites via Sonora Court.

Sonora Court is a two-lane roadway with an implied speed limit of 25 mph in the project vicinity. Sonora Court begins at San Zeno Way in the east and ends in a cul-de-sac approximately 1,500 feet to the west. Parking is permitted on both sides of the street. Sidewalks and bike lanes are not present. Sonora Court provides direct access to the project sites.

Existing Transit Service

Existing transit services in the vicinity of the project site are provided by VTA and Caltrain. Transit services are described below and shown on Figure 3.

Caltrain Service

Commuter rail service between San Francisco and Gilroy is provided by Caltrain. The Lawrence Caltrain Station, located beneath the Lawrence Expressway overcrossing between Reed Avenue and Kifer Road, provides Caltrain service with approximately 20- to 35-minute headways during the weekday AM and PM commute hours and 60-minute headways during weekday midday and night hours as well as on weekends. The Lawrence Caltrain Station provides service for only Local and Limited-Stop trains. Services at this station are provided between 4:40 AM and 1:27 AM (next day). The Baby-Bullet train does not stop at the Lawrence Caltrain Station. The 1154 Sonora Court project site is located about 1,200 feet from the Lawrence Caltrain Station, which is approximately a 5-minute walk. The 1170 Sonora Court site is located about 670 feet (a 3-minute walk) from the Lawrence Caltrain Station. Continuous pedestrian facilities are not present between the project site and the Lawrence Caltrain Station, since there are no sidewalks along Sonora Court. Between the project site and the Lawrence Caltrain Station, San Zeno Way and Sonora Court do not provide bicycle facilities.

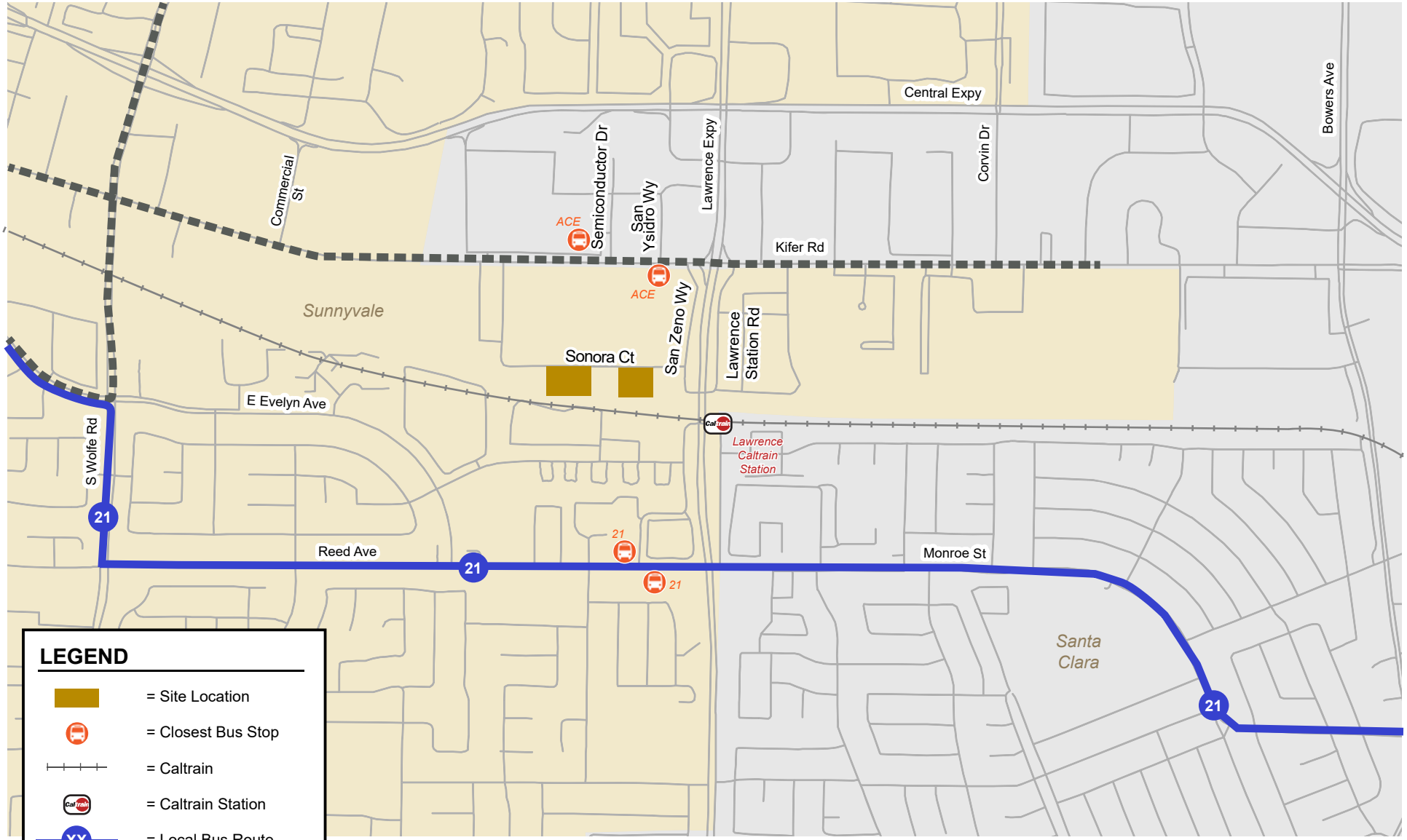


Figure 3
Existing Transit Services

ACE Shuttle Service

The project site is also served by the VTA ACE Gray Shuttle, which connects to the Altamont Corridor Express (ACE) Great America Amtrak Station in Santa Clara. ACE provides commuter rail service between Stockton, Tracy, Pleasanton, and San Jose during commute hours. The Gray Shuttle starts/ends at the Great America ACE Station and runs on Arques Avenue, Wolfe Road, and Kifer Road, with four southbound trips in the morning (between 6:06 AM and 10:00 AM) and six northbound trips in the afternoon/evening (between 3:09 PM and 6:39 PM) with headways between 60 and 90 minutes. The nearest bus stop at San Ysidro Way & Kifer Road serves the southbound routes and is located 0.3 mile from the 1170 Sonora Court site and 0.4 mile from the 1154 Sonora Court site.

VTA Bus Service

The project site is also served by Valley Transportation Authority (VTA) Local Route 21, which runs between the Stanford Shopping Center and Santa Clara Transit Center. Route 21 runs on Evelyn Avenue, Reed Avenue, and Monroe Street in the project vicinity between 5:31 AM and 9:48 PM with headways of 30 minutes during the peak commute hours. The nearest bus stop serves the westbound routes and is located 0.5 mile from the 1170 Sonora Court site and 0.6 mile from the 1154 Sonora Court site.

Existing Bicycle Facilities

Bicycle facilities in the project vicinity include multi-use paths, bike lanes, and bike routes. Class I multi-use paths are off-street trails, either paved or unpaved, that are shared between pedestrians and bicyclists. Class II bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Class IIB bike lanes are on-street bike lane facilities that separate bicycles from vehicle traffic by a painted buffer. Class III bike routes are streets that accommodate bicycles with pavement markings and signage but are not separate from the travel lanes. The existing bicycle facilities in the study area are shown on Figure 4. The following bicycle facilities exist within the immediate project vicinity:

A Class I multi-use path exists along the Caltrain tracks and through the Intuitive Surgical campus, connecting the west end of Sonora Court to Kifer Road. There are also bicycle and pedestrian bridges crossing Calabazas Creek and Bowers Avenue, just south of the Caltrain tracks.

Bike Lanes:

- Kifer Road between Fair Oaks Avenue and Uranium Drive, and east of Bowers Avenue
- Evelyn Avenue, along its entire length
- Reed Avenue/Old San Francisco Road between Sunnyvale Avenue and Lawrence Expressway
- Wolfe Road between Reed Avenue and Fair Oaks Avenue
- Arques Avenue/Scott Boulevard between Central Expressway and Fair Oaks Avenue
- Oakmead Parkway between Lawrence Expressway and Central Expressway
- Bowers Avenue between Great America Parkway and Chromite Drive
- Aster Avenue between E. Evelyn Avenue and Willow Avenue

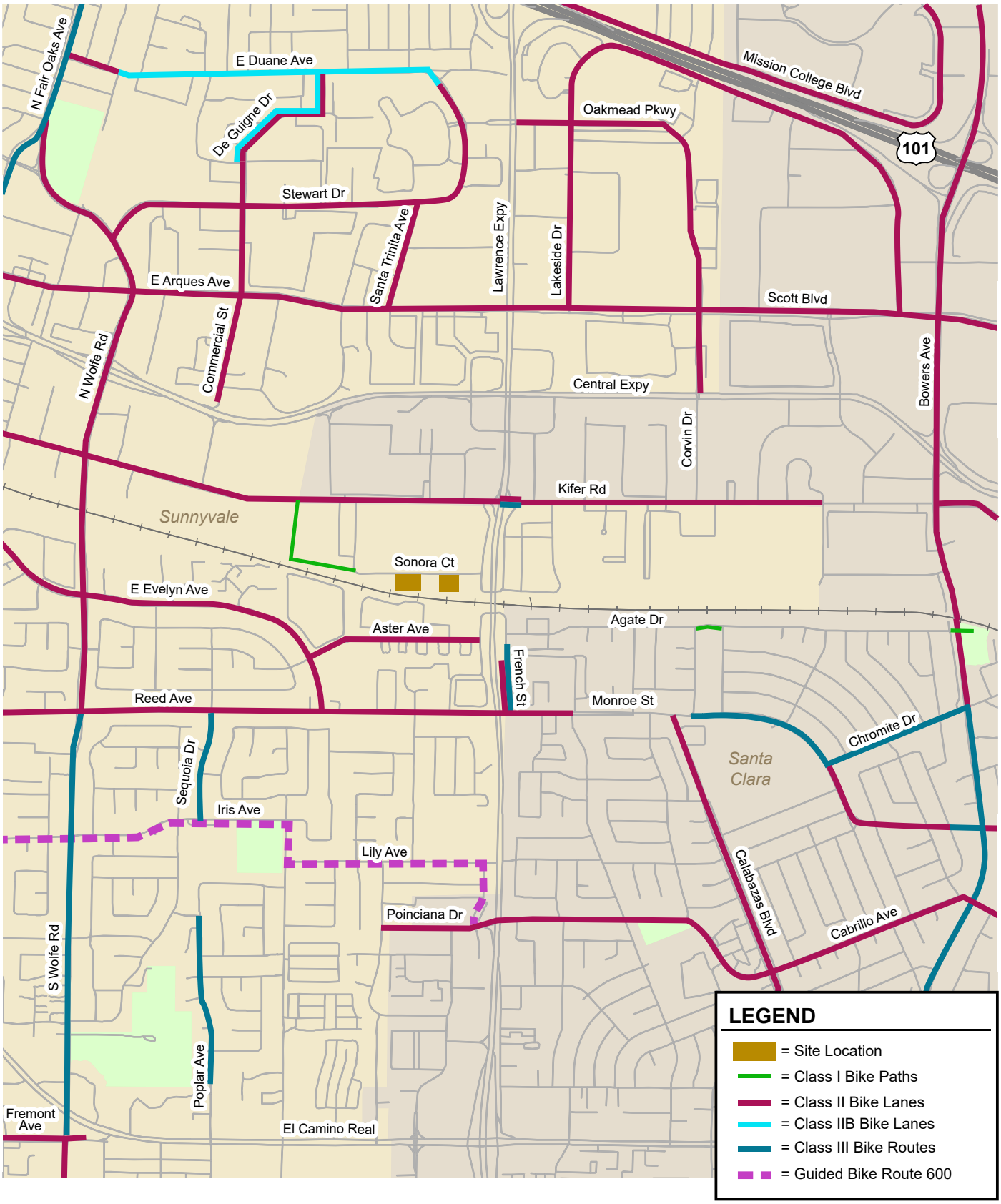


Figure 4
Existing Bicycle Facilities

Bike routes are present along Wolfe Road between Fremont Avenue and Reed Avenue, on Bowers Avenue between El Camino Real and Chromite Drive, and along sections of Kifer Road, French Street, and Monroe Street. According to the *City of Sunnyvale Bike Map, 2022 Edition*, there are three guided bike routes within the City. Bike Route 600 is located within the project vicinity and is a generally east-west bike route that extends from the intersection at Bernardo Avenue and El Camino Real and ends at Poinciana Drive. This route travels parallel and north of El Camino Real along residential roadways (mainly Olive Avenue, Gail Avenue, Iris Avenue and Lily Avenue). This route provides access to the Civic Center, Ellis Elementary School, Braly Elementary School and Ponderosa Elementary School.

Overall, the existing bicycle facilities in the study area provide adequate connections for bicycles. However, Sonora Court, San Zeno Way, Lawrence Station Road, and Willow Avenue do not provide bicycle facilities, which would otherwise connect the Lawrence Caltrain Station and the project sites to the surrounding areas.

Existing Pedestrian Facilities

The pedestrian facilities within the study area include sidewalks along most of the streets and striped crosswalks at major intersections. In the immediate project vicinity, sidewalks are present along the west side of San Zeno Way, the east side of Lawrence Station Road, and along the majority of Kifer Road. Sidewalks are missing on both sides of Sonora Court, including the project frontages.

Pedestrian crosswalks and signal heads are present at the nearby signalized intersections. The unsignalized intersections of San Zeno Way and Kifer Road, and Lawrence Station Road and Kifer, operate under side-street stop control and have marked crosswalks across the south legs. The unsignalized intersection of San Ysidro Way and Kifer Road also operates under side-street stop control and has a marked crosswalk across the north leg. Crosswalk is missing at the unsignalized intersection of San Zeno Way and Sonora Court.

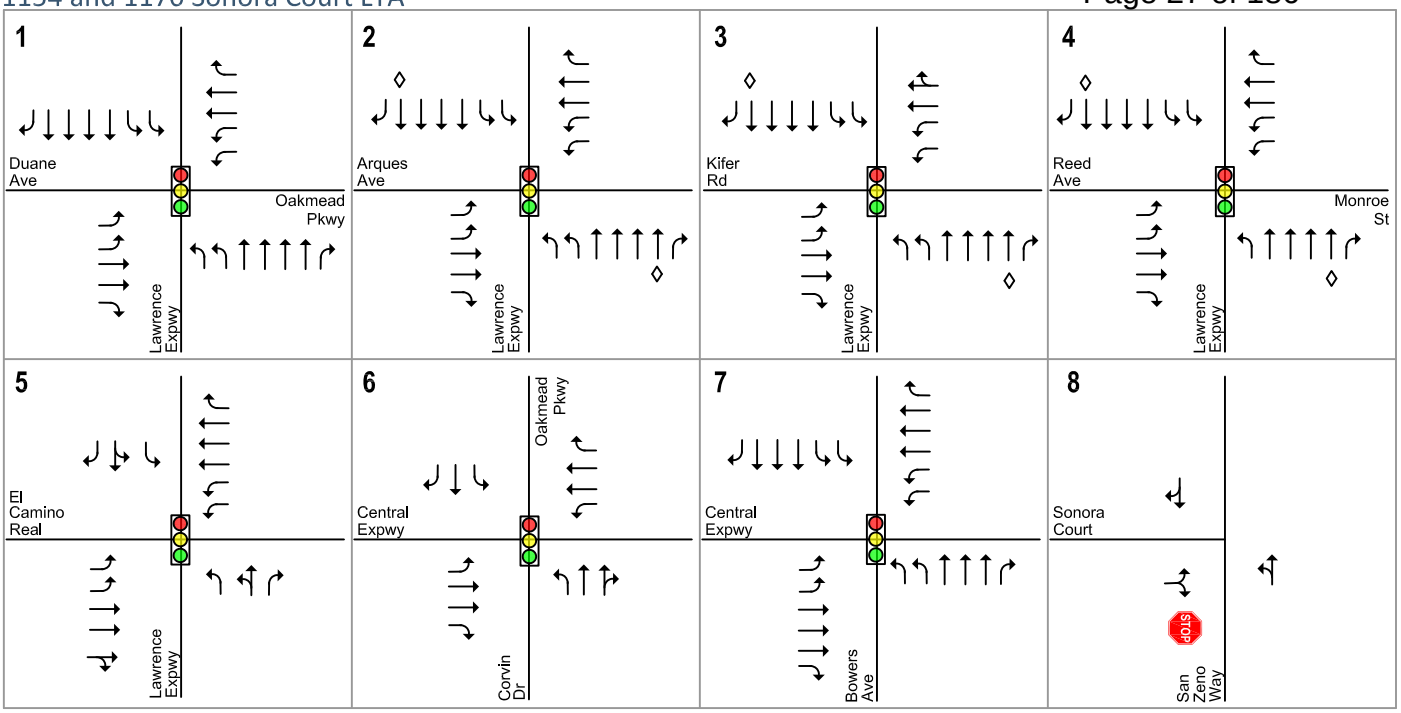
Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by previous traffic studies and satellite imagery and are shown on Figure 5.

Existing Traffic Volumes

The existing traffic volumes were obtained from the *Lawrence Station Area Plan Update TIA*, dated August 31, 2020, the *Moffett Park Specific Plan Update TIA*, dated December 15, 2022, and peak hour traffic counts collected in April of 2023. The existing PM traffic counts for the CMP intersections were collected in 2018. Traffic counts older than 2018 were escalated to 2020 (pre-pandemic) conditions using a compound annual growth rate of 0.1%.

Since historic traffic counts were not available at the intersection of San Zeno Way & Sonora Court, new counts were conducted and adjusted to represent pre-pandemic traffic volumes. This was done by comparing pre-pandemic counts from 2018 and new traffic counts from 2023 at the intersection of Lawrence Expressway & Kifer Road. The counts for the eastbound approach were compared to develop an adjustment factor of 138% for the PM peak hour. This adjustment factor was applied to the San Zeno Way & Sonora Court traffic counts to represent pre-pandemic traffic volumes during the PM peak hour. During the AM peak hour, the 2023 traffic counts at Lawrence Expressway & Kifer Road were higher than the 2018 counts. Therefore, the 2023 counts at San Zeno Way & Sonora Court were used for the AM peak hour as a conservative approach. The existing AM and PM peak hour traffic volumes are shown graphically on Figure 6. Traffic count data are included in Appendix A.



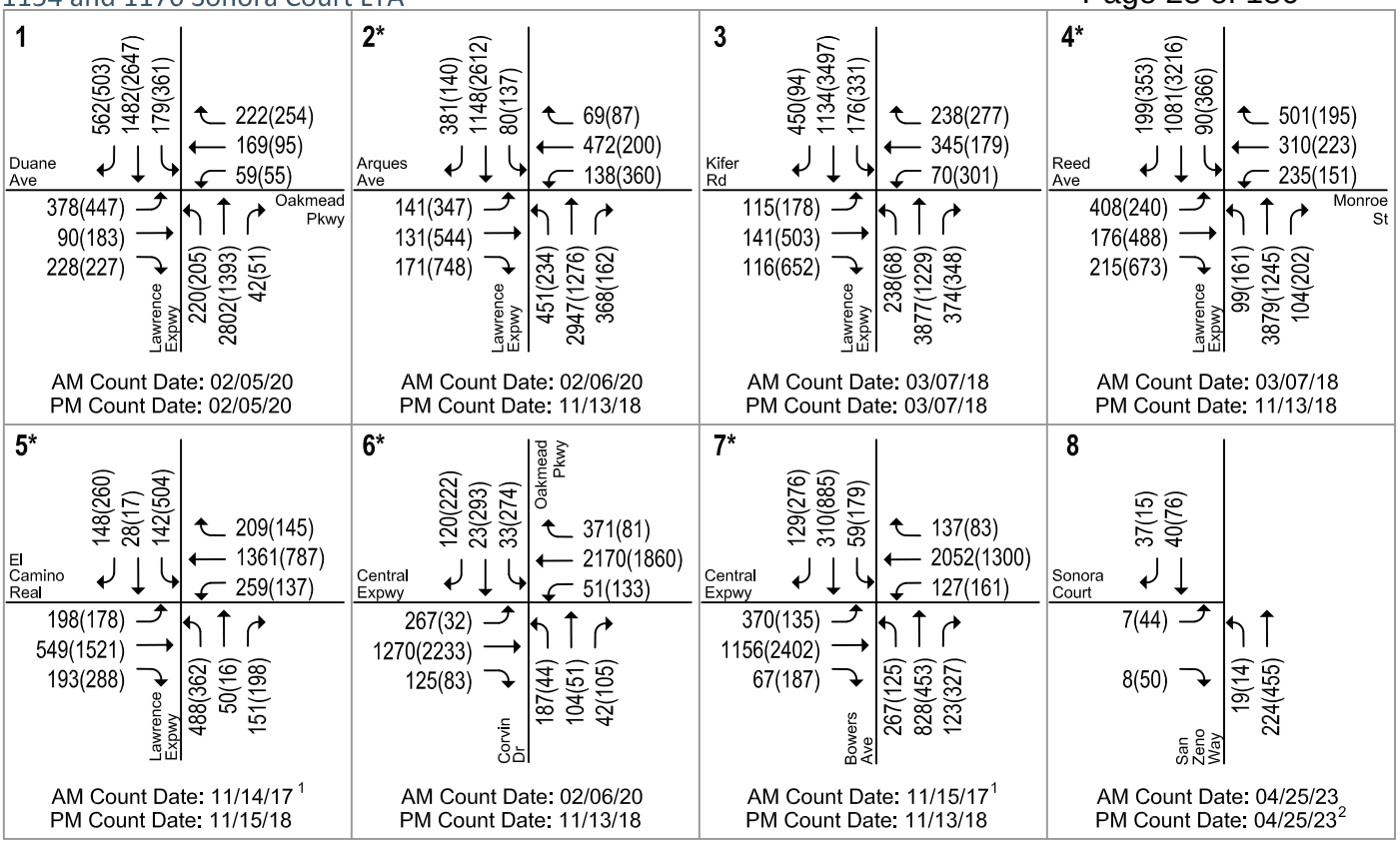
LEGEND

◊ = HOV Lane

= Signalized Intersection

= Stop Controlled Approach

Figure 5
Existing Lane Configurations



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

NOTE: * = CMP Intersection

[1] Counts were escalated to 2020 (pre-pandemic) conditions using a compound annual growth rate of 0.1%.

[2] Counts were adjusted to represent pre-pandemic traffic volumes by comparing pre-pandemic counts from 2018 and new traffic counts from 2023.

Figure 6
Existing Traffic Volumes

Existing Intersection Levels of Service

Intersection levels of service were evaluated against the respective City, County and CMP standards. The results of the intersection level of service analysis under existing conditions are summarized in Table 4. The results of the analysis show that the following Santa Clara County intersections currently operate at unacceptable levels.

- Lawrence Expressway & Kifer Road (#3) – PM peak hour (LOS F)
- Lawrence Expressway & Reed Avenue/Monroe Street (#4) – AM peak hour (LOS F)

The unsignalized study intersection, San Zeno Way & Sonora Court, currently operates at LOS B or better under existing conditions. However, the peak-hour signal warrant was checked for this intersection due to the anticipated project traffic. The results show that this intersection does not meet the peak-hour signal warrant under existing conditions. The intersection level of service sheets are included in Appendix C. The peak-hour signal warrant worksheets are included in Appendix D.

Table 4
Existing Level of Service Summary

#	Intersection	Control [1]	Peak Hour	Count Date	LOS Std.	Existing Avg. Delay (sec)	Existing LOS
1	Lawrence Expressway & Duane Avenue/Oakmead Parkway (County)	Signal	AM	02/05/20	E	38.5	D+
			PM	02/05/20		48.3	D
2	Lawrence Expressway & Arques Avenue (County*)	Signal	AM	02/06/20	E	55.3	E+
			PM	11/13/18		71.6	E
3	Lawrence Expressway & Kifer Road (County)	Signal	AM	03/07/18	E	54.4	D-
			PM	03/07/18		**101.6**	**F**
4	Lawrence Expressway & Reed Avenue/Monroe Street (County*)	Signal	AM	03/07/18	E	**114.8**	**F**
			PM	11/13/18		61.8	E
5	Lawrence Expressway Ramps & El Camino Real (◊*)	Signal	AM	11/14/17 [2]	E	34.5	C-
			PM	11/15/18		28.8	C
6	Oakmead Parkway/Corvin Drive & Central Expressway (County*)	Signal	AM	02/06/20	E	49.7	D
			PM	11/13/18		46.9	D
7	Bowers Avenue & Central Expressway (County*)	Signal	AM	11/15/17 [2]	E	46.6	D
			PM	11/13/18		53.8	D-
8	San Zeno Way & Sonora Court	SSSC	AM	04/25/23	D	9.5	A
			PM	04/25/23 [3]		11.3	B

Notes:

** = CMP, ◊ = Caltrans, County = County of Santa Clara*

SSSC = Side-Street Stop-Controlled

[1] Delay and LOS reported for side-street stop-controlled intersections represent the movement with the worst delay.

[2] Counts were escalated to 2020 (pre-pandemic) conditions using a compound annual growth rate of 0.1%.

[3] Counts were adjusted to represent pre-pandemic traffic volumes by comparing pre-pandemic counts from 2018 and new traffic counts from 2023.

BOLD indicates unacceptable level of service

Existing Freeway Levels of Service

Existing weekday AM and PM peak-hour traffic volumes on the study freeway segments were obtained from the *2018 CMP Monitoring & Conformance Report* published by VTA (see Table 5). Both study freeway segments on US 101 are operating at LOS F in the northbound direction in the morning and LOS F in the southbound direction in the evening.

Table 5
Existing Freeway Level of Service Summary

Freeway	Dir.	Segment	Peak Hour	Existing Conditions - Mixed Flow Lanes[1] Avg. Speed (mph)	# of Lanes	Capacity	Density (pc/mi/ln)	Volume	LOS[2]
US 101	SB	Fair Oaks Avenue to Lawrence Expressway	AM	60.0	3	6,900	30.0	5,346	D
			PM	**12.4**	**3**	**6,900**	**79.0**	**2,949**	**F**
US 101	SB	Lawrence Expressway to Great America Parkway	AM	55.0	3	6,900	35.0	5,850	D
			PM	**6.4**	**3**	**6,900**	**91.0**	**1,746**	**F**
US 101	NB	Great America Parkway to Lawrence Expressway	AM	**17.2**	**3**	**6,900**	**72.0**	**3,702**	**F**
			PM	47.6	3	6,900	42.0	5,964	D
US 101	NB	Lawrence Expressway to Fair Oaks Avenue	AM	**18.2**	**3**	**6,900**	**70.0**	**3,840**	**F**
			PM	47.2	3	6,900	42.0	5,958	D

Notes
Dir. = direction, NB = northbound, SB = southbound, mph = miles per hour, pc/mi/ln = passenger cars per mile per lane
[1] Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2018.
BOLD indicates substandard level of service.

Existing Freeway Ramp Capacity Analysis

This analysis consists of a volume-to-capacity ratio evaluation of four freeway ramps at the interchange of US 101 and Lawrence Expressway. The ramp capacities were obtained from the *Highway Capacity Manual 2000* (Chapter 25), which considers the free-flow speed, the number of lanes on the study ramp, and ramp metering.

To be conservative, if an on-ramp has meter equipment present, the ramp was analyzed assuming it is metered. It is assumed that the metered ramps would each have a capacity of 900 vehicles per hour for the mixed-flow lanes. A capacity of 900 vehicles per hour is assumed for the HOV lanes. The peak-hour freeway ramp volumes were obtained through traffic counts from 2019. As shown in Table 6, all freeway ramps currently have sufficient capacity to serve the existing traffic volumes. The study ramps have volume-to-capacity (V/C) ratios that are well below 1.0, which means that the existing traffic demand is lower than the ramp capacity.

Table 6
Existing Freeway Ramp Capacity Analysis

Interchange	Ramp	Type	Peak Hour	Lanes			Existing Conditions		
				Mixed Flow	HOV	Meter[1]	Capacity[2]	Peak Volume[3]	v/c
US 101/ Lawrence Expressway	NB Off-Ramp to Lawrence Expressway	Diagonal	AM	2	-	-	3,500	1,278	0.37
			PM				3,500	1,185	0.34
	SB On-Ramp from NB Lawrence Expressway	Diagonal	AM	2	1	Equipment Present	1,800	584	0.32
			PM				1,800	352	0.20
	NB On-Ramp from NB Lawrence Expressway	Loop	AM	1	1	Equipment Present	1,800	484	0.27
			PM				1,800	378	0.21
	SB Off-Ramp to Lawrence Expressway	Diagonal	AM	2	-	-	3,500	738	0.21
			PM				3,500	1,753	0.50

Notes:
NB=northbound, SB=southbound, v/c = volume-to-capacity ratio
[1] As a conservative approach, if an on-ramp has meter equipment present, the ramp was analyzed assuming it is metered.
[2] Ramp capacities were obtained from the Highway Capacity Manual, 2000 (pg 25-4), and considered the free-flow speed, the number of lanes on the ramp, and ramp metering.
[3] Peak-hour volumes were obtained through intersection counts.

3. Background Conditions

This chapter describes background traffic conditions, which are defined as conditions with the addition of traffic from approved but not yet constructed and occupied projects in the study area. Traffic volumes for background conditions comprise volumes from the existing traffic counts plus traffic generated by approved projects in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

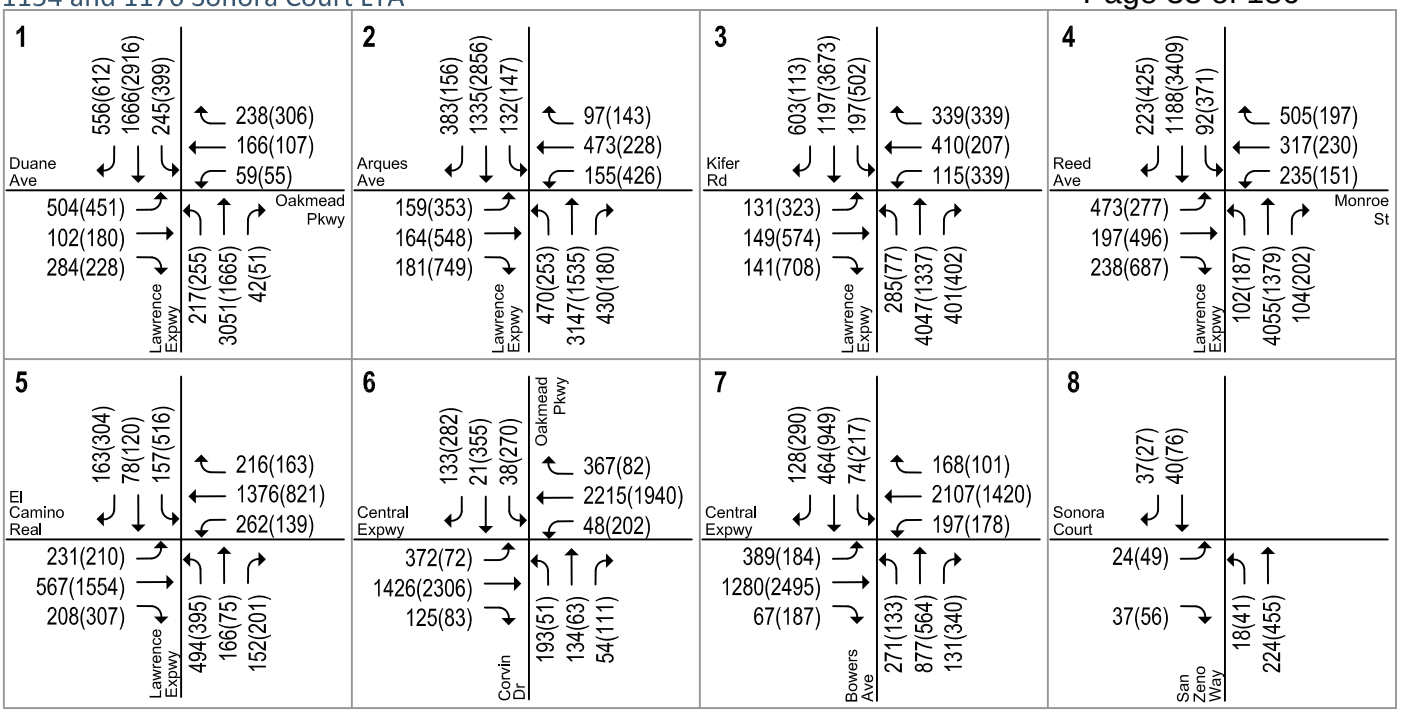
Background Transportation Network

It is assumed in this analysis that the transportation network under background conditions, including roadway and intersection lane configurations, would be the same as that described under the existing conditions.

Background Traffic Volumes

Background traffic volumes were estimated by adding traffic from approved but not yet completed developments in the study area. Approved developments are those developments that have been approved by local agencies, are under construction, or are built but not yet occupied. Approved project lists were obtained from the City of Sunnyvale and the City of Santa Clara websites. Based on a review of traffic studies prepared for these projects, the types and sizes of these developments, and their distances from the project site, a total of 17 approved projects were selected for inclusion in the background scenario. Trip generation for all background projects was based on their respective traffic reports, where available. The approved but not yet completed development locations included in this study are listed below. The approved project volumes are included in Appendix B. The AM and PM peak-hour traffic volumes at the study intersections under background conditions are shown in Figure 7.

1. 3375 Scott Boulevard
2. 3000 Bowers Avenue
3. 2400 Condensa Street
4. 3035 El Camino Real
5. 3402 El Camino Real
6. 3700 El Camino Real (retail portion)
7. 3155 El Camino Real
8. 3607 Kifer Road
9. Santa Clara LSAP: 3069 Lawrence Expressway, 2961 Corvin Drive, and 3505 Kifer Road
10. 3625 Peterson Way
11. 2900 Lakeside Drive
12. 1178 Sonora Court
13. 1050 Kifer Road (Phase 2)
14. 1101 Elko Drive
15. 1155 Aster Avenue
16. 871 and 895 E Fremont Avenue
17. 1 AMD Place



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 7
Background Traffic Volumes

Background Intersection Levels of Service

Intersection levels of service were evaluated against the respective City, County and CMP standards. The results of the intersection level of service analysis under background conditions are summarized in Table 7. The results of the analysis show that the following Santa Clara County intersections would operate at unacceptable levels.

- Lawrence Expressway & Kifer Road (#3) – PM peak hour (LOS F)
- Lawrence Expressway & Reed Avenue/Monroe Street (#4) – AM peak hour (LOS F)

The unsignalized study intersection, San Zeno Way & Sonora Court, would operate at LOS B or better under background conditions. However, the peak-hour signal warrant was checked for this intersection due to the anticipated project traffic. The results show that this intersection does not meet the peak-hour signal warrant under background conditions. The intersection level of service sheets are included in Appendix C. The peak-hour signal warrant worksheets are included in Appendix D.

Table 7
Background Level of Service Summary

					Existing		Background	
#	Intersection	Control [1]	Peak Hour	LOS Std.	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Lawrence Expressway & Duane Avenue/Oakmead Parkway (County)	Signal	AM	E	38.5	D+	48.8	D
			PM		48.3	D	50.5	D
2	Lawrence Expressway & Arques Avenue (County*)	Signal	AM	E	55.3	E+	59.0	E+
			PM		71.6	E	77.0	E-
3	Lawrence Expressway & Kifer Road (County)	Signal	AM	E	54.4	D-	71.1	E
			PM		**101.6**	**F**	**>120**	**F**
4	Lawrence Expressway & Reed Avenue/Monroe Street (County*)	Signal	AM	E	**114.8**	**F**	**>120**	**F**
			PM		61.8	E	64.8	E
5	Lawrence Expressway Ramps & El Camino Real (◊*)	Signal	AM	E	34.5	C-	37.7	D+
			PM		28.8	C	31.7	C
6	Oakmead Parkway/Corvin Drive & Central Expressway (County*)	Signal	AM	E	49.7	D	62.9	E
			PM		46.9	D	58.0	E+
7	Bowers Avenue & Central Expressway (County*)	Signal	AM	E	46.6	D	48.3	D
			PM		53.8	D-	56.0	E+
8	San Zeno Way & Sonora Court	SSSC	AM	D	9.5	A	9.6	A
			PM		11.3	B	11.9	B

Notes:
* = *CMP*, ◊ = *Caltrans*, *County* = *County of Santa Clara*
SSSC = Side-Street Stop-Controlled
">120" indicates this intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM 2000 methodology.
[1] Delay and LOS reported for side-street stop-controlled intersections represent the movement with the worst delay.
BOLD indicates unacceptable level of service

4. Project Conditions

This chapter describes the method by which project traffic is estimated, roadway traffic operations under background plus project conditions, and any adverse effects caused by the project.

Project Description

The project sites (1154 and 1170 Sonora Court sites) are located in the Lawrence Station Area Plan (LSAP), for which the LSAP Update and its EIR were approved in September 2021. For the 1154 Sonora Court site, the 1.887-acre site is currently developed with an office building with 33,362 square feet and a surface parking lot. The project proposes to demolish the existing building, and construct a seven-story building consisting of 142,270 square feet of office space on the first three levels and 174 apartment units on the fourth to seventh levels with two levels of underground parking.

For the 1170 Sonora Court site, the 1.088-acre site is currently developed with an office building with 14,902 square feet and a surface parking lot. The project proposes to demolish the existing building, and construct a seven-story building consisting of 79,211 square feet of office space on the first three levels and 106 apartment units on the fourth to seventh levels with two levels of underground parking. Vehicle access to both sites would be via driveways on Sonora Court.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed project site was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. This research is compiled in the *Trip Generation Manual, 11th Edition (2021)* published by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. Trip generation rates for the proposed residential portion of the buildings are based on the average rates published for “Multifamily Housing (Mid-Rise)” (Land Use Code 221). Trip generation rates for the proposed office portion of the buildings are based on the average rates published for “General Office Building” (Land Use Code 710).

Trip Reductions

The VTA's *Congestion Management Program Transportation Impact Analysis Guidelines* (October 2014) indicates that a 3% trip reduction can be applied to the smaller trip generator of mixed-used development projects with housing and employment. The guidelines also indicate that a trip reduction of 9% for housing and 6% for employment can be applied for projects located within a 2,000-foot walk of a Caltrain station.

In addition, the proposed project would receive trip credits for the trips generated by the existing on-site uses. Trip generation rates for the existing office buildings are based on the average rates published for "General Office Building" (Land Use Code 710).

Net Project Trips

After applying the ITE trip generation rates and the applicable trip reductions, the proposed project is estimated to generate a net increase of 209 vehicle trips during the AM peak hour (149 inbound and 60 outbound) and 206 vehicle trips during the PM peak hour (61 inbound and 145 outbound) at the 1154 Sonora Court site. At the 1170 Sonora Court site, the proposed project is estimated to generate a net increase of 125 vehicle trips during the AM peak hour (88 inbound and 37 outbound) and 122 vehicle trips during the PM peak hour (36 inbound and 86 outbound).

The trip generation for the proposed project is summarized in Tables 8 and 9.

Table 8
1154 Sonora Court Trip Generation Summary

		Daily		AM Peak Hour						PM Peak Hour					
		Trip		Trip	Splits		Trips			Trip	Splits		Trips		
Land Use	Size	Rate	Trips	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Proposed Use															
Multifamily Housing[1]	174 du	4.54	790	0.37	23%	77%	15	49	64	0.39	61%	39%	41	27	68
- Residential/Office Internal Capture (3%)[3]			-24				0	-2	-2				-1	-1	-2
- Transit Reduction (9%)[4]			-69				-1	-5	-6				-4	-2	-6
Sub-Total Residential			*697*				*14*	*42*	*56*				*36*	*24*	*60*
Office[2]	142.270 ksf	10.84	1,542	1.52	88%	12%	190	26	216	1.44	17%	83%	35	170	205
- Office/Residential Internal Capture (3%)[3]			-24				-2	0	-2				-1	-1	-2
- Transit Reduction (6%)[4]			-91				-11	-2	-13				-2	-10	-12
Sub-Total Office			*1,427*				*177*	*24*	*201*				*32*	*159*	*191*
Gross Proposed Trips			***2,124***				***191***	***66***	***257***				***68***	***183***	***251***
Existing Use															
Office[2]	33.362 ksf	10.84	362	1.52	88%	12%	45	6	51	1.44	17%	83%	8	40	48
- Transit Reduction (6%)[4]			-22				-3	0	-3				-1	-2	-3
Gross Existing Trips			***340***				***42***	***6***	***48***				***7***	***38***	***45***
Net Project Trips			**1,784**				**149**	**60**	**209**				**61**	**145**	**206**

Source: ITE Trip Generation Manual, 11th Edition, 2021. VTA Transportation Impact Analysis (TIA) Guidelines, 2014.
1. Multifamily Housing (Mid-Rise) (ITE Land Use 221): average trip rates in trips per dwelling unit are used.
2. General Office Building (Land Use 710): average trip rates (in trips per 1,000 s.f.) are used.
3. Residential/office internal trip reduction was applied to the project per VTA TIA Guidelines.
4. Per VTA TIA Guidelines, a transit trip reduction is applied to the project that is within 2,000 feet of a Caltrain station.

Table 9
1170 Sonora Court Trip Generation Summary

Land Use	Size	Daily		AM Peak Hour						PM Peak Hour					
		Trip		Trip	Splits		Trips			Trip	Splits		Trips		
		Rate	Trips	Rate	In	Out	In	Out	Total	Rate	In	Out	In	Out	Total
Proposed Use															
Multifamily Housing[1]	106 du	4.54	481	0.37	23%	77%	9	30	39	0.39	61%	39%	25	16	41
- Residential/Office Internal Capture (3%)[3]			-14				0	-1	-1				-1	0	-1
- Transit Reduction (9%)[4]			-42				-1	-2	-3				-2	-2	-4
Sub-Total Residential			*425*				*8*	*27*	*35*				*22*	*14*	*36*
Office[2]	79.211 ksf	10.84	859	1.52	88%	12%	106	14	120	1.44	17%	83%	19	95	114
- Office/Residential Internal Capture (3%)[3]			-14				-1	0	-1				0	-1	-1
- Transit Reduction (6%)[4]			-51				-6	-1	-7				-1	-6	-7
Sub-Total Office			*794*				*99*	*13*	*112*				*18*	*88*	*106*
Gross Proposed Trips			***1,219***				***107***	***40***	***147***				***40***	***102***	***142***
Existing Use															
Office[2]	14.902 ksf	10.84	162	1.52	88%	12%	20	3	23	1.44	17%	83%	4	17	21
- Transit Reduction (6%)[4]			-10				-1	0	-1				0	-1	-1
Gross Existing Trips			***152***				***19***	***3***	***22***				***4***	***16***	***20***
Net Project Trips			**1,067**				**88**	**37**	**125**				**36**	**86**	**122**

Source: ITE Trip Generation Manual, 11th Edition, 2021. VTA Transportation Impact Analysis (TIA) Guidelines, 2014.
1. Multifamily Housing (Mid-Rise) (ITE Land Use 221): average trip rates in trips per dwelling unit are used.
2. General Office Building (Land Use 710): average trip rates (in trips per 1,000 s.f.) are used.
3. Residential/office internal trip reduction was applied to the project per VTA TIA Guidelines.
4. Per VTA TIA Guidelines, a transit trip reduction is applied to the project that is within 2,000 feet of a Caltrain station.

Trip Distribution and Assignment

Trips generated by the proposed project were distributed to the study network based on the existing travel patterns on the surrounding roadway system, the locations of complementary land uses, and previous transportation studies for similar land uses. Office uses generate mostly inbound trips in the morning and mostly outbound trips in the evening, while residential uses generate mostly outbound trips in the morning and inbound trips in the evening. The majority of the project trips would travel via US 101, Lawrence Expressway, and Central Expressway. The project trip distribution for the residential use is shown on Figure 8 and the distribution for the office use is shown on Figure 9.

The project trips were assigned to the roadway network based on the direction of approach and departure, roadway network connections, freeway and expressway access points, and the locations of project driveways. Due to the intersection geometries of Kifer Road at San Zeno Way and Lawrence Station Road, it was assumed that vehicles entering from southbound Lawrence Expressway would access the site by turning left onto eastbound Kifer Road, immediately turning right onto southbound Lawrence Station Road, and northbound San Zeno Way. Vehicles exiting the site and traveling north would utilize southbound San Zeno Way, northbound Lawrence Station Road, eastbound Kifer Road, northbound Corvin Drive/Oakmead Parkway, westbound Arques Avenue, and northbound Lawrence Expressway. The net project trips at the study intersections are shown on Figure 10.

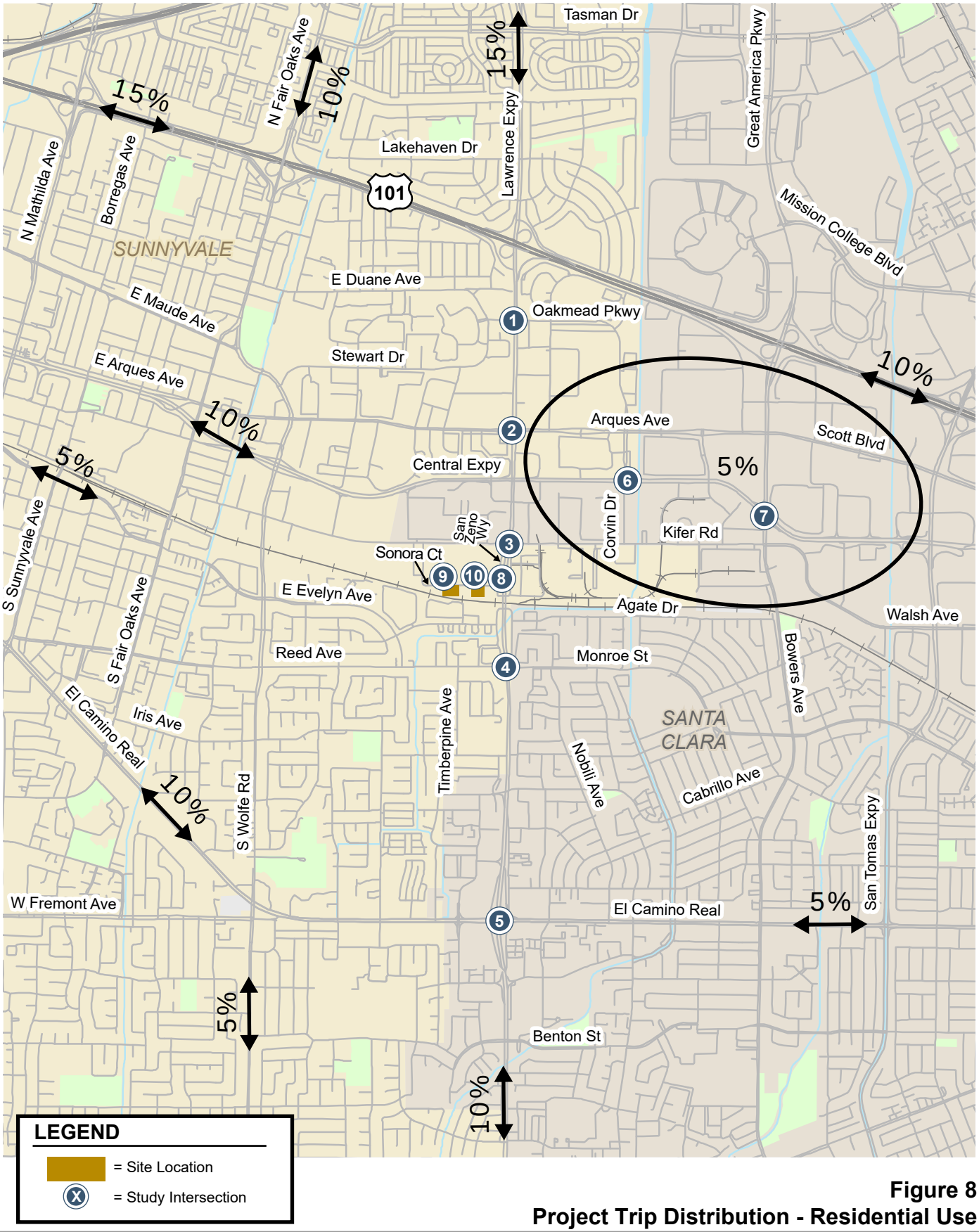


Figure 8
Project Trip Distribution - Residential Use

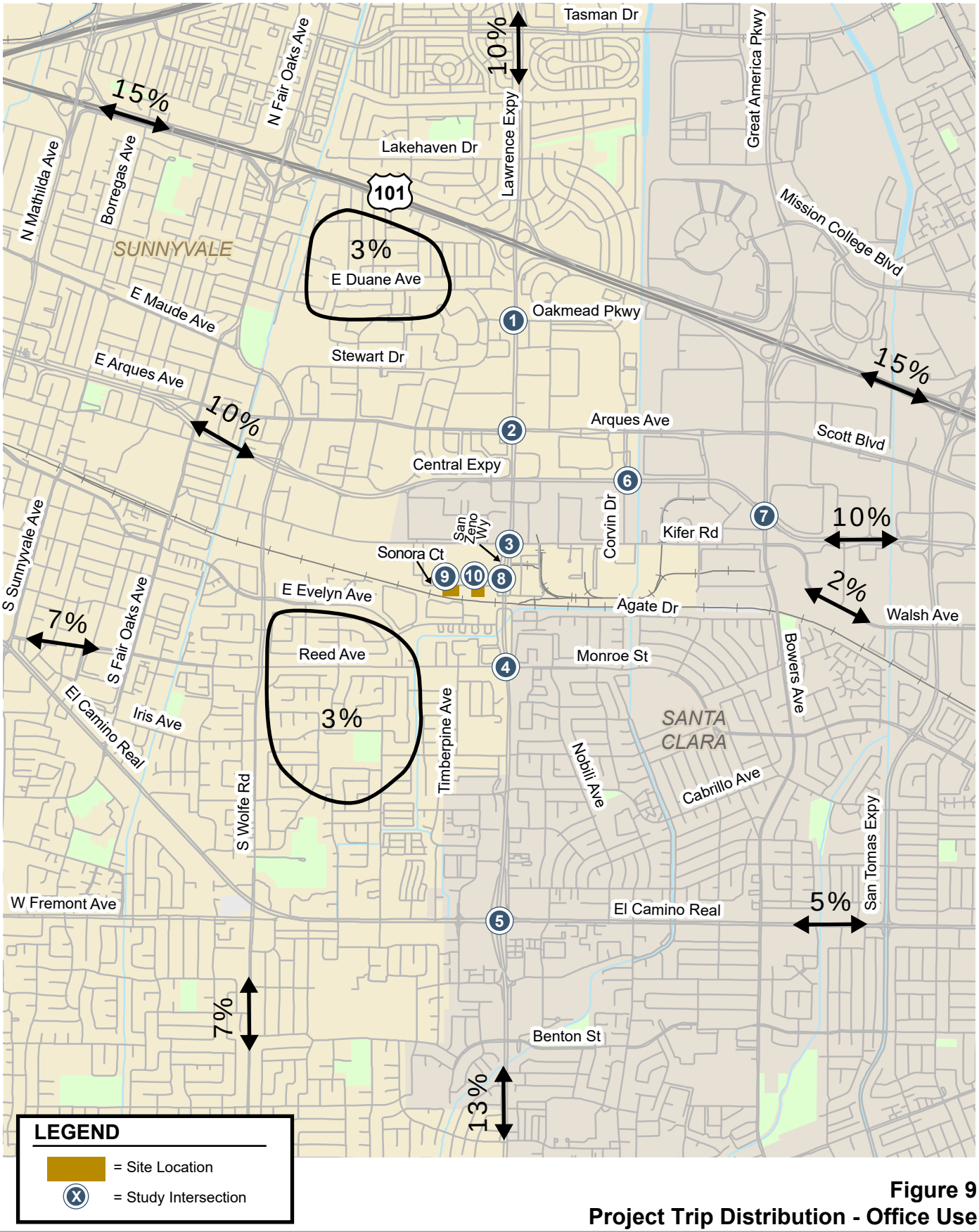
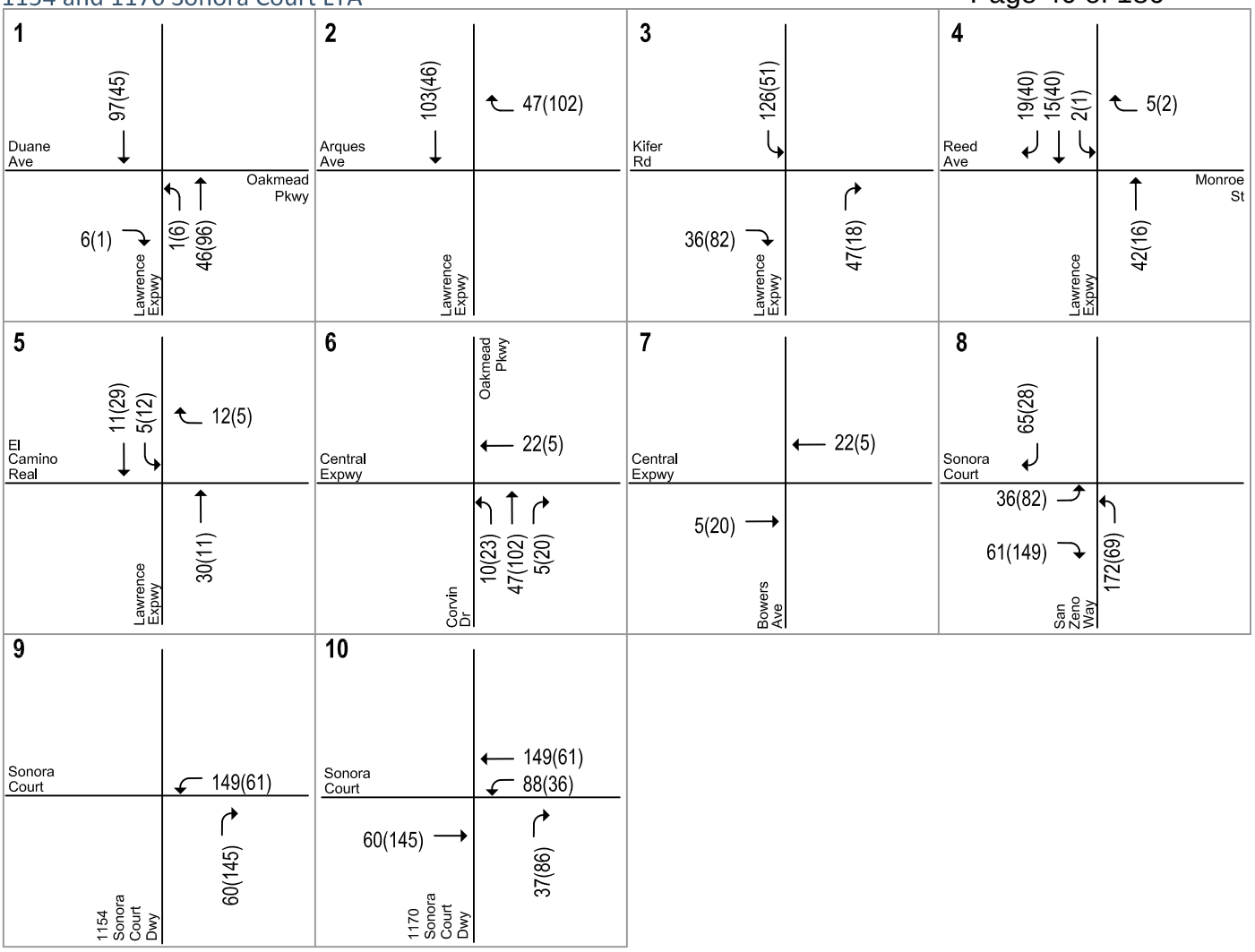


Figure 9
Project Trip Distribution - Office Use



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 10
Net Project Trip Assignment

Traffic Volumes and Roadway Network Under Project Conditions

Adverse project effects were evaluated relative to background traffic volumes. The net new trips generated by the proposed project were added to the background traffic volumes to derive the background plus project traffic volumes. Figure 11 shows the intersection turning-movement volumes under background plus project conditions.

It is assumed in this analysis that the transportation network under background plus project conditions, including roadways and intersection lane configurations, would be the same as that described under existing conditions and background conditions at all study intersections. The driveway intersections (#9 and #10) were only studied under background plus project conditions.

Background Plus Project Intersection Levels of Service

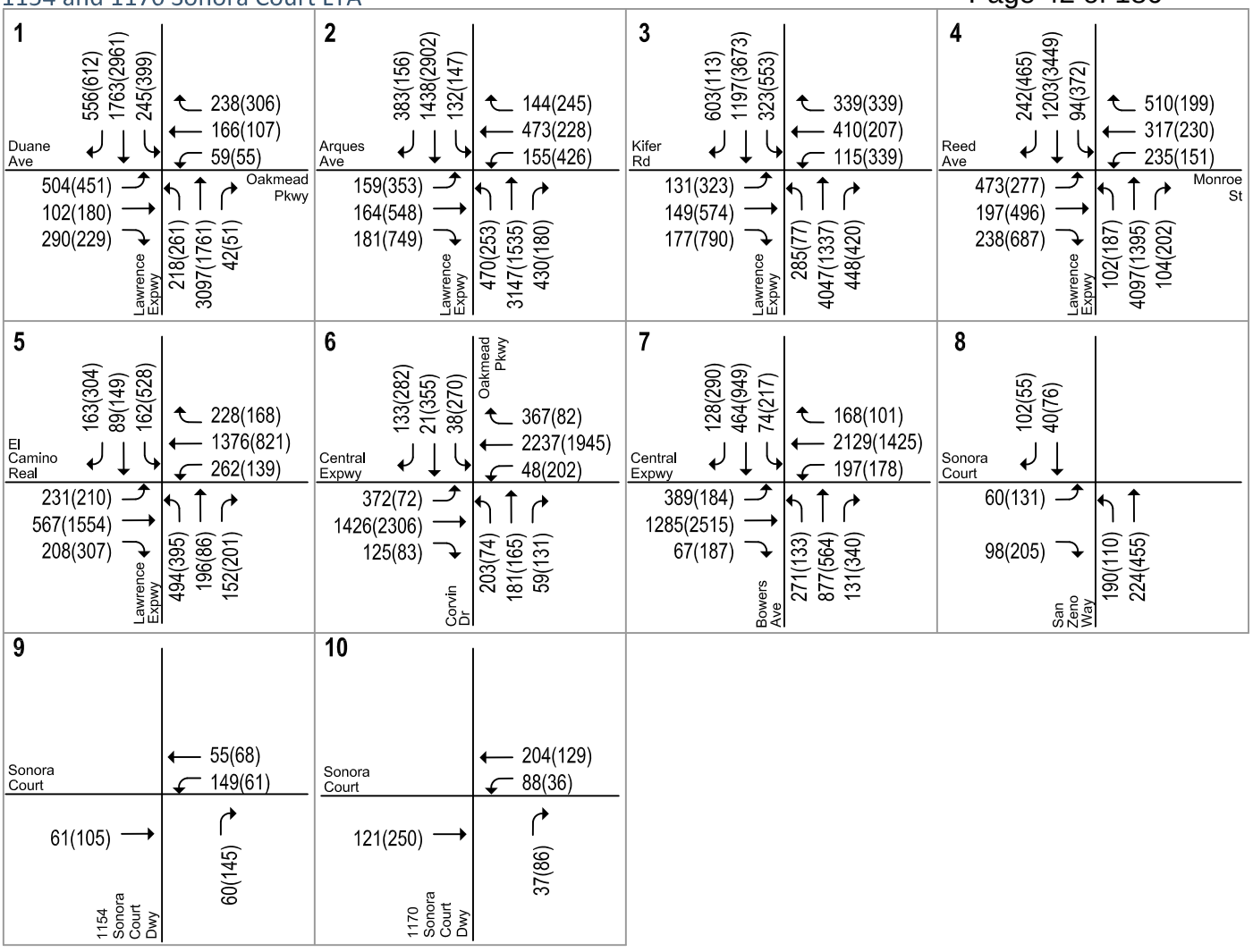
The intersection levels of service results for background plus project conditions were compared to background conditions to determine potential adverse intersection effects (see Table 10). Based on City of Sunnyvale and CMP intersection impact criteria, the project would generate adverse intersection effects at the following Santa Clara County intersections:

- Lawrence Expressway & Kifer Road (#3) – PM peak hour (LOS F)
- Lawrence Expressway & Reed Avenue/Monroe Street (#4) – AM peak hour (LOS F)

The LSAP requires projects within the plan area to make a fair share contribution toward the cost of the identified improvements. Potential improvement strategies are discussed in the following section.

The unsignalized study intersection, San Zeno Way & Sonora Court, would operate at LOS C or better under background plus project conditions. The peak-hour signal warrant was also checked for this intersection due to the anticipated project traffic. The results show that this intersection would meet the peak-hour signal warrant under background plus project conditions. Therefore, the intersection should be monitored to determine if a change in control is needed.

The intersection level of service sheets are included in Appendix C. The peak-hour signal warrant worksheets are included in Appendix D.



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 11
Background Plus Project Traffic Volumes

Table 10
Background Plus Project Level of Service Summary

#	Intersection	Control [1]	Peak Hour	LOS Std.	Background		Background + Project			
					Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	Lawrence Expressway & Duane Avenue/Oakmead Parkway (County)	Signal	AM	E	48.8	D	48.6	D	-0.1	0.006
			PM		50.5	D	50.8	D	0.6	0.008
2	Lawrence Expressway & Arques Avenue (County*)	Signal	AM	E	59.0	E+	58.7	E+	-1.4	0.015
			PM		77.0	E-	77.8	E-	1.8	0.006
3	Lawrence Expressway & Kifer Road (County)	Signal	AM	E	71.1	E	74.1	E	4.4	0.042
			PM		**>120**	**F**	**>120**	**F**	**43.5**	**0.067**
4	Lawrence Expressway & Reed Avenue/Monroe Street (County*)	Signal	AM	E	**>120**	**F**	**>120**	**F**	**5.2**	**0.010**
			PM		64.8	E	64.7	E	0.1	0.005
5	Lawrence Expressway Ramps & El Camino Real (◊*)	Signal	AM	E	37.7	D+	38.2	D+	0.7	0.014
			PM		31.7	C	32.5	C-	1.1	0.017
6	Oakmead Parkway/Corvin Drive & Central Expressway (County*)	Signal	AM	E	62.9	E	64.3	E	2.1	0.012
			PM		58.0	E+	58.2	E+	0.0	0.000
7	Bowers Avenue & Central Expressway (County*)	Signal	AM	E	48.3	D	48.3	D	0.1	0.005
			PM		56.0	E+	56.1	E+	0.2	0.004
8	San Zeno Way & Sonora Court	SSSC	AM	D	9.6	A	13.2	B	-	-
			PM		11.9	B	20.2	C	-	-
9	1154 Sonora Court Driveway & Sonora Court	SSSC	AM	D	-	-	8.8	A	-	-
			PM		-	-	9.4	A	-	-
10	1170 Sonora Court Driveway & Sonora Court	SSSC	AM	D	-	-	9.0	A	-	-
			PM		-	-	10.1	B	-	-

Notes:

** = CMP, ◊ = Caltrans, County = County of Santa Clara*

SSSC = Side-Street Stop-Controlled

">120" indicates this intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM 2000 methodology.

[1] Delay, LOS and volume-to-capacity ratio reported for side-street stop-controlled intersections represent the movement with the worst delay.

BOLD indicates an unacceptable level of service

BOLD and boxed indicates an adverse intersection effect

Background Plus Project Potential Intersection Improvement Strategies

Improvement options were studied for each intersection experiencing adverse effects under background plus project conditions when compared to background conditions. An adverse intersection effect can be satisfactorily addressed by implementing measures that would restore intersection conditions to its LOS standard *or* to an average delay equal to without-project conditions or better. The LOS results under the improved background plus project conditions are summarized below.

Lawrence Expressway & Kifer Road (#3)

Under background conditions, the LOS would be an unacceptable LOS F during the PM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet the City of Sunnyvale's adverse intersection effect criteria.

Potential Improvement: The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Lawrence Expressway & Reed Avenue/Monroe Street (#4) [CMP]

Under background conditions, the LOS would be an unacceptable LOS F during the AM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet VTA's CMP adverse intersection effect criteria.

Potential Improvement: The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Cumulative Conditions

Cumulative conditions were studied in the *Lawrence Station Area Plan Update Transportation Impact Analysis*. This project, as part of the LSAP-Update, would contribute to the cumulative adverse effects and would be required to contribute to the cumulative fair share improvements.

Project Conditions Adverse Freeway Effect Analysis

VTA CMP guidelines define that a project would cause an adverse freeway effect if the project would deteriorate freeway levels of service from an acceptable level to an unacceptable level, or if the freeway already operates at an unacceptable level under existing conditions, the project would add traffic exceeding 1% of the freeway capacity. The traffic added by the project to each freeway segment is summarized in Table 11. The results show that the project would not have an adverse effect on any freeway segments.

Project Conditions Ramp Analysis

Freeway ramp volumes under project conditions were estimated by adding project trips to the existing volumes obtained from intersection counts conducted in 2019. The peak hour ramp volumes under existing plus project conditions are shown in Table 12.

For the purpose of this study, the project is said to create an adverse effect on a freeway ramp if the project's implementation:

- Would cause the volume-to-capacity (V/C) ratio of the freeway ramp to exceed 1.0; or
- Would increase the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent (1%) of the ramp's capacity.

The ramp analysis shows that the study freeway ramps would continue to operate below capacity under project conditions.

Table 11
Project Conditions Freeway Analysis Summary

Freeway	Dir.	Segment	Peak Hour	Existing Conditions - Mixed Flow Lanes[1] Avg. Speed (mph)	# of Lanes	Capacity	Density (pc/mi/ln)	Volume	LOS	Project Conditions Project Trips	% Capacity
US 101	SB	Fair Oaks Avenue to Lawrence Expressway	AM	60.0	3	6,900	30.0	5,346	D	38	0.55%
			PM	**12.4**	**3**	**6,900**	**79.0**	**2,949**	**F**	20	0.29%
US 101	SB	Lawrence Expressway to Great America Parkway	AM	55.0	3	6,900	35.0	5,850	D	11	0.16%
			PM	**6.4**	**3**	**6,900**	**91.0**	**1,746**	**F**	33	0.48%
US 101	NB	Great America Parkway to Lawrence Expressway	AM	**17.2**	**3**	**6,900**	**72.0**	**3,702**	**F**	34	0.49%
			PM	47.6	3	6,900	42.0	5,964	D	12	0.17%
US 101	NB	Lawrence Expressway to Fair Oaks Avenue	AM	**18.2**	**3**	**6,900**	**70.0**	**3,840**	**F**	21	0.30%
			PM	47.2	3	6,900	42.0	5,958	D	38	0.55%

Notes
Dir. = direction, NB = northbound, SB = southbound, mph = miles per hour, pc/mi/ln = passenger cars per mile per lane
Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2018.
BOLD indicates substandard level of service.

Table 12
Project Conditions Freeway Ramp Analysis

Interchange	Ramp	Type	Peak Hour	Existing Conditions Capacity[1]	Peak Volume[2]	v/c	Project Conditions Project Trips	Peak Volume	v/c
US 101/ Lawrence Expressway	NB Off-Ramp to Lawrence Expressway	Diagonal	AM	3,500	1,278	0.37	34	1,312	0.37
			PM	3,500	1,185	0.34	12	1,197	0.34
	SB On-Ramp from NB Lawrence Expressway	Diagonal	AM	1,800	584	0.32	11	595	0.33
			PM	1,800	352	0.20	33	385	0.21
	NB On-Ramp from NB Lawrence Expressway	Loop	AM	1,800	484	0.27	21	505	0.28
			PM	1,800	378	0.21	38	416	0.23
	SB Off-Ramp to Lawrence Expressway	Diagonal	AM	3,500	738	0.21	38	776	0.22
			PM	3,500	1,753	0.50	20	1,773	0.51

Notes:
NB=northbound, SB=southbound, v/c = volume-to-capacity ratio
[1] Ramp capacities were obtained from the Highway Capacity Manual, 2000 (pg 25-4), and considered the free-flow speed, the number of lanes on the ramp, and ramp metering.
[2] Peak-hour volumes were obtained through intersection counts.
[3] As a conservative approach, if an on-ramp has meter equipment present, the ramp was analyzed assuming it is metered.

5. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project, including:

- operations analysis – vehicle queuing and storage at selected intersections
- potential impacts to transit services and pedestrian and bicycle facilities
- site access and circulation
- parking

Unlike the level of service adverse effect methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Queuing Analysis

The analysis of intersection level of service was supplemented with a queuing analysis for selected movements at the study intersections. Vehicle queues were estimated using a Poisson probability distribution. The operations analysis is based on vehicle queuing for high-demand left-turn movements at intersections where 10 or more project trips per lane were added. This analysis provides a basis for determining whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. For signalized intersections, the estimated queue length was compared to the length of the existing turn pockets. For the unsignalized intersection, the estimated queue lengths were compared to the storage space available between the limit line and the upstream driveway intersection.

The AM queuing analysis is based on vehicle queuing for the four movements listed below.

- Southbound left turn at Lawrence Expressway & Kifer Road
- Northbound left turn at Corvin Drive & Central Expressway
- Eastbound left turn at San Zeno Way & Sonora Court
- Northbound left turn at San Zeno Way & Sonora Court

The PM queuing analysis is based on vehicle queuing for the five movements listed below.

- Southbound left turn at Lawrence Expressway & Kifer Road
- Southbound left turn at Lawrence Expressway & El Camino Real
- Northbound left turn at Corvin Drive & Central Expressway
- Eastbound left turn at San Zeno Way & Sonora Court
- Northbound left turn at San Zeno Way & Sonora Court

The queuing results for the background plus project scenario were compared to the background scenario to determine whether the project would cause extensive queuing issues for the AM and PM peak hours (see Tables 13 and 14). The proposed project would create operational deficiencies at the two locations listed below during the PM peak hour.

- Southbound left turn at Lawrence Expressway & Kifer Road
- Northbound left turn at Corvin Drive & Central Expressway

Below is a detailed discussion of the above identified locations under background plus project conditions.

Lawrence Expressway & Kifer Road

The project is expected to add 51 vehicles (or about 25 vehicles per lane) during the PM peak hour to the southbound left-turn movement under background plus project conditions and would lengthen the 95th percentile queue. This left-turn movement has two turn lanes with a total queue storage space of approximately 325 feet per lane to the beginning of the taper. Under background conditions during the PM peak hour, the 95th percentile queue length would be 475 feet per lane. Under background plus project conditions, the 95th percentile queue length per lane would be extended by 50 feet to 525 feet.

The existing physical median could be narrowed to extend the southbound left-turn lanes, with a transition from a single left-turn lane to the existing double left-turn lanes after 100 feet, to accommodate the background plus project 95th percentile queues. In addition, it is expected that the proposed Lawrence Expressway Grade Separation project at this intersection would remove the identified queuing issue. The LSAP requires projects within the plan area to contribute their fair share towards the cost of the grade separation at Lawrence Expressway & Kifer Road.

Corvin Drive & Central Expressway

The project is expected to add 23 vehicles during the PM peak hour onto the northbound left-turn lane under background plus project conditions and would lengthen the 95th percentile queue. This left-turn movement has one turn lane with a total queue storage space of approximately 100 feet to the middle of the painted taper. Under background conditions during the PM peak hour, the 95th percentile queue length would be 150 feet. Under background plus project conditions, the 95th percentile queue length would be extended by 25 feet to 175 feet.

There is a two-way left-turn median immediately south of the painted northbound left-turn pocket that extends along the entire length of Corvin Drive. Therefore, any overflow from the turn lane could be accommodated within the two-way left-turn median.

San Zeno Way & Sonora Court

The project is expected to add 172 vehicles during the AM peak hour and 69 vehicles during the PM peak hour to the northbound left-turn movement under background plus project conditions. Since this movement is not stop controlled, the potential queue length was checked for informational purposes. Under existing and background conditions, the 95th percentile queue length would be 50 feet during the AM peak hour and 75 feet during the PM peak hour. Under background plus project conditions during both the AM and PM peak hours, the 95th percentile queue length would be 75 feet. This would be a 25-foot increase during the AM peak hour and no increase during the PM peak hour. Therefore, the queue would not be expected to cause significant operational issues on northbound San Zeno Way.

Table 13
AM Queuing Analysis Summary

	Lawrence Expressway & Kifer Road	Corvin Drive & Central Expressway	San Zeno Way & Sonora Court	
Movement:	**SBL**	**NBL**	**EBL/R**	**NBL/T**
Existing				
Cycle/Delay[1] (sec)	181	190	9.5	7.4
Volume (vphpl)	88	187	15	243
Avg. Queue (veh/ln.)	4	10	0	0
Avg. Queue[2] (ft./ln)	100	250	0	0
95th%. Queue (veh/ln.)	8	15	0	2
95th%. Queue[2] (ft./ln)	200	375	0	50
Storage (ft./ ln.)	325	100	215	-
Adequate (Y/N)	Y	N	Y	-
Background				
Cycle/Delay[1] (sec)	181	190	9.6	7.4
Volume (vphpl)	99	193	61	242
Avg. Queue (veh/ln.)	5	10	0	0
Avg. Queue[2] (ft./ln)	125	250	0	0
95th%. Queue (veh/ln.)	9	16	1	2
95th%. Queue[2] (ft./ln)	225	400	25	50
Storage (ft./ ln.)	325	100	215	-
Adequate (Y/N)	Y	N	Y	-
Background Plus Project				
Cycle/Delay[1] (sec)	181	190	13.2	7.8
Volume (vphpl)	162	203	158	414
Avg. Queue (veh/ln.)	8	11	1	1
Avg. Queue[2] (ft./ln)	200	275	25	25
95th%. Queue (veh/ln.)	13	16	2	3
95th%. Queue[2] (ft./ln)	325	400	50	75
Storage (ft./ ln.)	325	100	215	-
Adequate (Y/N)	Y	N	Y	-
Project Related Operational Deficiency?	No	No	No	-

Notes:

[1] Vehicle queue calculations are based on cycle length for signalized intersections, and movement delay for unsignalized intersections.

[2] Assumes 25 feet per vehicle queued.

BOLD indicates that the storage cannot accommodate the anticipated 95th percentile queue under background plus project conditions and the 95th percentile queue is expected to increase by at least one vehicle compared to background conditions.

Table 14
PM Queuing Analysis Summary

	Lawrence Expressway & Kifer Road	Lawrence Expressway & El Camino Real	Corvin Drive & Central Expressway	San Zeno Way & Sonora Court	
Movement:	**SBL**	**SBL**	**NBL**	**EBL/R**	**NBL/T**
Existing					
Cycle/Delay[1] (sec)	190	100	190	11.3	7.4
Volume (vphpl)	166	260	44	94	469
Avg. Queue (veh/ln.)	9	7	2	0	1
Avg. Queue[2] (ft./ln)	225	175	50	0	25
95th%. Queue (veh/ln.)	14	12	5	1	3
95th%. Queue[2] (ft./ln)	350	300	125	25	75
Storage (ft./ ln.)	325	470	100	215	-
Adequate (Y/N)	N	Y	N	Y	-
Background					
Cycle/Delay[1] (sec)	190	100	190	11.9	7.5
Volume (vphpl)	251	317	51	105	496
Avg. Queue (veh/ln.)	13	9	3	0	1
Avg. Queue[2] (ft./ln)	325	225	75	0	25
95th%. Queue (veh/ln.)	19	14	6	1	3
95th%. Queue[2] (ft./ln)	475	350	150	25	75
Storage (ft./ ln.)	325	470	100	215	-
Adequate (Y/N)	N	Y	N	Y	-
Background Plus Project					
Cycle/Delay[1] (sec)	190	100	190	20.2	7.7
Volume (vphpl)	277	336	74	336	565
Avg. Queue (veh/ln.)	15	9	4	2	1
Avg. Queue[2] (ft./ln)	375	225	100	50	25
95th%. Queue (veh/ln.)	21	15	7	4	3
95th%. Queue[2] (ft./ln)	525	375	175	100	75
Storage (ft./ ln.)	325	470	100	215	-
Adequate (Y/N)	N	Y	N	Y	-
Project Related Operational Deficiency?	**Yes**	No	**Yes**	No	-

Notes:

[1] Vehicle queue calculations are based on cycle length for signalized intersections, and movement delay for unsignalized intersections.

[2] Assumes 25 feet per vehicle queued.

BOLD indicates that the storage cannot accommodate the anticipated 95th percentile queue under background plus project conditions and the 95th percentile queue is expected to increase by at least one vehicle compared to background conditions.

Potential Impacts to Transit Facilities

The 1154 Sonora Court project site is located about 1,200 feet from the Lawrence Caltrain Station, which is approximately a 5-minute walk. The 1170 Sonora Court site is located about 670 feet (a 3-minute walk) from the Lawrence Caltrain Station. Under existing conditions, there are no continuous pedestrian paths between the project sites and the Lawrence Caltrain Station, since there are no sidewalks along Sonora Court. The proposed project includes frontage improvements along both project sites. Given the project's proximity to the Lawrence Caltrain Station, it is possible that some employees and residents would utilize Caltrain. Based on Caltrain's Executive Ridership Summary from May 2023, ridership continues to be less than pre-pandemic conditions, with approximately 27% of the average weekday ridership observed in May 2019. Therefore, it is assumed that Caltrain has sufficient capacity to accommodate additional riders.

There are also two VTA routes that have bus stops within the project vicinity. VTA Route 21 has a bus stop that is located 0.5 mile from the 1170 Sonora Court site and 0.6 mile from the 1154 Sonora Court site. VTA ACE Shuttle has a bus stop that is located 0.3 mile from the 1170 Sonora Court site and 0.4 mile from the 1154 Sonora Court site. Therefore, it is possible that some employees and residents of the project would ride these buses. Based on a VTA article from November 2022, ridership continues to be less than pre-pandemic conditions, with approximately 76% of the daily ridership observed in March 2020. Therefore, it is assumed that VTA has sufficient capacity to accommodate additional riders.

Transit Travel Time Impacts

Currently, eight bus routes travel within the project vicinity through the study intersections. To assess the transit travel time impacts, the bus route travel times in the study area under background plus project conditions were compared to background conditions. Bus route travel times are estimated using published schedules and adjusted based on delays experienced at study intersection movements. VTA does not have established criteria to determine impacts to transit services. Therefore, this analysis is presented for information purposes only.

The results show that there would be minimal changes in transit delay in the study area under the project scenario. For all bus routes, the project would increase route delay by less than two seconds during the peak hours. The proposed project would be located within and consistent with the Lawrence Station Area Plan (LSAP) Update, and the cumulative transit related impacts are included in the traffic impact analysis report prepared by the LSAP-Update study. The project is expected to worsen left-turn queuing at five left-turn movements (identified in above section). The bus routes would not turn left at these five left-turn movements. The results of the transit travel time comparison are summarized in Table 15.

Table 15
Transit Travel Time Delay Analysis

Route	Peak Hour	Existing		Background	Background + Project		
		Travel Time (min)	Delay in the Study Area (sec)	Delay in the Study Area (sec)	Delay in the Study Area (sec)	Change in Delay (sec)	% Change in Travel Time
VTA ACE Gray [1]							
Northbound	PM	40	135.7	144.5	144.5	0	0.000%
Southbound	AM	32	200	321.6	321.6	0	0.000%
VTA ACE Yellow [2]							
Northbound	PM	32	72.4	73.1	73.4	0.3	0.016%
Southbound	AM	32	64.7	65.8	65.8	0	0.000%
VTA 20							
Eastbound	AM	49	65	65.6	65.6	0	0.000%
	PM	54	58.1	58.2	58.2	0	0.000%
Westbound	AM	53	75	75.1	75.1	0	0.000%
	PM	52	55.7	56.1	56.1	0	0.000%
VTA 21							
Eastbound	AM	98	55	55.3	55.3	0	0.000%
	PM	102	62.3	62.9	62.9	0	0.000%
Westbound	AM	98	62.5	62.7	62.7	0	0.000%
	PM	102	61.1	62.7	62.7	0	0.000%
VTA 22							
Eastbound	AM	113	33.1	35.6	36.3	0.7	0.010%
	PM	138	23	27.3	28.5	1.2	0.014%
Westbound	AM	124	27.8	32.8	33.8	1	0.013%
	PM	124	24.8	26.5	27	0.5	0.007%
VTA 55							
Northbound	AM	53	117.6	225.6	225.6	0	0.000%
	PM	57	86.4	87.2	87.2	0	0.000%
Southbound	AM	47	9	9	9	0	0.000%
	PM	49	19.3	21.4	21.4	0	0.000%
VTA 57							
Northbound	AM	48	64.7	65.8	65.8	0	0.000%
	PM	56	65.3	66.2	66.4	0.2	0.006%
Southbound	AM	51	62.2	64.2	64.2	0	0.000%
	PM	56	72.4	73.1	73.4	0.3	0.009%
VTA 522							
Eastbound	AM	95	33.1	35.6	36.3	0.7	0.012%
	PM	113	23	27.3	28.5	1.2	0.018%
Westbound	AM	101	27.8	32.8	33.8	1	0.016%
	PM	103	24.8	26.5	27	0.5	0.008%

Notes

[1] VTA ACE Gray operates with southbound services during the AM peak commute period and northbound services during the PM peak commute period.

[2] VTA ACE Yellow operates with southbound services during the AM peak commute period and northbound services during the PM peak commute period.

Potential Impacts to Pedestrian Facilities

The proposed project is expected to generate pedestrian walking trips between the project site and the nearby Lawrence Caltrain Station. The project is also located within a half-mile walking distance of one Tulip Kids Academy preschool. As part of the proposed project, sidewalks would be added on the Sonora Court project frontages. The project proposes a 6-foot-wide detached sidewalk with a 25-foot-wide buffer along the project frontages. Detached sidewalks provide barriers between pedestrians and roadway traffic and would improve pedestrian safety and comfort levels. The project also proposes a new pedestrian path, including a proposed sliding gate and raised crosswalk, that would create a continuous pedestrian network from the Caltrain station through to Sonora Court along the east side of the 1170 Sonora Court site. It should be noted that this proposed connection would also require improvements on the Caltrain parking lot, which would require Caltrain approval. The proposed connection would also create a continuous pedestrian network between the 1170 Sonora Court site and the nearby preschool when the sidewalk for the project at 1155 and 1175 Aster Avenue is constructed. The project is consistent with the proposed LSAP-Update plan and would improve pedestrian facilities by providing sidewalks and a continuous connection between the 1170 Sonora Court project site and the Lawrence Caltrain Station.

Potential Impacts to Bicycle Facilities

Within the immediate project vicinity, bike lanes are present on Kifer Road, Evelyn Avenue, Aster Avenue, Reed Avenue, portions of Monroe Street, Wolfe Road, Arques Avenue/Scott Boulevard, and Bowers Avenue (see Figure 4 in Chapter 2). The project site is located within an industrial area, and nearby streets, including Sonora Court and San Zeno Way, currently carry relatively low traffic volumes. The proposed project is expected to generate bicycle trips between the project site and the Lawrence Caltrain Station. The project is also located within two miles (10-minute biking distance) of several schools. There are currently no continuous bicycle facilities connecting the project site to these destinations. New Class II bike lanes are planned along Sonora Court that would improve the connectivity between the project site and these destinations. After the bike lanes are constructed, there would be a continuous bicycle network between the project sites and Ponderosa Elementary School via Sonora Court, the shared-use path on the Intuitive Surgical site, Kifer Road, Wolfe Road, Reed Avenue, and Sequoia Drive. The project is consistent with the proposed LSAP-Update plan.

Site Access and Circulation

The evaluation of site access and circulation is based on the project site plans dated January 10, 2023. Site access and circulation were reviewed in accordance with generally accepted traffic engineering standards.

Site Access

The project-generated traffic would access the project sites via one full access driveway at each site along Sonora Court. Both driveways would provide access to two levels of below-grade parking garages for residents and employees, and a loading area for trash pick-up. An additional driveway would be provided at the 1154 Sonora Court site for emergency vehicle access. Currently, the 1154 Sonora Court site has three full-access driveways, and the 1170 Sonora Court site has two full access driveways, all of which connect to surface parking lots.

Driveway Design

According to the Sunnyvale Municipal Code Section 19.46.120(b)(4), two-way driveways should have a minimum width of 20 feet. Based on the site plans, both driveways would be 26 feet wide. Therefore, the project would exceed the requirement.

Driveway Queuing

A queuing analysis was performed for the westbound approaches at the project driveways to determine whether inbound project traffic would cause significant operational issues on Sonora Court. The queuing analysis (shown on Table 16) indicates that the 95th percentile queue for the westbound left-turn movements at the projects' driveways is expected to be a maximum of 50 feet during either peak hour. Therefore, the queues would not be expected to cause significant operational issues on westbound Sonora Court.

Table 16
Queuing Analysis – Project Driveways

	1154 Sonora Court Driveway		1170 Sonora Court Driveway	
Movement:	**WBL**	**WBL**	**WBL**	**WBL**
Peak Hour:	**AM**	**PM**	**AM**	**PM**
Background Plus Project				
Cycle/Delay[1] (sec)	7.6	7.5	7.6	7.8
Volume (vphpl)	204	129	292	165
Avg. Queue (veh/ln.)	0	0	1	0
Avg. Queue[2] (ft./ln)	0	0	25	0
95th%. Queue (veh/ln.)	2	1	2	2
95th%. Queue[2] (ft./ln)	50	25	50	50

Notes:
[1] Vehicle queue calculations are based on movement delay for unsignalized intersections.
[2] Assumes 25 feet per vehicle queued.

Truck Access

Emergency response vehicles would access the 1154 Sonora Court site from along Sonora Court and a fire lane along the east and west sides of the proposed building. Emergency response vehicles would access the 1170 Sonora Court site from along Sonora Court and a fire lane along the west side of the proposed building. The site plans show a loading area located along the west sides of the project buildings for trash pick-up and large delivery vehicles. At both project sites, trash would be staged at the rear of the driveway, at the southwest corner of the sites, and trucks would utilize the loading area for turning maneuvers. Based on the site plans, on-street parking would only be permitted on the north side of Sonora Court, due to the addition of a bike lane on the south side. However, on-street parking is assumed to be allowed on both sides of the street until the bike lanes are constructed. Thus, rideshare vehicles and smaller delivery and service trucks may be able to park on the street, subject to the availability of spaces.

Sight Distance at the Project Driveways

The project driveways should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other roadway users traveling

on Sonora Court. Landscaping, signage, and parking should be located in such a way to ensure an unobstructed view for drivers exiting the sites. Providing the appropriate sight distance reduces the likelihood of a collision at the driveways and provides drivers with the ability to locate sufficient gaps in traffic and exit a driveway.

The minimum acceptable sight distance is based on the Caltrans recommended stopping sight distance. Both project driveways would allow all movements, thus the project traffic exiting these driveways would need to have adequate sight distance in both directions. Sight distance requirements vary depending on roadway speeds. For driveways on Sonora Court, which has an implied speed limit of 25 mph, the Caltrans stopping sight distance is 200 feet (based on a design speed of 30 mph). Thus, a driver must be able to see 200 feet in both directions on Sonora Court to locate a sufficient gap to turn out of the driveway. There are no roadway curves on Sonora Court that would obstruct the vision of exiting drivers. Thus, vehicles at the site driveway would be expected to have adequate sight distance.

According to the site plan, the existing mature redwood and cedar trees along Sonora Court would be maintained at both project sites. These trees have a high canopy and would not obstruct the view of drivers exiting the project driveway.

On-street parking is currently permitted along both sides of Sonora Court. Based on the site plans, on-street parking would not be present on the south side of Sonora Court, due to the addition of a bike lane. However, on-street parking is assumed to be allowed until the bike lanes are constructed.

> **Recommendation:** Red curbs should be painted for 25 feet on both sides of the project driveways to ensure adequate sight distance.

On-Site Circulation

The project sites would each have one main driveway aisle that provides access to the parking garages and loading areas. The 1154 Sonora Court site would have a secondary driveway aisle for emergency vehicle access. The surface parking aisles would be 26 feet wide, which would be adequate for two-way vehicle travel. According to the Sunnyvale Municipal Code Section 19.46.120(b)(5), two-way drive aisles with 90-degree parking spaces should have a minimum width of 24 feet. Based on the site plans, the drive aisles would be 24 – 28 feet wide. The garage drive aisles include valet parking spaces within the drive aisles. Therefore, the project would exceed the requirement during the self-park hours.

Valet Parking Operations

Based on the *1154 and 1170 Sonora Court Parking Management Plan* by Walker Consultants, dated January 2023, the parking garages would operate as valet only on Monday through Friday from 7:00 AM to 7:00 PM during office hours. The facilities would be self-park at all other times. During valet hours, valet attendants would direct parkers into available self-park spaces until they approach full utilization. After that, valet attendants would issue a valet claim check ticket and store the valet-assist car keys in a digital locking key box. Keys for any valet parked cars still on-site at the end of valet operations would be brought to the security desk, from which parkers would retrieve them after hours.

Parking Stall Dimensions

The Sunnyvale Municipal Code Section 19.46.120(b)(1)(A) requires that standard parking spaces be a minimum of 8.5 feet wide by 18 feet long. Based on the site plans, the standard parking spaces would meet the requirements.

The Americans with Disabilities Act (ADA) standard for parking stall dimensions is 18 feet long and 8 feet wide, or 11 feet wide for van-accessible spaces, with 5-foot-wide access aisles. Van-accessible spaces may be 8 feet wide if adjacent access aisles are also 8 feet wide. The site plan shows the

accessible parking stalls to be 8.5 feet wide and 18 feet long. Access aisles adjacent to van-accessible spaces measure to be 8 feet wide.

Bicycle and Pedestrian Circulation

At the 1154 Sonora Court site, short-term bicycle parking would be provided in bike racks along the northern edge of the building, adjacent to the sidewalk. Long-term bicycle parking for the residential use would be provided within a storage room adjacent to the residential lobby and mail room, near the entry court. Long-term bicycle parking for the office use would be provided within a storage room, adjacent to the office showers and lockers, accessible via the driveway at the western edge of the project site. The project would remove three existing driveways and add two new driveways. The project proposes detached sidewalks along the street fronting the project site. Pedestrian access to the project site would be provided via the lobbies and entry court accessible from Sonora Court.

At the 1170 Sonora Court site, short-term bicycle parking would be provided in bike racks along the northern edge of the project frontage, between the sidewalk and the roadway. Long-term bicycle parking for the office use would be provided within a storage room adjacent to the office lobby and office showers and lockers. Bicycle storage for the residential use would be provided within a storage room in Level B1 of the parking garage adjacent to the residential lobby elevators. The project would remove two existing driveways and add one new driveway. The project proposes detached sidewalks along the street fronting the project site. Pedestrian access to the project site would be provided via the lobbies and entry court accessible from Sonora Court. Pedestrians would also have access along the eastern edge of the project site to a small retail area at the southeast corner. A proposed sliding gate and raised crosswalk would provide direct access to the Lawrence Caltrain Station.

Parking

Vehicle Parking

The *1154 and 1170 Sonora Court Parking Study* by Walker Consultants, dated January 2023, details the project's parking requirements, the recommended parking supply, and the parking spaces provided. Based on the Sunnyvale Municipal Code LSAP with State Density Bonus requirements, the project would be required to provide 477 parking spaces at the 1154 Sonora Court site and 271 parking spaces at the 1170 Sonora Court site. However, under AB 2097, which was approved in September of 2022, public agencies may not impose any minimum automobile parking requirement on any residential development project that is located within ½ mile of public transit. The project site is located within ½ mile of the Lawrence Caltrain Station. Thus, the project requests a parking reduction using AB 2097. The project would provide a total of 352 parking spaces at the 1154 Sonora Court site and 207 parking spaces at the 1170 Sonora Court site.

The Parking Study conducted by Walker Consultants recommends a parking supply of 346 parking spaces at the 1154 Sonora Court site and 207 parking spaces at the 1170 Sonora Court site. This is based on an expected 35 percent reduction in single-occupancy vehicle trip generation as a result of a transportation demand management (TDM) plan and a shared parking management strategy that includes valet parking during peak office hours. The shared parking strategy is detailed in the *1154 and 1170 Sonora Court Parking Management Plan* by Walker Consultants, dated January 2023. Based on the proposed parking supply, the project would meet the recommendations provided in the Parking Study.

Bicycle Parking Requirements

The project proposes to provide a total of 79 bicycle parking spaces at the 1154 Sonora Court site and a total of 48 bicycle parking spaces at the 1170 Sonora Court site. The proposed bicycle parking and

the LSAP requirements are summarized in Tables 17 and 18. Based on LSAP parking requirements, the proposed project bicycle parking would not meet the requirements.

Recommendation: Prior to final design, the project should provide the number of bicycle parking spaces required by the LSAP.

Table 17
1154 Sonora Court Bicycle Parking Requirements

Land Use		Bicycle Parking Spaces
Proposed	**Size**	
Office	142.270 ksf	
Class I / Long Term		18
Class II / Short Term		6
Residential	174 units	
Class I / Long Term		43
Class II / Short Term		12
Total Bicycle Parking Spaces Provided		***79***
LSAP Parking Requirements [1]	**Rate**	
Office		
Class I / Long Term	1 per 75% of 6.0 ksf	18
Class II / Short Term	1 per 25% of 6.0 ksf	6
Residential		
Class I / Long Term	1 per 4 units	44
Class II / Short Term	1 per 15 units	12
Total Bicycle Parking Spaces Required		***80***

Notes

ksf = 1,000 square feet

[1] Source: *Sunnyvale Municipal Code*, Chapter 19.35 Lawrence Station Area Specific Plan District, Table 19.35.080B: LSAP Bicycle Parking Requirements

Table 18
1170 Sonora Court Bicycle Parking Requirements

Land Use		Bicycle Parking Spaces
Proposed	**Size**	
Office	79.211 ksf	
Class I / Long Term		10
Class II / Short Term		3
Residential	106 units	
Class I / Long Term		27
Class II / Short Term		8
Retail	0.377 ksf	
Class I / Long Term		0
Class II / Short Term		0
Total Bicycle Parking Spaces Provided		***48***
LSAP Parking Requirements [1]	**Rate**	
Office		
Class I / Long Term	1 per 75% of 6.0 ksf	10
Class II / Short Term	1 per 25% of 6.0 ksf	4
Residential		
Class I / Long Term	1 per 4 units	27
Class II / Short Term	1 per 15 units	8
Retail		
Class I / Long Term	1 per 30 employees	1
Class II / Short Term	1 per 6.0 ksf	1
Total Bicycle Parking Spaces Required		***51***

Notes

ksf = 1,000 square feet

[1] Source: *Sunnyvale Municipal Code*, Chapter 19.35 Lawrence Station Area Specific Plan District, Table 19.35.080B: LSAP Bicycle Parking Requirements

6. Conclusions

This report presents the results of the local transportation analysis (LTA) conducted for the proposed 1154 and 1170 Sonora Court project in Sunnyvale, California. The project would build two residential and office mixed-use developments within the Lawrence Station Area Plan (LSAP) area on the south side of Sonora Court. For the 1154 Sonora Court site, the 1.887-acre site is currently developed with an office building with 33,362 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 142,270 square feet of office space on the first three levels and 174 apartment units on the fourth to seventh levels with two levels of underground parking. For the 1170 Sonora Court site, the 1.088-acre site is currently developed with an office building with 14,902 square feet and a surface parking lot. The project will demolish the existing building and construct a seven-story building consisting of 79,211 square feet of office space on the first three levels and 106 apartment units on the fourth to seventh levels with two levels of underground parking. Vehicle access to both sites would be via driveways on Sonora Court.

This study was conducted for the purpose of identifying the potential near-term adverse traffic effects related to the proposed development. The project is consistent with the Lawrence Station Area Plan (LSAP) Update, and the potential long-term adverse traffic effects are presented in the traffic study conducted for the LSAP-Update.

Intersection Level of Service Results

The intersection level of service analysis showed that based on City of Sunnyvale and CMP intersection impact criteria, the project would generate adverse intersection effects at two signalized intersections during one peak period.

Potential Improvements Strategies for Intersection Impacts

Improvement options were studied for the two affected signalized intersections. An adverse intersection effect can be satisfactorily addressed by implementing measures that would restore intersection conditions to the LOS standard *or* to an average delay equal to without-project conditions or better.

Lawrence Expressway & Kifer Road (#3)

Under background conditions, the LOS would be an unacceptable LOS F during the PM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet the City of Sunnyvale's adverse intersection effect criteria.

> **Potential Improvement:** The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Lawrence Expressway & Reed Avenue/Monroe Street (#4) [CMP]

Under background conditions, the LOS would be an unacceptable LOS F during the AM peak hour. The addition of project traffic would increase both the critical-movement delay and V/C ratio sufficient to meet VTA's CMP adverse intersection effect criteria.

> **Potential Improvement:** The *City of Sunnyvale Traffic Impact Fee Update Study* has identified an improvement to provide a grade separation at this intersection. This would improve the north-south flow of traffic and potentially address the project's adverse effects.

Projects within the LSAP are required to pay the TIF, which would constitute their fair share contribution towards the cost of the improvement.

Freeway Effects

The results of the freeway analysis show that both study freeway segments on US 101 are operating at LOS F in the northbound direction in the morning and LOS F in the southbound direction in the evening. However, the results show that the project would not have an adverse effect on any freeway segments.

Freeway Ramp Effects

The results of the ramp analysis show that the study freeway ramps currently have sufficient capacity to service the existing traffic volumes and the ramps would continue to have sufficient capacity to serve the project traffic volumes under project conditions.

Other Transportation Issues

Hexagon conducted a site plan review, queuing analysis, pedestrian, bicycle and transit facility analysis and parking analysis for the proposed project. Our recommendation is listed below.

Recommendation

- Red curbs should be painted for 25 feet on both sides of the project driveways to ensure adequate sight distance.
- Prior to final design, the project should provide the number of bicycle parking spaces required by the LSAP.

1154 and 1170 Sonora Court LTA

Technical Appendices

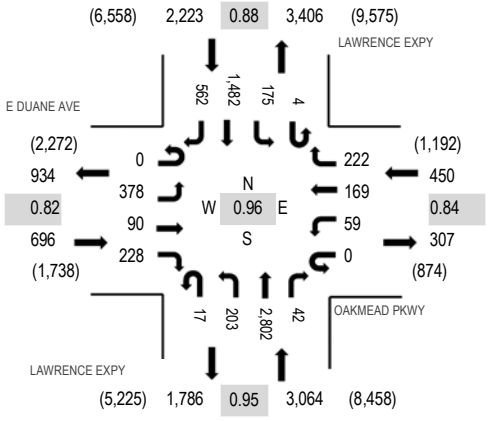
September 5, 2023

Appendix A
Traffic Counts

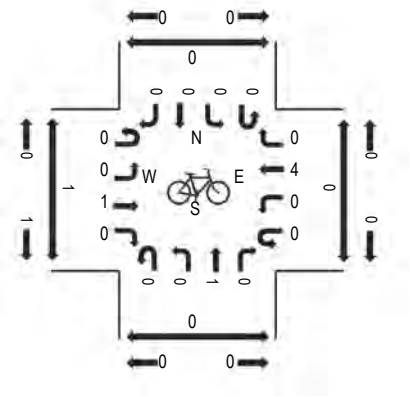
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 44 LAWRENCE EXPY & OAKMEAD PKWY AM
Date: Wednesday, February 5, 2020
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

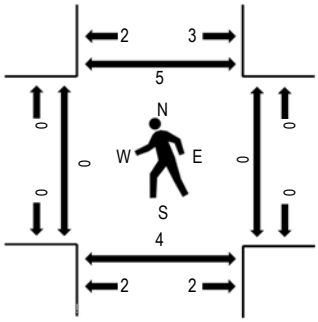
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E DUANE AVE Eastbound				OAKMEAD PKWY Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	48	3	24	0	10	9	21	3	16	521	5	1	50	328	75	1,114	5,479	2	1	0	4
7:15 AM	0	52	6	40	0	11	12	49	3	43	525	11	0	42	334	102	1,230	5,947	0	2	1	5
7:30 AM	0	81	12	43	0	8	33	28	3	65	654	10	0	29	356	146	1,468	6,256	1	0	1	1
7:45 AM	0	103	31	78	0	12	55	51	4	61	684	4	1	45	369	169	1,667	6,433	0	0	0	1
8:00 AM	0	114	30	66	0	13	44	56	6	37	664	14	0	48	376	114	1,582	6,370	0	0	0	0
8:15 AM	0	83	11	38	0	19	38	46	3	67	699	11	3	35	354	132	1,539	6,270	0	0	3	4
8:30 AM	0	78	18	46	0	15	32	69	4	38	755	13	0	47	383	147	1,645	6,277	0	0	1	0
8:45 AM	0	103	29	35	0	15	37	93	5	23	681	15	0	46	397	125	1,604	6,154	0	0	0	6
9:00 AM	0	106	20	30	0	21	16	78	8	26	676	6	1	55	347	92	1,482	6,097	0	0	1	8
9:15 AM	0	98	17	31	0	19	19	75	6	30	691	5	0	45	379	131	1,546		1	1	0	0
9:30 AM	0	89	16	36	0	12	19	60	1	23	659	10	1	57	438	101	1,522		0	0	0	0
9:45 AM	1	82	17	23	0	19	16	62	4	29	633	4	1	57	450	149	1,547		1	2	1	1

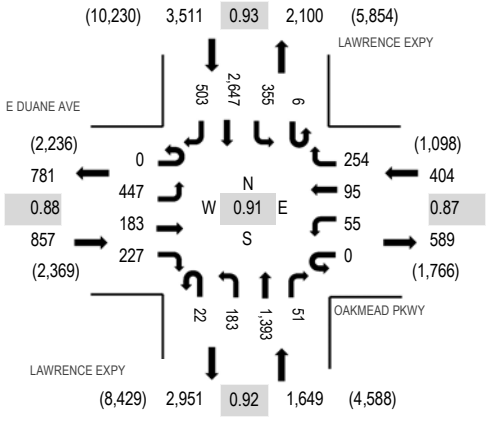
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	0	0	0	0	0	0	0	0	9	0	0	0	4	1	17
Lights	0	369	90	228	0	59	168	219	17	200	2,761	41	4	166	1,434	552	6,308
Mediums	0	6	0	0	0	0	1	3	0	3	32	1	0	9	44	9	108
Total	0	378	90	228	0	59	169	222	17	203	2,802	42	4	175	1,482	562	6,433

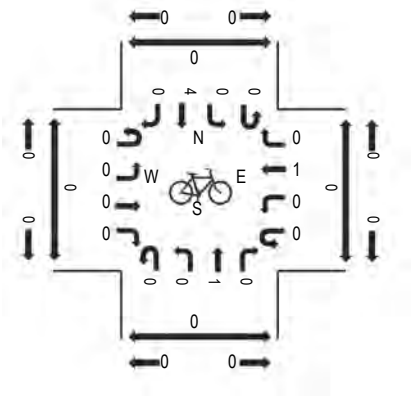
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 44 LAWRENCE EXPY & OAKMEAD PKWY PM
Date: Wednesday, February 5, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

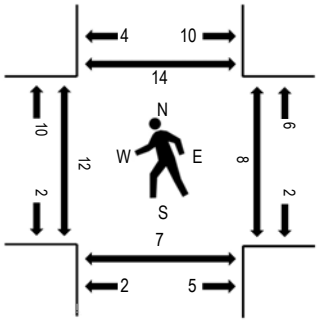
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E DUANE AVE Eastbound				OAKMEAD PKWY Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	94	41	46	0	12	12	52	6	42	288	16	0	73	701	107	1,490	6,062	0	1	0	1
4:15 PM	0	95	31	39	0	17	24	48	2	28	311	8	1	66	685	95	1,450	6,110	2	5	4	0
4:30 PM	0	107	42	51	0	11	10	44	5	44	388	11	0	84	683	92	1,572	6,421	4	1	2	4
4:45 PM	0	74	41	52	0	13	28	65	3	45	352	10	2	97	642	126	1,550	6,387	5	2	1	5
5:00 PM	0	126	48	55	0	13	32	60	9	50	289	17	0	81	635	123	1,538	6,343	0	3	1	2
5:15 PM	0	140	52	69	0	18	25	85	5	44	364	13	4	93	687	162	1,761	6,276	3	2	3	3
5:30 PM	0	105	47	56	0	7	23	76	4	51	319	12	4	124	552	158	1,538	6,082	0	2	1	3
5:45 PM	0	120	56	41	0	11	30	61	10	37	292	19	1	118	533	177	1,506	6,020	8	0	11	7
6:00 PM	0	121	53	59	0	13	27	71	8	26	286	13	1	107	538	148	1,471	5,880	0	0	3	2
6:15 PM	0	122	36	45	0	9	12	51	6	35	330	13	1	97	679	131	1,567		0	0	0	0
6:30 PM	0	75	31	39	0	9	9	40	11	43	342	20	2	90	677	88	1,476		0	0	4	0
6:45 PM	0	85	22	53	0	11	19	50	10	35	303	13	7	71	589	98	1,366		0	0	1	2

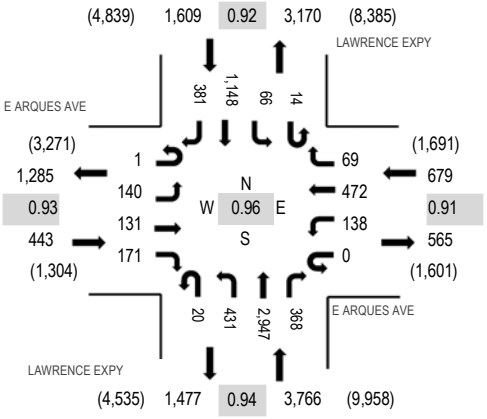
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	0	0	0	0	0	2	0	0	2	0	0	0	2	0	7
Lights	0	439	182	226	0	55	95	249	22	181	1,377	50	6	350	2,627	490	6,349
Mediums	0	7	1	1	0	0	0	3	0	2	14	1	0	5	18	13	65
Total	0	447	183	227	0	55	95	254	22	183	1,393	51	6	355	2,647	503	6,421

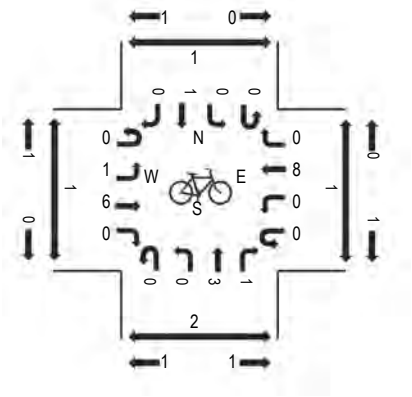
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 45 LAWRENCE EXPY & E ARQUES AVE AM
Date: Thursday, February 6, 2020
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

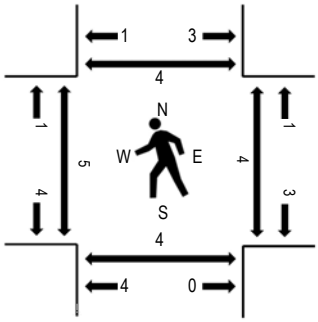
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	E ARQUES AVE Eastbound				E ARQUES AVE Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	21	9	18	0	14	25	9	8	46	517	29	3	8	268	49	1,024	5,101	0	0	0	1
7:15 AM	0	28	16	28	0	29	57	5	1	49	517	49	3	8	299	55	1,144	5,672	1	1	0	0
7:30 AM	0	32	18	31	0	20	63	11	0	73	699	68	2	13	316	59	1,405	6,164	0	1	1	0
7:45 AM	0	25	33	24	0	40	86	20	4	85	730	70	3	12	335	61	1,528	6,443	0	0	1	0
8:00 AM	1	39	32	47	0	31	119	14	8	88	722	83	5	17	292	97	1,595	6,497	2	1	1	0
8:15 AM	0	36	24	41	0	45	117	25	3	89	738	103	2	21	307	85	1,636	6,469	2	1	0	0
8:30 AM	0	26	43	43	0	28	125	10	4	128	787	87	1	14	280	108	1,684	6,311	1	0	1	2
8:45 AM	0	39	32	40	0	34	111	20	5	126	700	95	6	14	269	91	1,582	6,160	0	2	2	2
9:00 AM	0	42	35	56	0	48	78	13	12	104	637	128	5	3	302	104	1,567	6,194	3	2	0	1
9:15 AM	1	41	39	53	0	45	100	15	4	102	544	105	8	19	291	111	1,478		0	1	0	0
9:30 AM	0	39	49	68	0	30	100	23	2	111	577	113	9	12	282	118	1,533		2	1	3	1
9:45 AM	0	52	46	57	0	63	101	17	7	112	559	130	9	24	303	136	1,616		1	2	1	0

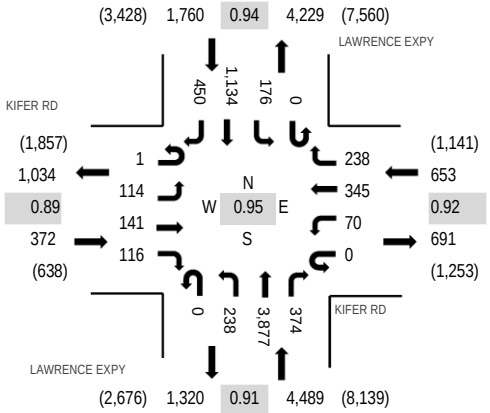
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	0	2	0	0	1	0	0	2	4	0	0	0	3	1	15
Lights	1	131	124	161	0	135	456	68	18	426	2,901	366	13	64	1,096	374	6,334
Mediums	0	7	7	8	0	3	15	1	2	3	42	2	1	2	49	6	148
Total	1	140	131	171	0	138	472	69	20	431	2,947	368	14	66	1,148	381	6,497

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

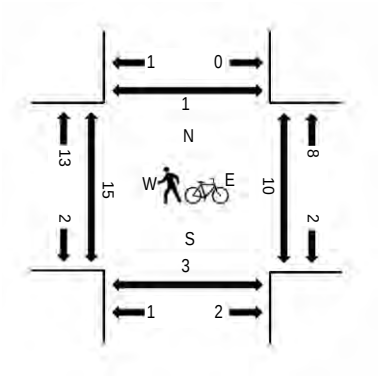
Location: 1 LAWRENCE EXPY & KIFER RD AM
Date and Start Time: Wednesday, March 7, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	KIFER RD Eastbound				KIFER RD Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	10	14	38	0	11	43	32	0	44	531	80	1	34	278	82	1,198	6,072	1	0	0	0
7:15 AM	0	16	12	34	0	16	54	33	0	51	661	82	2	35	276	78	1,350	6,621	0	2	0	0
7:30 AM	0	26	17	23	0	18	85	47	0	44	937	108	2	33	284	92	1,716	7,059	3	1	0	0
7:45 AM	0	22	28	26	0	18	83	48	0	61	962	89	1	30	334	106	1,808	7,167	0	0	0	0
8:00 AM	1	21	29	29	0	24	77	46	0	69	879	91	0	56	319	106	1,747	7,274	5	5	0	0
8:15 AM	0	33	39	33	0	19	86	60	0	52	975	77	0	43	275	96	1,788		3	3	0	1
8:30 AM	0	28	36	26	0	21	88	68	0	51	946	112	0	33	292	123	1,824		0	1	0	0
8:45 AM	0	32	37	28	0	6	94	64	0	66	1,077	94	0	44	248	125	1,915		4	1	2	0

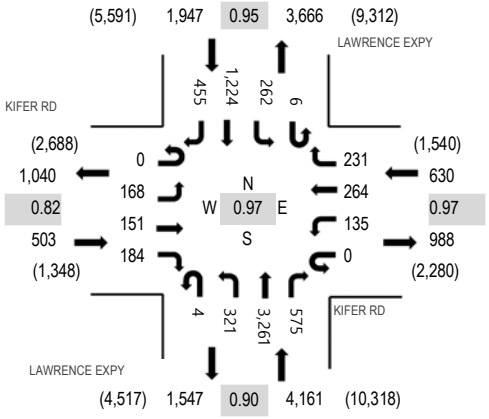
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	0	0	0	0	0	1	0	0	5	1	0	0	5	0	15
Lights	1	107	137	112	0	60	338	230	0	237	3,851	371	0	175	1,095	438	7,152
Mediums	0	4	4	4	0	10	7	7	0	1	21	2	0	1	34	12	107
Total	1	114	141	116	0	70	345	238	0	238	3,877	374	0	176	1,134	450	7,274

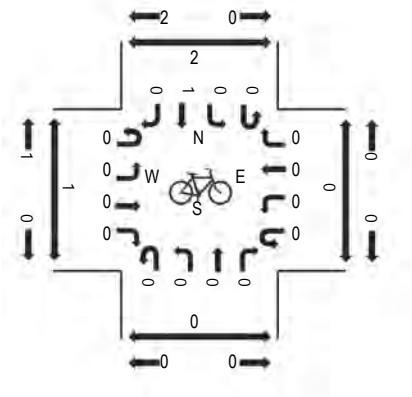
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 LAWRENCE EXPY & KIFER RD AM
Date: Tuesday, April 25, 2023
Peak Hour: 08:30 AM - 09:30 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

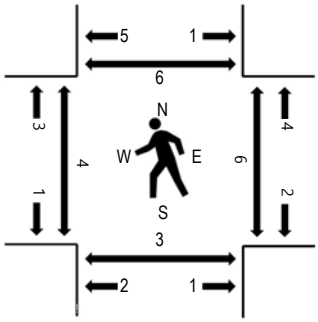
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	KIFER RD Eastbound				KIFER RD Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	19	14	37	0	18	24	33	0	24	369	45	0	47	192	72	894	4,858	0	0	1	0
7:15 AM	0	32	11	30	0	16	30	35	1	41	431	93	1	61	255	89	1,126	5,493	0	0	0	0
7:30 AM	0	32	12	36	0	22	28	37	1	50	597	47	0	53	265	100	1,280	6,085	0	0	0	0
7:45 AM	0	35	34	44	0	31	40	24	0	75	697	64	0	56	353	105	1,558	6,531	0	0	0	0
8:00 AM	0	26	25	49	0	16	47	42	0	55	662	57	0	52	388	110	1,529	6,834	0	0	0	1
8:15 AM	0	35	20	42	0	26	52	56	1	68	793	101	0	47	358	119	1,718	7,135	0	0	0	0
8:30 AM	0	52	40	38	0	40	64	45	2	61	771	115	0	52	332	114	1,726	7,241	1	3	2	2
8:45 AM	0	35	42	35	0	31	46	57	1	81	877	191	0	60	289	116	1,861	7,178	2	1	0	2
9:00 AM	0	29	45	53	0	30	78	67	0	72	833	130	4	85	291	113	1,830	7,105	0	1	0	0
9:15 AM	0	52	24	58	0	34	76	62	1	107	780	139	2	65	312	112	1,824		1	1	1	2
9:30 AM	0	58	32	84	0	41	60	68	0	82	664	143	4	46	258	123	1,663		1	0	0	0
9:45 AM	0	37	31	70	0	38	56	70	1	82	788	125	1	76	297	116	1,788		3	0	1	0

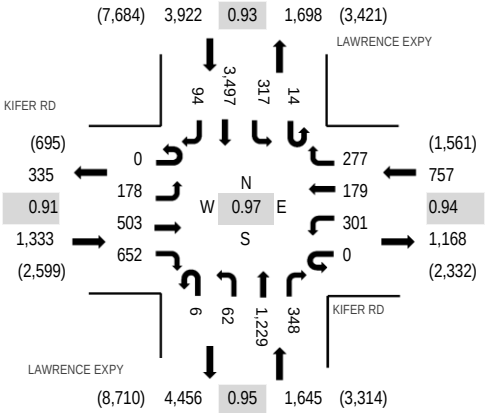
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	3	1	0	0	0	1	3	0	0	2	0	0	0	3	6	19
Lights	0	155	144	178	0	129	252	224	4	319	3,234	575	6	257	1,155	439	7,071
Mediums	0	10	6	6	0	6	11	4	0	2	25	0	0	5	66	10	151
Total	0	168	151	184	0	135	264	231	4	321	3,261	575	6	262	1,224	455	7,241

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

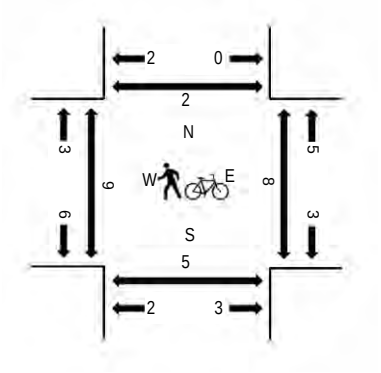
Location: 1 LAWRENCE EXPY & KIFER RD PM
Date and Start Time: Wednesday, March 7, 2018
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	KIFER RD Eastbound				KIFER RD Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	37	162	185	0	67	38	74	2	16	289	97	0	69	782	30	1,848	7,572	3	1	2	0
4:15 PM	0	37	114	156	0	63	40	75	2	7	356	99	2	94	845	27	1,917	7,657	1	1	0	0
4:30 PM	0	48	130	161	0	74	28	68	1	13	300	90	5	87	935	28	1,968	7,650	1	0	2	1
4:45 PM	0	45	147	175	0	77	48	57	2	20	272	66	3	68	838	21	1,839	7,542	3	1	1	1
5:00 PM	0	48	112	160	0	87	63	77	1	22	301	93	4	68	879	18	1,933	7,586	1	2	0	0
5:15 PM	0	38	117	139	0	66	66	80	0	10	344	87	4	60	879	20	1,910		5	1	2	0
5:30 PM	0	38	110	133	0	71	48	82	1	11	297	102	2	74	857	34	1,860		4	4	0	0
5:45 PM	0	47	131	129	0	75	55	82	0	15	303	95	6	60	868	17	1,883		3	2	2	0

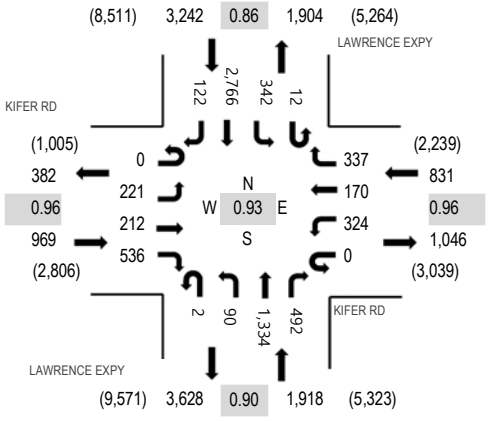
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	1	0	0	0	0	1	0	0	3	0	0	0	3	0	9
Lights	0	175	499	651	0	301	175	273	6	62	1,214	339	14	315	3,475	86	7,585
Mediums	0	2	3	1	0	0	4	3	0	0	12	9	0	2	19	8	63
Total	0	178	503	652	0	301	179	277	6	62	1,229	348	14	317	3,497	94	7,657

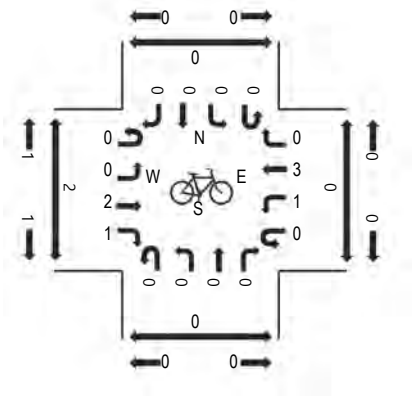
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 LAWRENCE EXPY & KIFER RD PM
Date: Tuesday, April 25, 2023
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

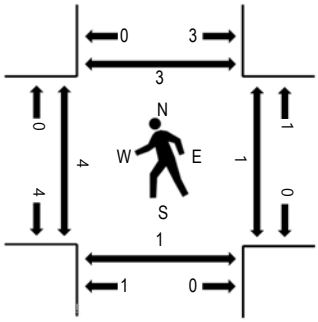
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	KIFER RD Eastbound				KIFER RD Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	68	60	107	0	78	34	77	0	21	280	102	0	55	418	20	1,320	6,041	0	0	0	0
4:15 PM	0	68	36	123	0	61	29	63	0	11	349	120	2	83	650	28	1,623	6,354	2	2	0	0
4:30 PM	0	57	78	127	0	51	31	66	2	14	286	86	2	91	585	34	1,510	6,543	0	0	0	1
4:45 PM	0	52	80	132	0	92	36	95	1	19	288	115	2	92	560	24	1,588	6,897	2	2	1	1
5:00 PM	0	55	63	140	0	76	41	99	2	16	301	116	1	62	641	20	1,633	6,960	0	0	0	0
5:15 PM	0	54	42	135	0	83	35	84	0	23	296	116	4	73	835	32	1,812	6,826	2	0	0	0
5:30 PM	0	53	46	137	0	82	58	75	0	24	390	137	4	99	721	38	1,864	6,650	2	0	1	0
5:45 PM	0	59	61	124	0	83	36	79	0	27	347	123	3	108	569	32	1,651	6,183	0	1	0	3
6:00 PM	0	71	45	107	0	86	26	74	3	9	311	94	0	59	575	39	1,499	5,878	0	0	0	1
6:15 PM	0	51	40	129	0	60	31	70	0	25	308	177	2	83	632	28	1,636		1	1	0	1
6:30 PM	0	40	41	127	0	74	34	70	2	16	267	115	0	78	499	34	1,397		0	0	0	1
6:45 PM	0	45	41	112	0	73	29	68	0	22	226	136	2	86	477	29	1,346		0	0	0	0

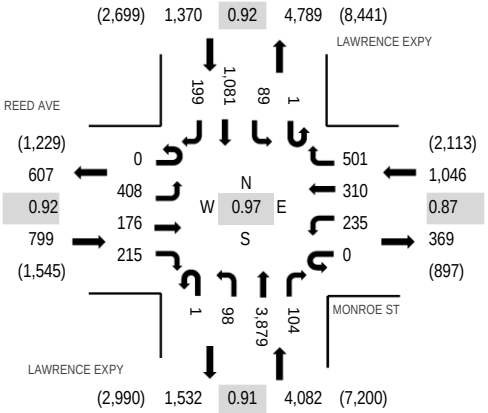
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	3
Lights	0	215	212	535	0	323	168	336	2	88	1,321	489	12	342	2,742	120	6,905
Mediums	0	6	0	1	0	1	2	1	0	1	12	3	0	0	23	2	52
Total	0	221	212	536	0	324	170	337	2	90	1,334	492	12	342	2,766	122	6,960

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

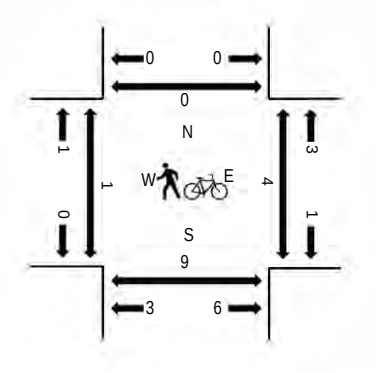
Location: 2 LAWRENCE EXPY & MONROE ST AM
Date and Start Time: Wednesday, March 7, 2018
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	REED AVE Eastbound				MONROE ST Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	52	76	39	0	33	54	106	1	28	510	39	1	47	175	41	1,202	6,260	1	0	7	0
7:15 AM	0	88	99	27	0	69	110	143	0	21	612	66	0	32	266	38	1,571	6,936	0	4	4	0
7:30 AM	0	85	34	44	0	83	82	116	0	43	854	22	0	26	329	37	1,755	7,193	0	1	1	0
7:45 AM	0	112	33	57	0	55	90	126	1	48	847	26	0	28	279	30	1,732	7,140	1	0	3	0
8:00 AM	0	111	44	65	0	53	82	106	1	31	988	26	0	25	302	44	1,878	7,297	0	0	1	0
8:15 AM	0	78	42	62	0	57	78	129	0	28	987	33	0	34	249	51	1,828		0	1	2	0
8:30 AM	0	130	50	44	0	67	71	152	0	19	829	19	1	14	259	47	1,702		0	3	2	0
8:45 AM	0	89	40	44	0	58	79	114	0	20	1,075	26	0	16	271	57	1,889		1	0	1	0

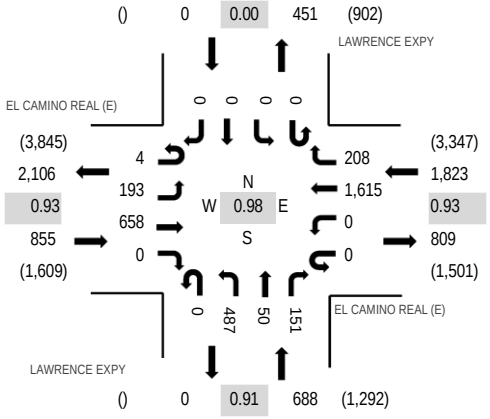
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	0	2	0	0	0	2	0	2	2	0	0	0	4	5	19
Lights	0	401	173	210	0	231	304	496	1	95	3,860	100	1	89	1,039	190	7,190
Mediums	0	5	3	3	0	4	6	3	0	1	17	4	0	0	38	4	88
Total	0	408	176	215	0	235	310	501	1	98	3,879	104	1	89	1,081	199	7,297

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

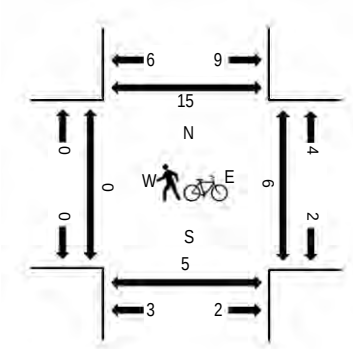
Location: 38 LAWRENCE EXPY & EL CAMINO REAL (E) AM
Date and Start Time: Tuesday, November 14, 2017
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EL CAMINO REAL (E) Eastbound				EL CAMINO REAL (E) Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	52	103	0	0	0	238	54	0	67	14	16	0	0	0	0	544	2,962	0	0	3	1
7:15 AM	0	56	125	0	0	0	357	62	0	86	11	18	0	0	0	0	715	3,252	0	2	1	1
7:30 AM	0	75	149	0	0	0	404	56	0	111	13	34	0	0	0	0	842	3,366	0	1	1	1
7:45 AM	2	45	170	0	0	0	437	51	0	105	14	37	0	0	0	0	861	3,344	0	2	1	7
8:00 AM	0	38	191	0	0	0	389	52	0	125	10	29	0	0	0	0	834	3,286	0	0	1	3
8:15 AM	2	35	148	0	0	0	385	49	0	146	13	51	0	0	0	0	829		0	1	2	3
8:30 AM	0	34	166	0	0	0	381	44	0	143	11	41	0	0	0	0	820		0	2	2	4
8:45 AM	1	40	177	0	0	0	335	53	0	131	20	46	0	0	0	0	803		0	4	2	5

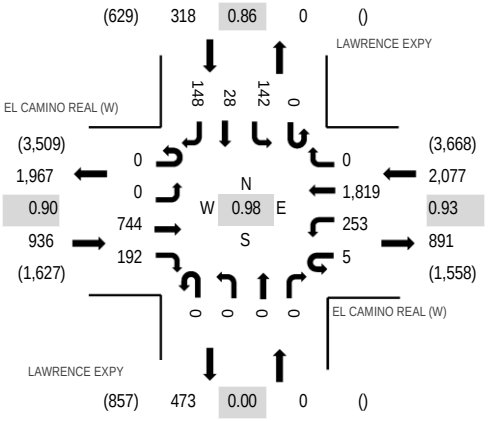
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	3	0	0	0	4	0	0	2	0	2	0	0	0	0	12
Lights	4	191	642	0	0	0	1,577	204	0	479	50	147	0	0	0	0	3,294
Mediums	0	1	13	0	0	0	34	4	0	6	0	2	0	0	0	0	60
Total	4	193	658	0	0	0	1,615	208	0	487	50	151	0	0	0	0	3,366

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

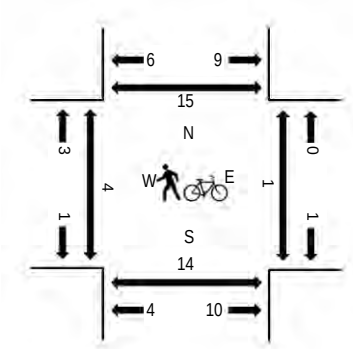
Location: 37 LAWRENCE EXPY & EL CAMINO REAL (W) AM
Date and Start Time: Tuesday, November 14, 2017
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	EL CAMINO REAL (W) Eastbound				EL CAMINO REAL (W) Westbound				LAWRENCE EXPY Northbound				LAWRENCE EXPY Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	110	25	0	37	215	0	0	0	0	0	0	11	5	32	435	2,647	0	0	1	1
7:15 AM	0	0	122	37	0	43	309	0	0	0	0	0	0	24	9	53	597	3,061	1	0	0	3
7:30 AM	0	0	166	38	0	63	411	0	0	0	0	0	0	39	13	50	780	3,268	0	0	3	1
7:45 AM	0	0	206	53	0	61	442	0	0	0	0	0	0	29	8	36	835	3,331	2	0	3	2
8:00 AM	0	0	174	51	1	61	476	0	0	0	0	0	0	38	11	37	849	3,277	0	0	4	5
8:15 AM	0	0	189	52	0	57	416	0	0	0	0	0	0	47	3	40	804		0	0	3	5
8:30 AM	0	0	175	36	4	74	485	0	0	0	0	0	0	28	6	35	843		1	1	4	1
8:45 AM	0	0	154	39	4	67	442	0	0	0	0	0	0	37	8	30	781		2	0	3	7

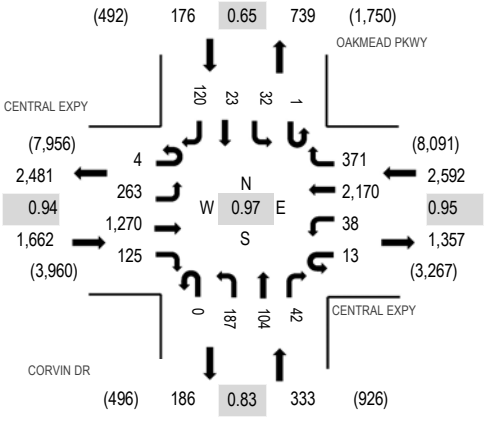
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	1	0	0	6	0	0	0	0	0	0	1	0	2	11
Lights	0	0	727	183	5	248	1,772	0	0	0	0	0	0	140	28	142	3,245
Mediums	0	0	16	8	0	5	41	0	0	0	0	0	0	1	0	4	75
Total	0	0	744	192	5	253	1,819	0	0	0	0	0	0	142	28	148	3,331

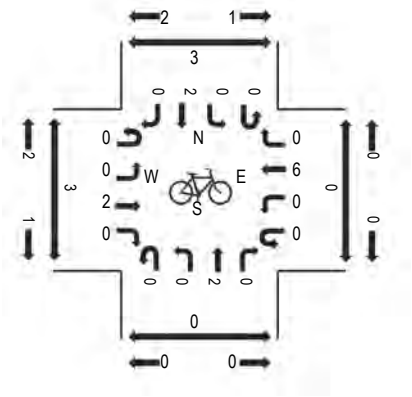
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 46 CORVIN DR & CENTRAL EXPY AM
Date: Thursday, February 6, 2020
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

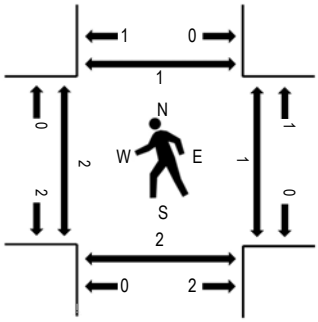
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				CORVIN DR Northbound				OAKMEAD PKWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	8	119	8	4	19	651	39	0	7	4	5	0	0	2	7	873	4,090	0	0	0	0
7:15 AM	1	17	140	12	3	11	669	41	0	14	10	9	0	6	4	16	953	4,395	0	0	0	0
7:30 AM	0	21	177	13	5	6	694	61	0	30	12	20	0	5	4	26	1,074	4,599	0	0	0	0
7:45 AM	3	31	268	26	3	6	634	68	0	56	22	10	0	8	5	50	1,190	4,722	1	0	0	1
8:00 AM	2	45	271	20	3	8	540	102	0	66	27	12	1	8	6	67	1,178	4,763	1	0	0	1
8:15 AM	1	71	309	33	4	6	540	93	0	35	22	10	0	10	6	17	1,157	4,741	1	0	0	0
8:30 AM	0	83	348	29	3	13	526	85	0	43	27	10	0	9	3	18	1,197	4,746	0	0	1	0
8:45 AM	1	64	342	43	3	11	564	91	0	43	28	10	0	5	8	18	1,231	4,709	0	1	1	0
9:00 AM	1	72	291	38	4	8	561	79	0	45	19	12	0	3	5	18	1,156	4,616	3	0	0	0
9:15 AM	3	72	271	33	1	6	518	82	0	85	20	14	0	10	9	38	1,162		0	0	0	0
9:30 AM	3	67	262	32	5	8	528	92	0	86	21	8	0	3	4	41	1,160		0	0	0	0
9:45 AM	2	54	223	30	5	13	608	67	0	40	32	12	0	4	8	40	1,138		0	0	0	0

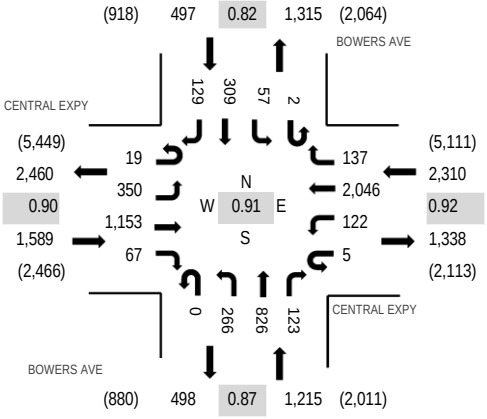
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	5	1	0	0	0	0	0	0	0	0	8
Lights	4	260	1,251	124	13	36	2,133	364	0	184	100	40	1	31	21	118	4,680
Mediums	0	3	17	1	0	2	32	6	0	3	4	2	0	1	2	2	75
Total	4	263	1,270	125	13	38	2,170	371	0	187	104	42	1	32	23	120	4,763

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

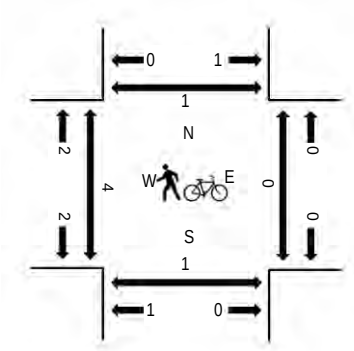
Location: 23 BOWERS AVE & CENTRAL EXPY AM
Date and Start Time: Wednesday, November 15, 2017
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CENTRAL EXPY Eastbound				CENTRAL EXPY Westbound				BOWERS AVE Northbound				BOWERS AVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	1	16	117	8	4	30	686	44	0	34	78	17	0	5	44	17	1,101	4,895	0	0	0	0
7:15 AM	6	30	127	13	1	27	640	41	0	61	100	21	0	10	40	47	1,164	5,015	0	0	0	0
7:30 AM	9	37	185	16	2	25	636	21	0	80	114	19	0	7	43	60	1,254	5,243	0	0	0	0
7:45 AM	9	56	220	27	1	26	583	34	0	69	178	25	0	14	83	51	1,376	5,445	1	0	0	0
8:00 AM	2	63	255	19	2	24	487	25	0	60	154	25	0	13	66	26	1,221	5,611	1	0	1	0
8:15 AM	3	92	311	21	2	34	504	31	0	67	190	27	1	10	70	29	1,392		1	0	0	1
8:30 AM	7	93	271	13	0	37	524	38	0	75	226	41	1	16	77	37	1,456		1	0	0	0
8:45 AM	7	102	316	14	1	27	531	43	0	64	256	30	0	18	96	37	1,542		1	0	0	0

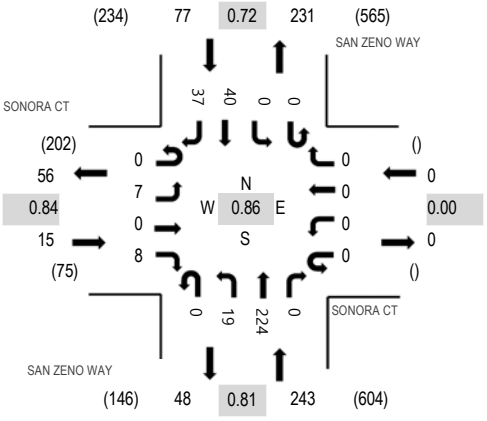
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	6	0	0	0	7	0	0	0	5	2	0	0	2	0	22
Lights	19	349	1,124	66	5	119	1,997	136	0	265	801	119	2	47	295	125	5,469
Mediums	0	1	23	1	0	3	42	1	0	1	20	2	0	10	12	4	120
Total	19	350	1,153	67	5	122	2,046	137	0	266	826	123	2	57	309	129	5,611

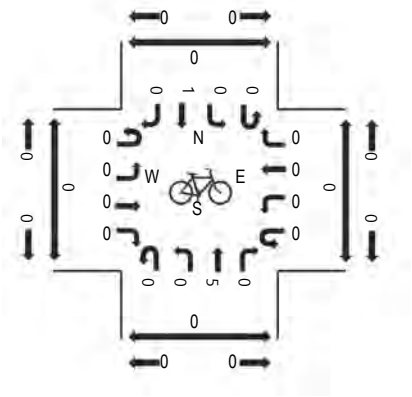
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 SAN ZENO WAY & SONORA CT AM
Date: Tuesday, April 25, 2023
Peak Hour: 09:00 AM - 10:00 AM
Peak 15-Minutes: 09:30 AM - 09:45 AM

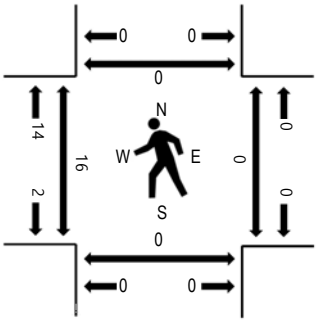
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SONORA CT Eastbound				SONORA CT Westbound				SAN ZENO WAY Northbound				SAN ZENO WAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	0	0	0	0	0	0	0	4	37	0	0	0	5	12	65	267	0	0	0	0
7:15 AM	0	1	0	2	0	0	0	0	0	11	45	0	0	0	4	5	68	281	0	0	0	0
7:30 AM	0	7	0	3	0	0	0	0	0	7	39	0	0	0	7	8	71	292	11	0	0	0
7:45 AM	0	1	0	2	0	0	0	0	0	10	37	0	0	0	6	7	63	300	0	0	0	0
8:00 AM	0	2	0	6	0	0	0	0	0	9	37	0	0	0	13	12	79	311	0	0	0	0
8:15 AM	0	8	0	2	0	0	0	0	0	11	38	0	0	0	10	10	79	307	4	0	0	0
8:30 AM	0	6	0	2	0	0	0	0	0	5	29	0	0	0	17	20	79	297	6	0	0	0
8:45 AM	0	4	0	7	0	0	0	0	0	6	36	0	0	0	12	9	74	315	8	0	0	0
9:00 AM	0	1	0	1	0	0	0	0	0	4	41	0	0	0	14	14	75	335	2	0	0	0
9:15 AM	0	2	0	0	0	0	0	0	0	7	46	0	0	0	4	10	69		2	0	0	0
9:30 AM	0	2	0	4	0	0	0	0	0	3	72	0	0	0	8	8	97		12	0	0	0
9:45 AM	0	2	0	3	0	0	0	0	0	5	65	0	0	0	14	5	94		0	0	0	0

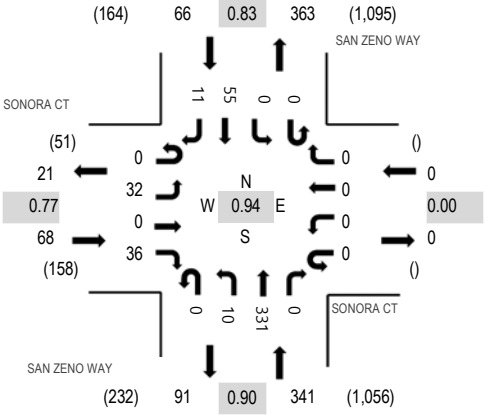
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	6	0	8	0	0	0	0	0	19	224	0	0	0	38	34	329
Mediums	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	3	6
Total	0	7	0	8	0	0	0	0	0	19	224	0	0	0	40	37	335

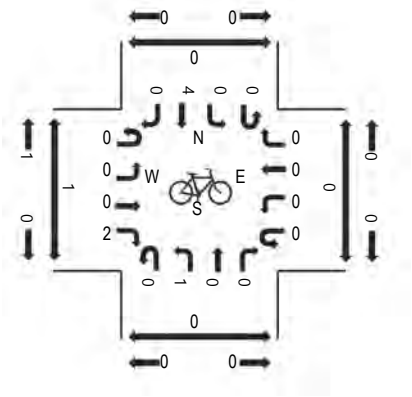
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 SAN ZENO WAY & SONORA CT PM
Date: Tuesday, April 25, 2023
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

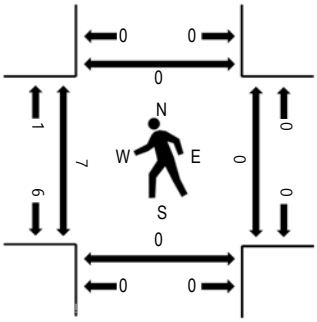
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	SONORA CT Eastbound				SONORA CT Westbound				SAN ZENO WAY Northbound				SAN ZENO WAY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	11	0	11	0	0	0	0	0	1	81	0	0	0	16	4	124	475	0	0	0	0
4:15 PM	0	9	0	7	0	0	0	0	0	4	92	0	0	0	12	3	127	469	3	0	0	0
4:30 PM	0	5	0	10	0	0	0	0	0	2	80	0	0	0	11	4	112	453	2	0	0	0
4:45 PM	0	7	0	8	0	0	0	0	0	3	78	0	0	0	16	0	112	462	2	0	0	0
5:00 PM	0	8	0	9	0	0	0	0	0	2	85	0	0	0	12	2	118	463	1	0	0	0
5:15 PM	0	10	0	7	0	0	0	0	0	1	75	0	0	0	17	1	111	453	5	0	0	0
5:30 PM	0	7	0	10	0	0	0	0	0	4	82	0	0	0	16	2	121	454	7	0	0	0
5:45 PM	0	3	0	9	0	0	0	0	0	1	87	0	0	0	13	0	113	435	3	0	0	0
6:00 PM	0	1	0	7	0	0	0	0	1	4	85	0	0	0	10	0	108	440	3	0	0	0
6:15 PM	0	5	0	2	0	0	0	0	0	0	92	0	0	0	11	2	112		2	0	0	0
6:30 PM	0	2	0	3	0	0	0	0	0	3	88	0	0	0	5	1	102		0	0	0	0
6:45 PM	0	3	0	4	0	0	0	0	0	6	99	0	0	0	5	1	118		6	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	31	0	36	0	0	0	0	0	10	330	0	0	0	54	9	470
Mediums	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	2	5
Total	0	32	0	36	0	0	0	0	0	10	331	0	0	0	55	11	475

Appendix B
Volume Summary

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Lawrence Expressw& Duane Avenue/Oakmead Parkway
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 02/05/20
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	562	1482	179	222	169	59	42	2802	220	228	90	378	6433
Approved Project Trips													
3375 Scott Blvd		14	27	4				2					47
3000 Bowers Ave		10						1					11
2400 Condensa St (NVDIA Phase 3)		3											3
3035 El Camino Real								1					1
3402 El Camino Real		2						5					7
3700 El Camino Real (retail portion)		4						10					14
3155 El Camino Real													
3607 Kifer Rd		103						14					117
Santa Clara LSAP		-5						112					107
3625 Peterson Way		14	32	6	1			2			8		63
2900 Lakeside Drive			7	6									13
1178 Sonora Court		1						23					24
1050 Kifer Rd (Phase 2)		28						4					32
1101 Elko Dr								11					11
1155 Aster Ave		6						38					44
871 and 895 E Fremont Ave		2						8					10
1 AMD Place	-6	2			-4			18	-3	56	4	126	193
Total Approved Trips	-6	184	66	16	-3	0	0	249	-3	56	12	126	697
Background Conditions	556	1666	245	238	166	59	42	3051	217	284	102	504	7130
Project Trips	0	97	0	0	0	0	0	46	1	6	0	0	150
Background + Project	556	1763	245	238	166	59	42	3097	218	290	102	504	7280

Intersection Number: 2
Traffix Node Number: 5611
Intersection Name: Lawrence Expressw& Arques Avenue
Peak Hour: AM
Count Date: 02/06/20
Scenario: 1154 & 1170 Sonora Court LTA
Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.77	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	
Existing Conditions	381	1148	80	69	472	138	368	2947	451	171	131	141	6497
Approved Project Trips													
3375 Scott Blvd			14	2	1	3	19				4		43
3000 Bowers Ave		10						1			7		18
2400 Condensa St (NVDIA Phase 3)		4											4
3035 El Camino Real								1					1
3402 El Camino Real		2						5					7
3700 El Camino Real (retail portion)		4						10					14
3155 El Camino Real													
3607 Kifer Rd		103						14					117
Santa Clara LSAP		-5						112	19				126
3625 Peterson Way			14	2	1	6	33				8		64
2900 Lakeside Drive						8	10						18
1178 Sonora Court		1		23									24
1050 Kifer Rd (Phase 2)		28						4					32
1101 Elko Dr								11					11
1155 Aster Ave		6						38					44
871 and 895 E Fremont Ave		2						8					10
1 AMD Place	2	32	24	1	-1			-4		10	14	18	96
Total Approved Trips	2	187	52	28	1	17	62	200	19	10	33	18	629
Background Conditions	383	1335	132	97	473	155	430	3147	470	181	164	159	7126
Project Trips	0	103	0	47	0	0	0	0	0	0	0	0	150
Background + Project	383	1438	132	144	473	155	430	3147	470	181	164	159	7276

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Lawrence Expressw & Kifer Road
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 03/07/18
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.87	1.00	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	1.00	
Existing Conditions	450	1134	176	238	345	70	374	3877	238	116	141	115	7274
Approved Project Trips													
3375 Scott Blvd		3						24					27
3000 Bowers Ave				2	1	3	20				7		33
2400 Condensa St (NVDIA Phase 3)							1	8					9
3035 El Camino Real								1					1
3402 El Camino Real		2						5					7
3700 El Camino Real (retail portion)		4						10					14
3155 El Camino Real													
3607 Kifer Rd	133				17				36	5	3	16	210
Santa Clara LSAP			4	99	45	42	-2				-2		186
3625 Peterson Way		8						46					54
2900 Lakeside Drive		8						10					18
1178 Sonora Court			-1				-1			17			15
1050 Kifer Rd (Phase 2)	21		18		2		9		11	3		6	70
1101 Elko Dr								11					11
1155 Aster Ave		11						46					57
871 and 895 E Fremont Ave		2						8					10
1 AMD Place	-1	25						1				-6	19
Total Approved Trips	153	63	21	101	65	45	27	170	47	25	8	16	741
Background Conditions	603	1197	197	339	410	115	401	4047	285	141	149	131	8015
Project Trips	0	0	126	0	0	0	47	0	0	36	0	0	209
Background + Project	603	1197	323	339	410	115	448	4047	285	177	149	131	8224

Intersection Number: 4
Traffix Node Number: 5613
Intersection Name: Lawrence Expressw& Reed Avenue/Monroe Street
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 03/07/18
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.87	1.00	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	1.00	
Existing Conditions	199	1081	90	501	310	235	104	3879	99	215	176	408	7297
Approved Project Trips													
3375 Scott Blvd		3						24					27
3000 Bowers Ave		3						20					23
2400 Condensa St (NVDIA Phase 3)		1						10			4		15
3035 El Camino Real								1					1
3402 El Camino Real		2						5					7
3700 El Camino Real (retail portion)		4						10					14
3155 El Camino Real													
3607 Kifer Rd	1	3	1	4				21				11	41
Santa Clara LSAP	2	40						-2					40
3625 Peterson Way	1	6						38				8	53
2900 Lakeside Drive		8						10					18
1178 Sonora Court	9	7	1					-1					16
1050 Kifer Rd (Phase 2)		3						20					23
1101 Elko Dr								11					11
1155 Aster Ave	11				7				3	23	17	46	107
871 and 895 E Fremont Ave		2						8					10
1 AMD Place		25						1					26
Total Approved Trips	24	107	2	4	7	0	0	176	3	23	21	65	432
Background Conditions	223	1188	92	505	317	235	104	4055	102	238	197	473	7729
Project Trips	19	15	2	5	0	0	0	42	0	0	0	0	83
Background + Project	242	1203	94	510	317	235	104	4097	102	238	197	473	7812

Intersection Number: 5
Traffix Node Number: 1214
Intersection Name: Lawrence Expressw& El Camino Real
Peak Hour: AM
Count Date: 11/14/17
Scenario: 1154 & 1170 Sonora Court LTA
Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	148	28	142	209	1361	259	151	50	488	193	549	198	3776
Approved Project Trips													
3375 Scott Blvd		3						24					27
3000 Bowers Ave		3						20					23
2400 Condensa St (NVDIA Phase 3)		1						10					11
3035 El Camino Real				1	1								2
3402 El Camino Real			2	5	9	3	1				3		23
3700 El Camino Real (retail portion)	3				4				6	14	10	12	49
3155 El Camino Real													
3607 Kifer Rd		3						21					24
Santa Clara LSAP	8		3										11
3625 Peterson Way	2											13	15
2900 Lakeside Drive		8						10					18
1178 Sonora Court		4	2					-1					5
1050 Kifer Rd (Phase 2)		3						20					23
1101 Elko Dr								11					11
1155 Aster Ave			8	1									9
871 and 895 E Fremont Ave	2				1					1	5	8	17
1 AMD Place		25						1					26
Total Approved Trips	15	50	15	7	15	3	1	116	6	15	18	33	294
Background Conditions	163	78	157	216	1376	262	152	166	494	208	567	231	4070
Project Trips	0	11	5	12	0	0	0	30	0	0	0	0	58
Background + Project	163	89	162	228	1376	262	152	196	494	208	567	231	4128

Intersection Number: 6
Traffix Node Number: 5325
Intersection Name: Oakmead Parkway & Central Expressway
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 02/06/20
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	120	23	33	371	2170	51	42	104	187	125	1270	267	4763
Approved Project Trips													
3375 Scott Blvd	3											19	22
3000 Bowers Ave			3		2				1		37		43
2400 Condensa St (NVDIA Phase 3)					3						33		36
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd					21		1				2		24
Santa Clara LSAP		-2				-3	10	7			52	49	113
3625 Peterson Way	6											33	39
2900 Lakeside Drive	4											4	8
1178 Sonora Court					-1		1	23	5				28
1050 Kifer Rd (Phase 2)					11						2		13
1101 Elko Dr													
1155 Aster Ave					5						8		13
871 and 895 E Fremont Ave					1						3		4
1 AMD Place			2	-4	3						19		20
Total Approved Trips	13	-2	5	-4	45	-3	12	30	6	0	156	105	363
Background Conditions	133	21	38	367	2215	48	54	134	193	125	1426	372	5126
Project Trips	0	0	0	0	22	0	5	47	10	0	0	0	84
Background + Project	133	21	38	367	2237	48	59	181	203	125	1426	372	5210

Intersection Number: 7
Traffix Node Number: 5329
Intersection Name: Bowers Avenue & Central Expressway
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 11/15/17
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	129	310	59	137	2052	127	123	828	267	67	1156	370	5628
Approved Project Trips													
3375 Scott Blvd		1			17			3	3				24
3000 Bowers Ave		140				70	1	14			5	7	237
2400 Condensa St (NVDIA Phase 3)		4	7		3		2	1	1		33		51
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd					21		1				2		24
Santa Clara LSAP	-1	-1			-2		4	19			50	12	81
3625 Peterson Way		2	5	27				13					47
2900 Lakeside Drive			3	4									7
1178 Sonora Court					-1						1		
1050 Kifer Rd (Phase 2)					11						2		13
1101 Elko Dr													
1155 Aster Ave					5						8		13
871 and 895 E Fremont Ave					1						3		4
1 AMD Place		8						-1			20		27
Total Approved Trips	-1	154	15	31	55	70	8	49	4	0	124	19	528
Background Conditions	128	464	74	168	2107	197	131	877	271	67	1280	389	6156
Project Trips	0	0	0	0	22	0	0	0	0	0	5	0	27
Background + Project	128	464	74	168	2129	197	131	877	271	67	1285	389	6183

Intersection Number: 8
Traffix Node Number: 8
Intersection Name: San Zeno Way & Sonora Court
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 04/25/23
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	37	40	0	0	0	0	0	224	19	8	0	7	335
Approved Project Trips													
3375 Scott Blvd													
3000 Bowers Ave													
2400 Condensa St (NVDIA Phase 3)													
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd													
Santa Clara LSAP													
3625 Peterson Way													
2900 Lakeside Drive													
1178 Sonora Court									-1	29		17	45
1050 Kifer Rd (Phase 2)													
1101 Elko Dr													
1155 Aster Ave													
871 and 895 E Fremont Ave													
1 AMD Place													
Total Approved Trips	0	0	0	0	0	0	0	0	-1	29	0	17	45
Background Conditions	37	40	0	0	0	0	0	224	18	37	0	24	380
Project Trips	65	0	0	0	0	0	0	0	172	61	0	36	334
Background + Project	102	40	0	0	0	0	0	224	190	98	0	60	714

Intersection Number: 9
Traffix Node Number: 9
Intersection Name: 1154 Sonora Court E & Sonora Court
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 01/00/00
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Project Trips	0	0	0	0	0	149	60	0	0	0	0	0	209
Background + Project	0	0	0	0	55	149	60	0	0	0	61	0	325

Intersection Number: 10
Traffix Node Number: 10
Intersection Name: 1170 Sonora Court E & Sonora Court
Peak Hour: AM
Date of Analysis: 04/25/23
Count Date: 01/00/00
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Project Trips	0	0	0	0	149	88	37	0	0	0	60	0	334
Background + Project	0	0	0	0	204	88	37	0	0	0	121	0	450

Intersection Number: 1
Traffix Node Number: 1
Intersection Name: Lawrence Expressw& Duane Avenue/Oakmead Parkway
Peak Hour: PM
Date of Analysis: 04/25/23
Count Date: 02/05/20
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	503	2647	361	254	95	55	51	1393	205	227	183	447	6421
Approved Project Trips													
3375 Scott Blvd		3	24	5				12					44
3000 Bowers Ave		2						8					10
2400 Condensa St (NVDIA Phase 3)		1						5	1				7
3035 El Camino Real													
3402 El Camino Real		5						4					9
3700 El Camino Real (retail portion)		19						12					31
3155 El Camino Real													
3607 Kifer Rd		19						93					112
Santa Clara LSAP		124						48					172
3625 Peterson Way		3	7	34	9			15			2		70
2900 Lakeside Drive			7	13									20
1178 Sonora Court		20						7					27
1050 Kifer Rd (Phase 2)		5						25					30
1101 Elko Dr								9					9
1155 Aster Ave		43						23					66
871 and 895 E Fremont Ave		9						5					14
1 AMD Place	109	16			3			6	49	1	-5	4	183
Total Approved Trips	109	269	38	52	12	0	0	272	50	1	-3	4	804
Background Conditions	612	2916	399	306	107	55	51	1665	255	228	180	451	7225
Project Trips	0	45	0	0	0	0	0	96	6	1	0	0	148
Background + Project	612	2961	399	306	107	55	51	1761	261	229	180	451	7373

Intersection Number: 2
Traffix Node Number: 5611
Intersection Name: Lawrence Expressw& Arques Avenue
Peak Hour: PM
Count Date: 02/06/20
Scenario: 1154 & 1170 Sonora Court LTA

Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.80	1.00	1.00	1.00	1.00	1.00	0.67	1.00	1.00	1.00	1.00	
Existing Conditions	140	2612	137	87	200	360	162	1276	234	748	544	347	6847
Approved Project Trips													
3375 Scott Blvd			3	12	4	17	4				1		41
3000 Bowers Ave		2			3			8	3		1		17
2400 Condensa St (NVDIA Phase 3)		1						5					6
3035 El Camino Real													
3402 El Camino Real		5						4					9
3700 El Camino Real (retail portion)		19						12					31
3155 El Camino Real													
3607 Kifer Rd		19						93					112
Santa Clara LSAP		124						48	8				180
3625 Peterson Way			3	15	9	36	7				2		72
2900 Lakeside Drive						13	7						20
1178 Sonora Court		20		7									27
1050 Kifer Rd (Phase 2)		5						25					30
1101 Elko Dr								9					9
1155 Aster Ave		43						23					66
871 and 895 E Fremont Ave		9						5					14
1 AMD Place	16	-3	4	22	12			27	8	1		6	93
Total Approved Trips	16	244	10	56	28	66	18	259	19	1	4	6	727
Background Conditions	156	2856	147	143	228	426	180	1535	253	749	548	353	7574
Project Trips	0	46	0	102	0	0	0	0	0	0	0	0	148
Background + Project	156	2902	147	245	228	426	180	1535	253	749	548	353	7722

Intersection Number: 3
Traffix Node Number: 3
Intersection Name: Lawrence Expressw & Kifer Road
Peak Hour: PM
Count Date: 03/07/18
Scenario: 1154 & 1170 Sonora Court LTA

Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.79	1.00	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00	1.00	
Existing Conditions	94	3497	331	277	179	301	348	1229	68	652	503	178	7657
Approved Project Trips													
3375 Scott Blvd		22						5					27
3000 Bowers Ave				15	6	18	3				1		43
2400 Condensa St (NVDIA Phase 3)		6		1		2		2					11
3035 El Camino Real													
3402 El Camino Real		5						4					9
3700 El Camino Real (retail portion)		19						12					31
3155 El Camino Real													
3607 Kifer Rd	24				3				7	33	23	107	197
Santa Clara LSAP			148	46	19	18	42	5			45	5	328
3625 Peterson Way		49						10					59
2900 Lakeside Drive		13						7					20
1178 Sonora Court			20				7			5			32
1050 Kifer Rd (Phase 2)	4		3				2		2	18	2	35	66
1101 Elko Dr								9					9
1155 Aster Ave		49						27					76
871 and 895 E Fremont Ave		9						5					14
1 AMD Place	-9	4						22				-2	15
Total Approved Trips	19	176	171	62	28	38	54	108	9	56	71	145	937
Background Conditions	113	3673	502	339	207	339	402	1337	77	708	574	323	8594
Project Trips	0	0	51	0	0	0	18	0	0	82	0	0	151
Background + Project	113	3673	553	339	207	339	420	1337	77	790	574	323	8745

Intersection Number: 4
Traffix Node Number: 5613
Intersection Name: Lawrence Expressw & Reed Avenue/Monroe Street
Peak Hour: PM
Date of Analysis: 04/25/23
Count Date: 03/07/18
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	0.72	1.00	1.00	1.00	1.00	1.00	0.81	1.00	1.00	1.00	1.00	
Existing Conditions	353	3216	366	195	223	151	202	1245	161	673	488	240	7513
Approved Project Trips													
3375 Scott Blvd		22						5					27
3000 Bowers Ave		18						3					21
2400 Condensa St (NVDIA Phase 3)		8			5			2			1		16
3035 El Camino Real													
3402 El Camino Real		5						4					9
3700 El Camino Real (retail portion)		19						12					31
3155 El Camino Real													
3607 Kifer Rd	10	19	4	1				4				2	40
Santa Clara LSAP	1	17						44				6	68
3625 Peterson Way	9	40						8				2	59
2900 Lakeside Drive		13						7					20
1178 Sonora Court	3	1	1	1				6					12
1050 Kifer Rd (Phase 2)		18						3					21
1101 Elko Dr								9					9
1155 Aster Ave	49				2				26	14	7	27	125
871 and 895 E Fremont Ave		9						5					14
1 AMD Place		4						22					26
Total Approved Trips	72	193	5	2	7	0	0	134	26	14	8	37	498
Background Conditions	425	3409	371	197	230	151	202	1379	187	687	496	277	8011
Project Trips	40	40	1	2	0	0	0	16	0	0	0	0	99
Background + Project	465	3449	372	199	230	151	202	1395	187	687	496	277	8110

Intersection Number: 5
Traffix Node Number: 1214
Intersection Name: Lawrence Expressw & El Camino Real
Peak Hour: PM
Count Date: 11/14/17
Scenario: 1154 & 1170 Sonora Court LTA

Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	260	17	504	145	787	137	198	16	362	288	1521	178	4413
Approved Project Trips													
3375 Scott Blvd		22						5					27
3000 Bowers Ave		18						3					21
2400 Condensa St (NVDIA Phase 3)		8						2					10
3035 El Camino Real													
3402 El Camino Real			5	4	7	2	3				9		30
3700 El Camino Real (retail portion)	19				22				32	18	21	15	127
3155 El Camino Real													
3607 Kifer Rd		19						4					23
Santa Clara LSAP	3		1	3								9	16
3625 Peterson Way	13											3	16
2900 Lakeside Drive		13						7					20
1178 Sonora Court		1	1	2				4					8
1050 Kifer Rd (Phase 2)		18						3					21
1101 Elko Dr								9					9
1155 Aster Ave			5	9									14
871 and 895 E Fremont Ave	9				5				1	1	3	5	24
1 AMD Place		4						22					26
Total Approved Trips	44	103	12	18	34	2	3	59	33	19	33	32	392
Background Conditions	304	120	516	163	821	139	201	75	395	307	1554	210	4805
Project Trips	0	29	12	5	0	0	0	11	0	0	0	0	57
Background + Project	304	149	528	168	821	139	201	86	395	307	1554	210	4862

Intersection Number: 6
Traffix Node Number: 5325
Intersection Name: Oakmead Parkway & Central Expressway
Peak Hour: PM
Count Date: 02/06/20
Scenario: 1154 & 1170 Sonora Court LTA

Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	222	293	274	81	1860	133	105	51	44	83	2233	32	5411
Approved Project Trips													
3375 Scott Blvd	17											4	21
3000 Bowers Ave			1		13			3	6		6		29
2400 Condensa St (NVDIA Phase 3)					34						8		42
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd					4		4				12		20
Santa Clara LSAP		62				69	3	2			24	22	182
3625 Peterson Way	36											7	43
2900 Lakeside Drive	7											7	14
1178 Sonora Court					1		-1	7	1				8
1050 Kifer Rd (Phase 2)					2						10		12
1101 Elko Dr													
1155 Aster Ave					6						4		10
871 and 895 E Fremont Ave					3						2		5
1 AMD Place			-5	1	17						7		20
Total Approved Trips	60	62	-4	1	80	69	6	12	7	0	73	40	406
Background Conditions	282	355	270	82	1940	202	111	63	51	83	2306	72	5817
Project Trips	0	0	0	0	5	0	20	102	23	0	0	0	150
Background + Project	282	355	270	82	1945	202	131	165	74	83	2306	72	5967

Intersection Number: 7
Traffix Node Number: 5329
Intersection Name: Bowers Avenue & Central Expressway
Peak Hour: PM
Count Date: 11/15/17
Scenario: 1154 & 1170 Sonora Court LTA
Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	276	885	179	83	1300	161	327	453	125	187	2402	135	6513
Approved Project Trips													
3375 Scott Blvd		6			3			1	1				11
3000 Bowers Ave		24				12	7	85			32	44	204
2400 Condensa St (NVDIA Phase 3)		1	2	5	28			7	7		8		58
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd					4		4				15		23
Santa Clara LSAP	14	21			55	5	2	8			21	5	131
3625 Peterson Way		13	29	6				3					51
2900 Lakeside Drive			7	7									14
1178 Sonora Court					1						-1		
1050 Kifer Rd (Phase 2)					2						10		12
1101 Elko Dr													
1155 Aster Ave					6						4		10
871 and 895 E Fremont Ave					3						2		5
1 AMD Place		-1			18			7			2		26
Total Approved Trips	14	64	38	18	120	17	13	111	8	0	93	49	545
Background Conditions	290	949	217	101	1420	178	340	564	133	187	2495	184	7058
Project Trips	0	0	0	0	5	0	0	0	0	0	20	0	25
Background + Project	290	949	217	101	1425	178	340	564	133	187	2515	184	7083

Intersection Number: 8
Traffix Node Number: 8
Intersection Name: San Zeno Way & Sonora Court
Peak Hour: PM
Count Date: 04/25/23
Scenario: 1154 & 1170 Sonora Court LTA
Date of Analysis: 04/25/23

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Existing Conditions	15	76	0	0	0	0	0	455	14	50	0	44	653
Approved Project Trips													
3375 Scott Blvd													
3000 Bowers Ave													
2400 Condensa St (NVDIA Phase 3)													
3035 El Camino Real													
3402 El Camino Real													
3700 El Camino Real (retail portion)													
3155 El Camino Real													
3607 Kifer Rd													
Santa Clara LSAP													
3625 Peterson Way													
2900 Lakeside Drive													
1178 Sonora Court	12								27	6		5	50
1050 Kifer Rd (Phase 2)													
1101 Elko Dr													
1155 Aster Ave													
871 and 895 E Fremont Ave													
1 AMD Place													
Total Approved Trips	12	0	0	0	0	0	0	0	27	6	0	5	50
Background Conditions	27	76	0	0	0	0	0	455	41	56	0	49	703
Project Trips	28	0	0	0	0	0	0	0	69	149	0	82	328
Background + Project	55	76	0	0	0	0	0	455	110	205	0	131	1031

Intersection Number: 9
Traffix Node Number: 9
Intersection Name: 1154 Sonora Court E & Sonora Court
Peak Hour: PM
Date of Analysis: 04/25/23
Count Date: 01/00/00
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Project Trips	0	0	0	0	0	61	145	0	0	0	0	0	206
Background + Project	0	0	0	0	68	61	145	0	0	0	105	0	379

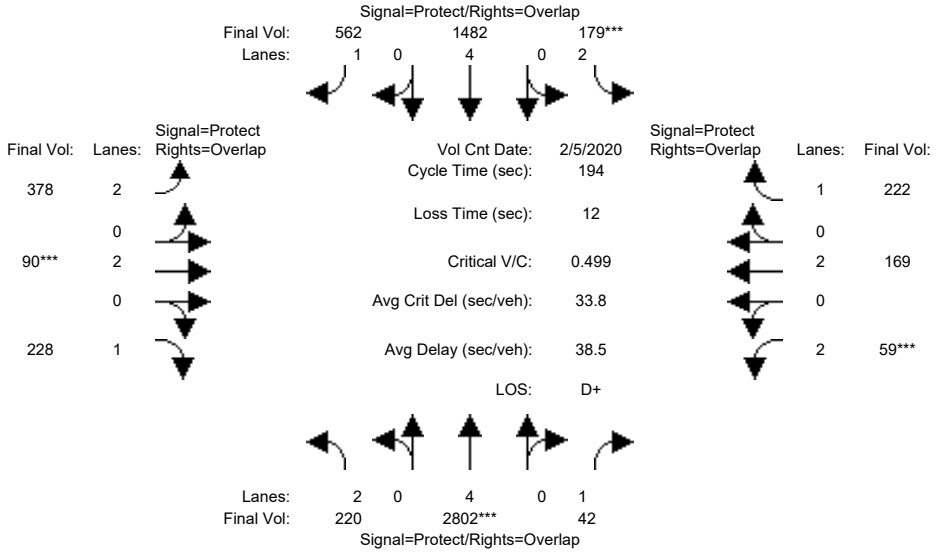
Intersection Number: 10
Traffix Node Number: 10
Intersection Name: 1170 Sonora Court E & Sonora Court
Peak Hour: PM
Date of Analysis: 04/25/23
Count Date: 01/00/00
Scenario: 1154 & 1170 Sonora Court LTA

	Movements												
	North Approach			East Approach			South Approach			West Approach			
Scenario:	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	*Total*
INDEX	7	6	5	13	12	11	4	3	2	10	9	8	
PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Volume Adjustment	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Project Trips	0	0	0	0	61	36	86	0	0	0	145	0	328
Background + Project	0	0	0	0	129	36	86	0	0	0	250	0	501

Appendix C
Level of Service Calculations

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

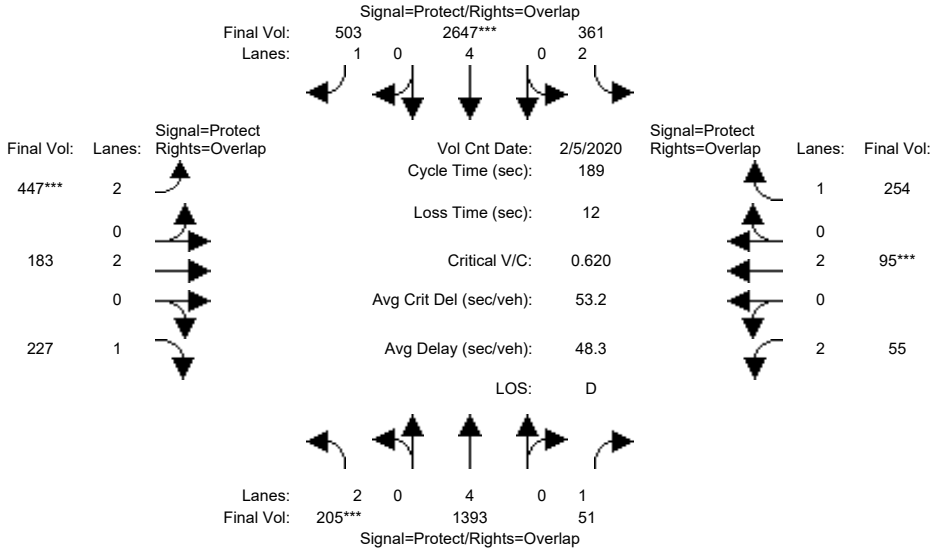


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	20	99	99	21	100	100	24	36	36	15	26	26
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 5 Feb 2020 << 7:45 AM - 8:45 AM												
Base Vol:	220	2802	42	179	1482	562	378	90	228	59	169	222
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	2802	42	179	1482	562	378	90	228	59	169	222
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	2802	42	179	1482	562	378	90	228	59	169	222
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	220	2802	42	179	1482	562	378	90	228	59	169	222
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	2802	42	179	1482	562	378	90	228	59	169	222
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	220	2802	42	179	1482	562	378	90	228	59	169	222
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.37	0.02	0.06	0.20	0.32	0.12	0.02	0.13	0.02	0.04	0.13
Crit Moves:		****		****				****		****		
Green Time:	19.6	98.8	114.2	20.7	99.8	124.2	24.4	35.5	55.1	15.4	26.4	47.1
Volume/Cap:	0.69	0.72	0.04	0.53	0.38	0.50	0.95	0.13	0.46	0.24	0.33	0.52
Uniform Del:	84.3	37.0	16.8	82.1	28.4	18.5	84.2	66.3	57.2	83.8	75.8	63.7
IncremntDel:	6.4	0.7	0.0	1.6	0.1	0.4	33.4	0.1	0.7	0.5	0.4	1.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.75	0.60	1.00	0.74	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	90.7	28.5	10.1	83.7	21.2	9.0	117.6	66.4	57.9	84.3	76.1	64.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.7	28.5	10.1	83.7	21.2	9.0	117.6	66.4	57.9	84.3	76.1	64.9
LOS by Move:	F	C	B+	F	C+	A	F	E	E+	F	E-	E
HCM2kAvgQ:	7	25	1	6	9	9	17	2	12	2	5	12

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

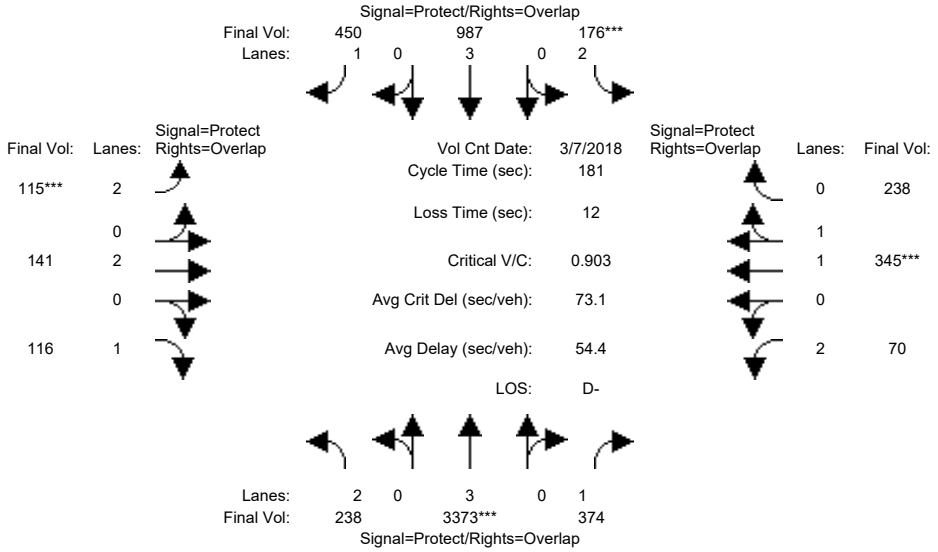


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	22	79	79	29	86	86	32	48	48	10	25	25
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 5 Feb 2020 << 4:30 PM - 5:30 PM												
Base Vol:	205	1393	51	361	2647	503	447	183	227	55	95	254
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	205	1393	51	361	2647	503	447	183	227	55	95	254
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	1393	51	361	2647	503	447	183	227	55	95	254
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	205	1393	51	361	2647	503	447	183	227	55	95	254
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	1393	51	361	2647	503	447	183	227	55	95	254
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	205	1393	51	361	2647	503	447	183	227	55	95	254
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.18	0.03	0.11	0.35	0.29	0.14	0.05	0.13	0.02	0.03	0.15
Crit Moves:	****				****		****				****	
Green Time:	21.5	78.4	88.7	28.6	85.4	117.6	32.2	47.2	68.7	10.3	25.3	53.8
Volume/Cap:	0.57	0.44	0.06	0.76	0.77	0.46	0.83	0.19	0.36	0.32	0.19	0.51
Uniform Del:	79.4	39.6	27.4	76.9	43.6	18.9	75.8	55.8	44.0	85.9	72.7	56.5
IncremntDel:	2.2	0.1	0.0	6.9	1.1	0.3	10.7	0.1	0.3	1.1	0.2	0.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.88	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	81.6	34.9	22.3	83.9	44.7	19.3	86.4	55.9	44.3	87.0	72.9	57.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.6	34.9	22.3	83.9	44.7	19.3	86.4	55.9	44.3	87.0	72.9	57.4
LOS by Move:	F	C-	C+	F	D	B-	F	E+	D	F	E	E+
HCM2kAvgQ:	7	12	1	13	32	16	17	4	10	2	2	13

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3: Lawrence Expwy & Kifer Rd

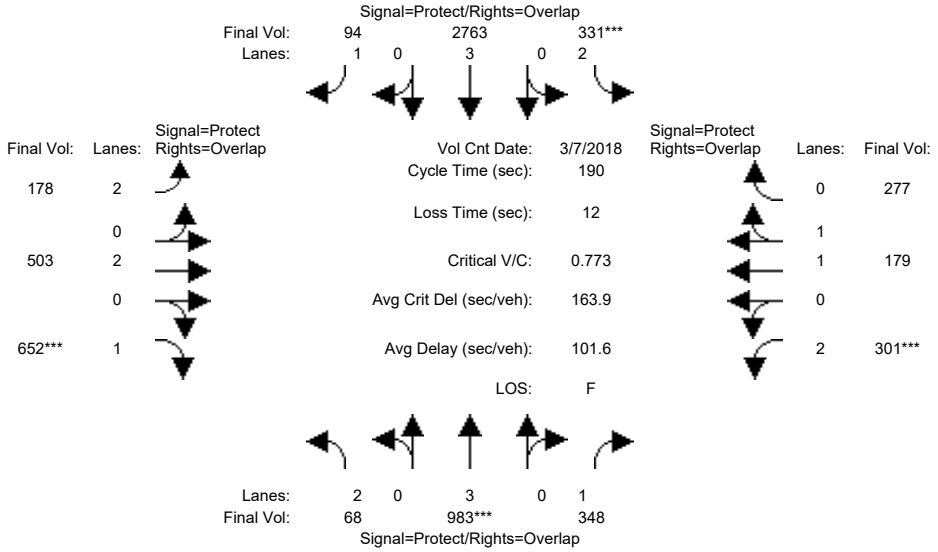


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	25	101	101	17	93	93	13	29	29	11	27	27
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	238	3877	374	176	1134	450	115	141	116	70	345	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	238	3877	374	176	1134	450	115	141	116	70	345	238
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	238	3877	374	176	1134	450	115	141	116	70	345	238
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	238	3373	374	176	987	450	115	141	116	70	345	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	238	3373	374	176	987	450	115	141	116	70	345	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	238	3373	374	176	987	450	115	141	116	70	345	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.94
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.16	0.84
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	2173	1499
Capacity Analysis Module:												
Vol/Sat:	0.08	0.59	0.21	0.06	0.17	0.26	0.04	0.04	0.07	0.02	0.16	0.16
Crit Moves:		****		****			****				****	
Green Time:	25.2	101	111.8	17.1	93.1	105.9	12.8	28.8	54.0	10.8	26.9	44.0
Volume/Cap:	0.54	1.06	0.35	0.59	0.34	0.44	0.52	0.23	0.22	0.37	1.07	0.65
Uniform Del:	72.5	40.0	16.8	78.6	25.8	21.0	81.1	66.5	47.7	81.8	77.1	61.6
IncremntDel:	1.4	34.9	0.2	3.1	0.1	0.3	2.1	0.2	0.2	1.2	58.1	1.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.67	0.53	1.00	0.74	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	73.9	61.6	9.1	81.7	19.3	13.1	83.2	66.7	47.9	83.1	135	63.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.9	61.6	9.1	81.7	19.3	13.1	83.2	66.7	47.9	83.1	135	63.4
LOS by Move:	E	E	A	F	B-	B	F	E	D	F	F	E
HCM2kAvgQ:	7	66	5	6	7	9	4	3	5	3	22	15

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3: Lawrence Expwy & Kifer Rd

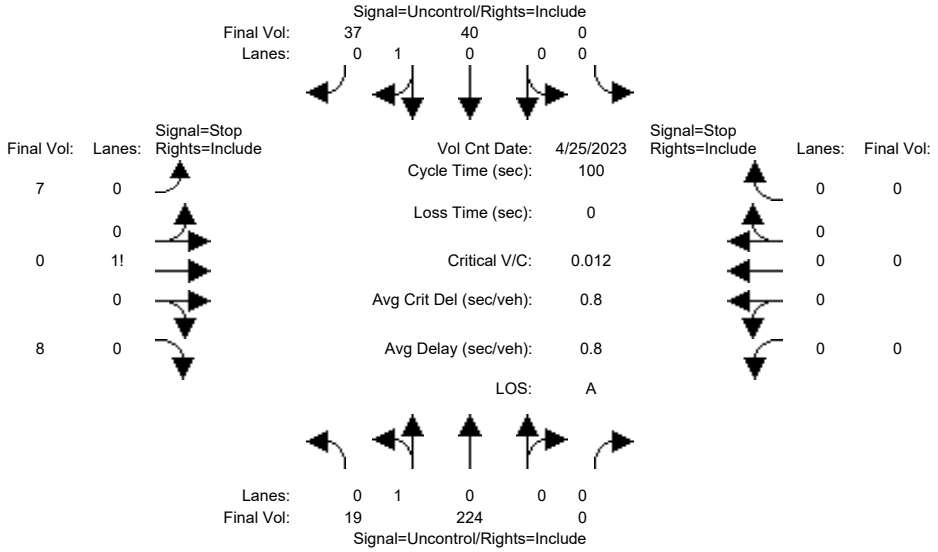


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	9	85	85	27	103	103	16	33	33	22	39	39
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 4:15 PM - 5:15 PM												
Base Vol:	68	1229	348	331	3497	94	178	503	652	301	179	277
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	1229	348	331	3497	94	178	503	652	301	179	277
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	68	1229	348	331	3497	94	178	503	652	301	179	277
User Adj:	1.00	0.80	1.00	1.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	983	348	331	2763	94	178	503	652	301	179	277
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	983	348	331	2763	94	178	503	652	301	179	277
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	983	348	331	2763	94	178	503	652	301	179	277
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.17	0.20	0.11	0.48	0.05	0.06	0.13	0.37	0.10	0.09	0.16
Crit Moves:		****		****					****	****		
Green Time:	8.9	84.9	106.6	26.9	103	118.9	15.8	33.0	41.9	21.7	38.9	65.8
Volume/Cap:	0.46	0.39	0.35	0.74	0.89	0.09	0.68	0.76	1.69	0.84	0.46	0.46
Uniform Del:	88.2	35.1	22.9	78.2	38.6	14.1	84.6	74.8	74.1	82.4	66.3	48.2
IncremntDel:	2.3	0.1	0.2	6.6	3.7	0.0	7.0	5.2	321.4	15.6	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.03	1.54	1.85	1.11	1.79	2.11	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	93.4	54.1	42.5	93.4	72.8	29.8	91.7	80.0	395.4	98.0	66.7	48.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.4	54.1	42.5	93.4	72.8	29.8	91.7	80.0	395.4	98.0	66.7	48.6
LOS by Move:	F	D-	D	F	E	C	F	E-	F	F	E	D
HCM2kAvgQ:	2	16	18	13	53	4	7	15	76	12	9	13

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing AM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 25 Apr 2023 << 9:00 AM - 10:00 AM												
Base Vol:	19	224	0	0	40	37	7	0	8	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	224	0	0	40	37	7	0	8	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	224	0	0	40	37	7	0	8	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	19	224	0	0	40	37	7	0	8	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	19	224	0	0	40	37	7	0	8	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	77	xxxx	xxxxx	xxxx	xxxx	xxxxx	321	321	59	xxxx	xxxx	xxxxx
Potent Cap.:	1535	xxxx	xxxxx	xxxx	xxxx	xxxxx	677	600	1013	xxxx	xxxx	xxxxx
Move Cap.:	1535	xxxx	xxxxx	xxxx	xxxx	xxxxx	671	592	1013	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	818	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.5			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	19 224	0		0 40	37		7 0	8		0 0	0	
ApproachDel:	xxxxxx			xxxxxx			9.5			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=335]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	19 224	0		0 40	37		7 0	8		0 0	0	

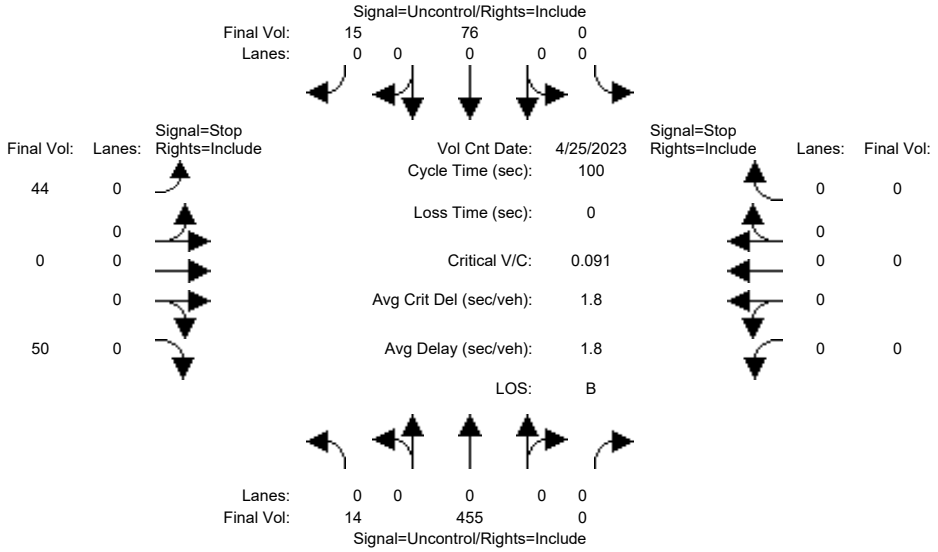
Major Street Volume: 320
Minor Approach Volume: 15
Minor Approach Volume Threshold: 523

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing PM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module: >> Count Date: 25 Apr 2023 << 4:00 PM - 5:00 PM												
Base Vol:	14	455	0	0	76	15	44	0	50	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	455	0	0	76	15	44	0	50	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	455	0	0	76	15	44	0	50	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	455	0	0	76	15	44	0	50	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	455	0	0	76	15	44	0	50	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	91	xxxx	xxxxx	xxxx	xxxx	xxxxx	567	567	84	xxxx	xxxx	xxxxx
Potent Cap.:	1517	xxxx	xxxxx	xxxx	xxxx	xxxxx	489	436	981	xxxx	xxxx	xxxxx
Move Cap.:	1517	xxxx	xxxxx	xxxx	xxxx	xxxxx	485	432	981	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	0.00	0.05	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	664	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.3			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	14	455	0	0	76	15	44	0	50	0	0	0
ApproachDel:	xxxxxx			xxxxxx			11.3			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=94]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=654]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Initial Vol:	14	455	0	0	76	15	44	0	50	0	0	0

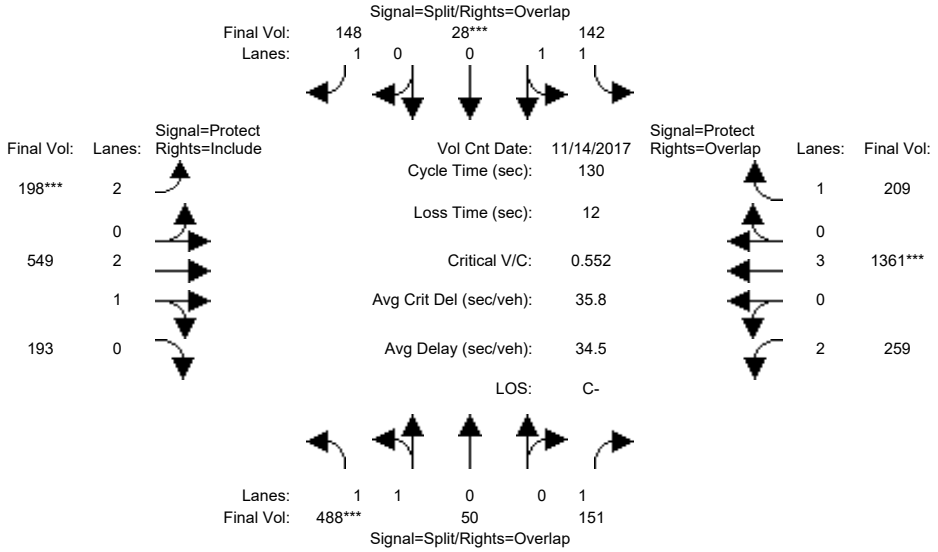
Major Street Volume: 560
Minor Approach Volume: 94
Minor Approach Volume Threshold: 374

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

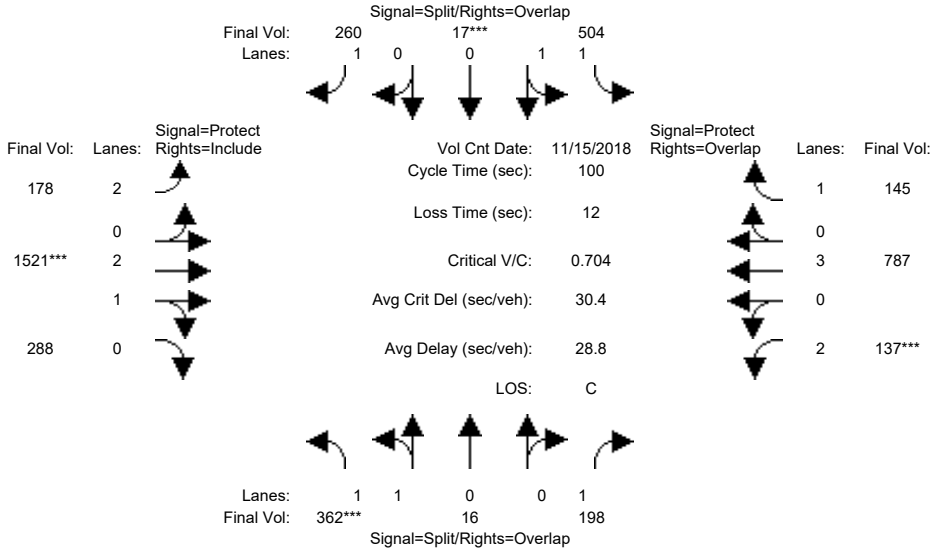


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Nov 2017 << 7:45 AM - 8:45 AM												
Base Vol:	488	50	151	142	28	148	198	549	193	259	1361	209
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	488	50	151	142	28	148	198	549	193	259	1361	209
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	488	50	151	142	28	148	198	549	193	259	1361	209
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	488	50	151	142	28	148	198	549	193	259	1361	209
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	50	151	142	28	148	198	549	193	259	1361	209
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	488	50	151	142	28	148	198	549	193	259	1361	209
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	0.99	0.95	0.83	1.00	0.92
Lanes:	1.82	0.18	1.00	1.68	0.32	1.00	2.00	2.19	0.81	2.00	3.00	1.00
Final Sat.:	3220	330	1750	2965	585	1750	3150	4141	1456	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.15	0.15	0.09	0.05	0.05	0.08	0.06	0.13	0.13	0.08	0.24	0.12
Crit Moves:	****				****		****				****	
Green Time:	35.7	35.7	62.9	11.3	11.3	26.1	14.8	43.8	43.8	27.2	56.2	67.5
Volume/Cap:	0.55	0.55	0.18	0.55	0.55	0.42	0.55	0.39	0.39	0.39	0.55	0.23
Uniform Del:	40.3	40.3	19.0	56.9	56.9	45.4	54.5	32.9	32.9	44.3	27.5	17.1
IncremntDel:	0.7	0.7	0.1	2.2	2.2	0.8	1.9	0.1	0.1	0.4	0.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	41.0	41.0	19.1	59.1	59.1	46.2	56.3	33.1	33.1	44.7	27.8	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.0	41.0	19.1	59.1	59.1	46.2	56.3	33.1	33.1	44.7	27.8	17.2
LOS by Move:	D	D	B-	E+	E+	D	E+	C-	C-	D	C	B
HCM2kAvgQ:	10	10	4	3	3	5	4	7	7	5	13	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

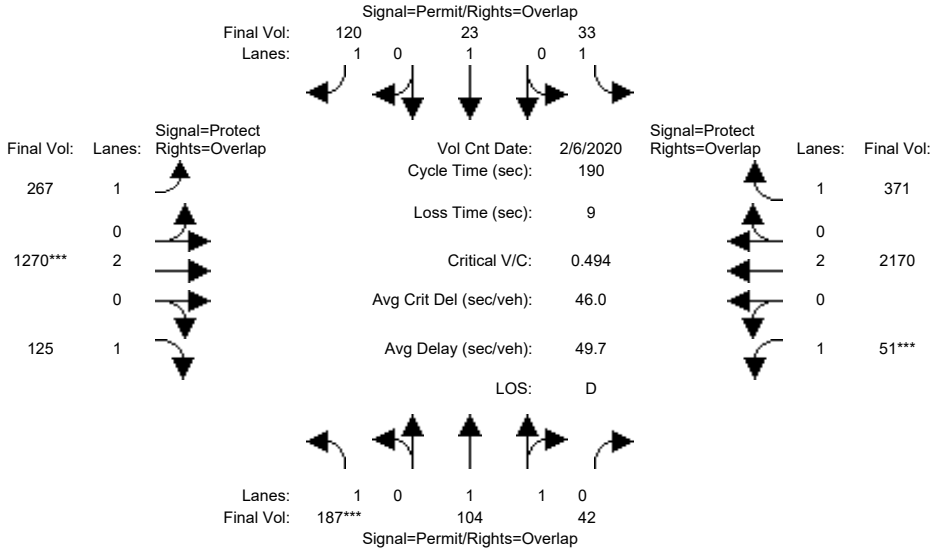


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	362	16	198	504	17	260	178	1521	288	137	787	145
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	362	16	198	504	17	260	178	1521	288	137	787	145
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	362	16	198	504	17	260	178	1521	288	137	787	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	362	16	198	504	17	260	178	1521	288	137	787	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	362	16	198	504	17	260	178	1521	288	137	787	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	362	16	198	504	17	260	178	1521	288	137	787	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	0.99	0.95	0.83	1.00	0.92
Lanes:	1.92	0.08	1.00	1.94	0.06	1.00	2.00	2.50	0.50	2.00	3.00	1.00
Final Sat.:	3400	150	1750	3434	116	1750	3150	4707	891	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.15	0.15	0.15	0.06	0.32	0.32	0.04	0.14	0.08
Crit Moves:	****				****			****			****	
Green Time:	15.0	15.0	22.0	20.6	20.6	38.3	17.6	45.4	45.4	7.0	34.8	55.4
Volume/Cap:	0.71	0.71	0.52	0.71	0.71	0.39	0.32	0.71	0.71	0.62	0.40	0.15
Uniform Del:	40.5	40.5	34.3	36.9	36.9	22.4	36.0	22.0	22.0	45.2	24.7	10.8
IncremntDel:	4.5	4.5	1.2	3.3	3.3	0.4	0.3	1.0	1.0	5.4	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.0	45.0	35.5	40.2	40.2	22.8	36.3	23.0	23.0	50.6	24.8	10.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.0	45.0	35.5	40.2	40.2	22.8	36.3	23.0	23.0	50.6	24.8	10.9
LOS by Move:	D	D	D+	D	D	C+	D+	C+	C+	D	C	B+
HCM2kAvgQ:	7	7	6	7	7	6	3	15	15	3	6	2

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

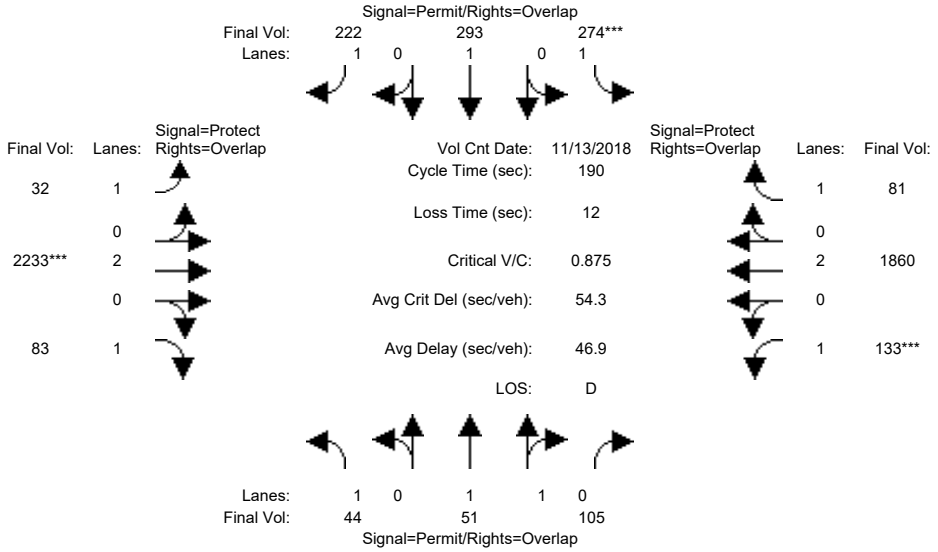


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	29	29	29	30	30	30	31	124	124	20	113	113
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 6 Feb 2020 << 8:00 AM - 9:00 AM												
Base Vol:	187	104	42	33	23	120	267	1270	125	51	2170	371
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	104	42	33	23	120	267	1270	125	51	2170	371
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	104	42	33	23	120	267	1270	125	51	2170	371
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	104	42	33	23	120	267	1270	125	51	2170	371
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	104	42	33	23	120	267	1270	125	51	2170	371
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	104	42	33	23	120	267	1270	125	51	2170	371
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.41	0.59	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2635	1064	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.04	0.04	0.02	0.01	0.07	0.15	0.33	0.07	0.03	0.57	0.21
Crit Moves:	****							****		****		
Green Time:	29.3	29.3	49.2	29.5	29.5	60.5	31.0	124	123.8	19.9	113	112.8
Volume/Cap:	0.69	0.26	0.15	0.12	0.08	0.22	0.93	0.51	0.11	0.28	0.96	0.36
Uniform Del:	76.1	70.8	54.3	69.1	68.6	47.4	78.5	17.3	12.4	78.4	36.6	19.9
IncremntDel:	7.5	0.2	0.1	0.2	0.1	0.2	36.2	0.2	0.0	0.8	11.4	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.13	2.25	2.25	1.00	1.00	1.00
Delay/Veh:	83.6	71.0	54.4	69.3	68.7	47.6	124.9	39.1	27.9	79.3	47.9	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	83.6	71.0	54.4	69.3	68.7	47.6	124.9	39.1	27.9	79.3	47.9	20.1
LOS by Move:	F	E	D-	E	E	D	F	D	C	E-	D	C+
HCM2kAvgQ:	11	4	3	2	1	5	20	31	6	3	62	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

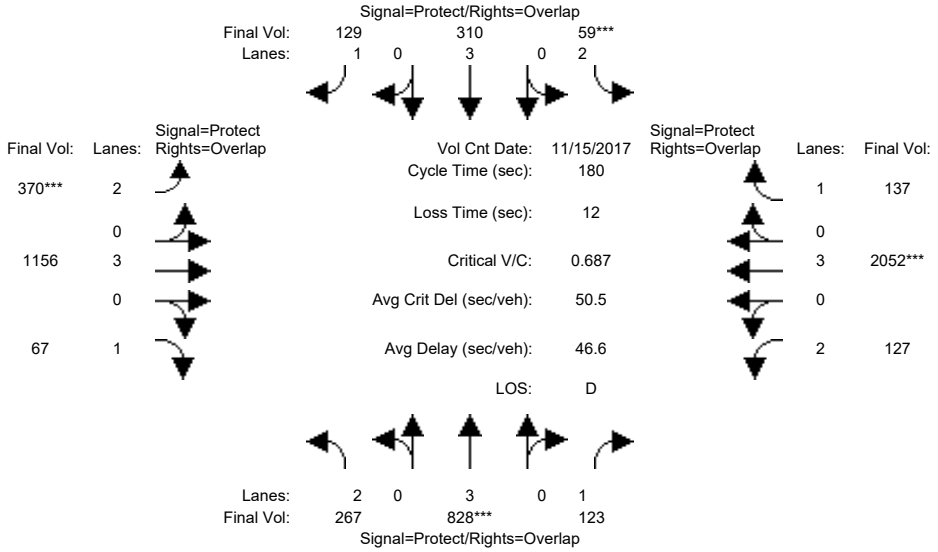


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	36	36	36	37	37	37	9	124	124	13	128	128
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	44	51	105	274	293	222	32	2233	83	133	1860	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	44	51	105	274	293	222	32	2233	83	133	1860	81
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	51	105	274	293	222	32	2233	83	133	1860	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	44	51	105	274	293	222	32	2233	83	133	1860	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	51	105	274	293	222	32	2233	83	133	1860	81
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	44	51	105	274	293	222	32	2233	83	133	1860	81
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.06	0.16	0.15	0.13	0.02	0.59	0.05	0.08	0.49	0.05
Crit Moves:				****				****		****		
Green Time:	37.0	37.0	53.1	37.0	37.0	46.3	9.3	125	124.9	16.1	132	131.7
Volume/Cap:	0.13	0.14	0.21	0.80	0.79	0.52	0.38	0.89	0.07	0.89	0.71	0.07
Uniform Del:	63.2	63.3	52.4	73.0	72.8	62.3	87.6	27.1	11.7	86.1	17.5	9.4
IncremntDel:	0.2	0.1	0.1	13.0	11.1	1.2	2.8	4.6	0.0	44.1	0.9	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.52	1.52	1.00	1.63	1.63
Delay/Veh:	63.4	63.4	52.6	86.0	83.9	63.4	90.3	45.9	17.9	130.2	29.4	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.4	63.4	52.6	86.0	83.9	63.4	90.3	45.9	17.9	130.2	29.4	15.3
LOS by Move:	E	E	D-	F	F	E	F	D	B	F	C	B
HCM2kAvgQ:	2	2	5	17	16	12	2	61	3	9	42	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

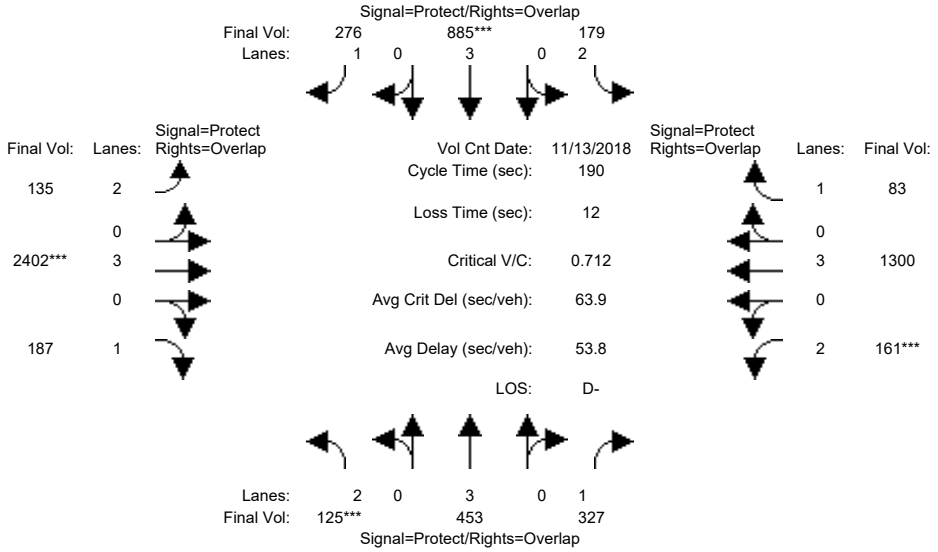


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	10	10	14	10	10	14	78	78	14	85	85
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 15 Nov 2017 << 8:00 AM - 9:00 AM												
Base Vol:	267	828	123	59	310	129	370	1156	67	127	2052	137
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	267	828	123	59	310	129	370	1156	67	127	2052	137
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	267	828	123	59	310	129	370	1156	67	127	2052	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	267	828	123	59	310	129	370	1156	67	127	2052	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	267	828	123	59	310	129	370	1156	67	127	2052	137
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	267	828	123	59	310	129	370	1156	67	127	2052	137
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.15	0.07	0.02	0.05	0.07	0.12	0.20	0.04	0.04	0.36	0.08
Crit Moves:		****		****			****				****	
Green Time:	19.7	40.2	56.6	13.9	34.6	60.4	25.8	97.4	117.1	16.4	88.4	102.3
Volume/Cap:	0.77	0.65	0.22	0.24	0.28	0.22	0.82	0.37	0.06	0.44	0.73	0.14
Uniform Del:	78.0	63.5	45.5	78.1	62.1	42.9	74.8	23.8	11.4	77.5	36.4	18.2
IncremntDel:	10.5	1.2	0.2	0.5	0.1	0.2	11.3	0.1	0.0	1.1	1.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	88.5	64.7	45.7	78.6	62.2	43.1	86.2	23.9	11.5	78.6	37.4	18.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.5	64.7	45.7	78.6	62.2	43.1	86.2	23.9	11.5	78.6	37.4	18.3
LOS by Move:	F	E	D	E-	E	D	F	C	B+	E-	D+	B-
HCM2kAvgQ:	9	13	5	2	5	5	12	12	1	4	30	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

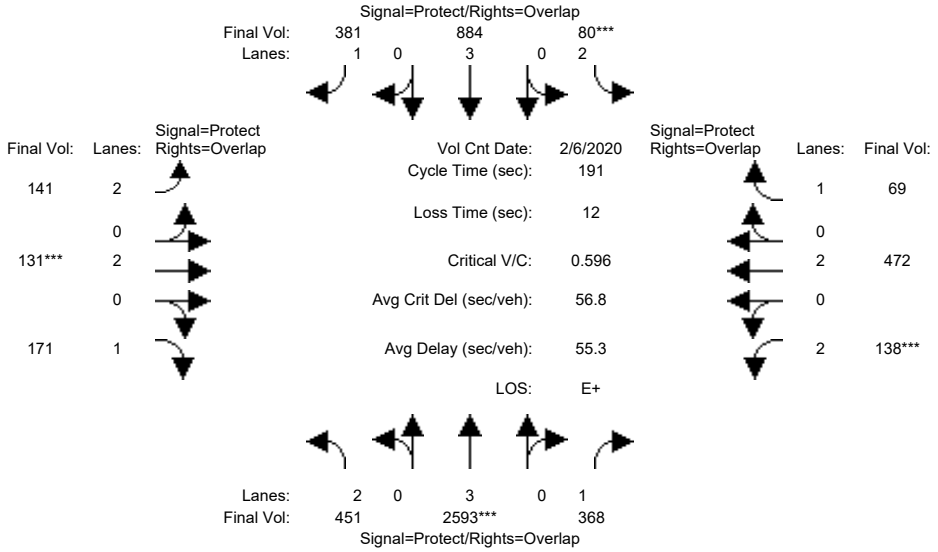


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	39	39	16	40	40	16	96	96	14	95	95
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	125	453	327	179	885	276	135	2402	187	161	1300	83
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	453	327	179	885	276	135	2402	187	161	1300	83
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	453	327	179	885	276	135	2402	187	161	1300	83
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	453	327	179	885	276	135	2402	187	161	1300	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	453	327	179	885	276	135	2402	187	161	1300	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	453	327	179	885	276	135	2402	187	161	1300	83
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.19	0.06	0.16	0.16	0.04	0.42	0.11	0.05	0.23	0.05
Crit Moves:	****				****			****			****	
Green Time:	15.0	39.1	53.1	16.0	40.1	57.8	17.7	109	123.9	14.0	105	121.2
Volume/Cap:	0.50	0.39	0.67	0.67	0.74	0.52	0.46	0.74	0.16	0.69	0.41	0.07
Uniform Del:	83.9	65.1	60.7	84.4	70.0	54.6	81.6	29.9	12.9	85.9	24.5	13.1
IncremntDel:	1.6	0.2	3.6	6.6	2.4	0.9	1.1	0.9	0.1	8.7	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.07	1.89	2.25	1.00	0.67	0.47
Delay/Veh:	85.6	65.3	64.2	91.1	72.4	55.5	88.3	57.6	29.0	94.7	16.6	6.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	85.6	65.3	64.2	91.1	72.4	55.5	88.3	57.6	29.0	94.7	16.6	6.2
LOS by Move:	F	E	E	F	E	E+	F	E+	C	F	B	A
HCM2kAvgQ:	4	7	18	6	16	14	4	41	9	7	9	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

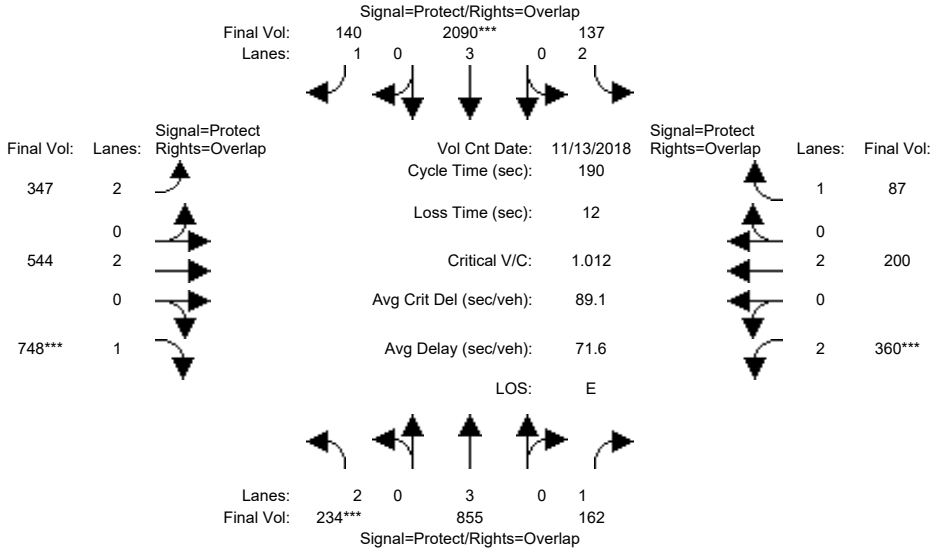


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	27	100	100	19	91	91	14	36	36	13	35	35
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 6 Feb 2020 << 8:00 AM - 9:00 AM												
Base Vol:	451	2947	368	80	1148	381	141	131	171	138	472	69
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	451	2947	368	80	1148	381	141	131	171	138	472	69
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	451	2947	368	80	1148	381	141	131	171	138	472	69
User Adj:	1.00	0.88	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	451	2593	368	80	884	381	141	131	171	138	472	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	451	2593	368	80	884	381	141	131	171	138	472	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	451	2593	368	80	884	381	141	131	171	138	472	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.45	0.21	0.03	0.16	0.22	0.04	0.03	0.11	0.04	0.12	0.04
Crit Moves:		****		****				****		****		
Green Time:	26.7	99.8	112.9	18.9	90.8	104.9	14.1	36.3	63.0	13.1	35.3	54.2
Volume/Cap:	1.02	0.87	0.36	0.26	0.33	0.40	0.61	0.18	0.32	0.64	0.67	0.14
Uniform Del:	82.1	40.0	20.2	79.5	31.1	24.8	85.8	64.9	48.0	86.6	72.5	51.0
IncremntDel:	49.2	3.1	0.2	0.4	0.1	0.3	4.5	0.1	0.4	6.3	2.6	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.27	1.38	1.00	0.80	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	131.3	53.8	28.1	80.0	25.0	17.2	90.3	65.0	48.4	92.9	75.0	51.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	131.3	53.8	28.1	80.0	25.0	17.2	90.3	65.0	48.4	92.9	75.0	51.1
LOS by Move:	F	D-	C	E-	C	B	F	E	D	F	E-	D-
HCM2kAvgQ:	21	48	15	2	8	9	5	3	8	5	13	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

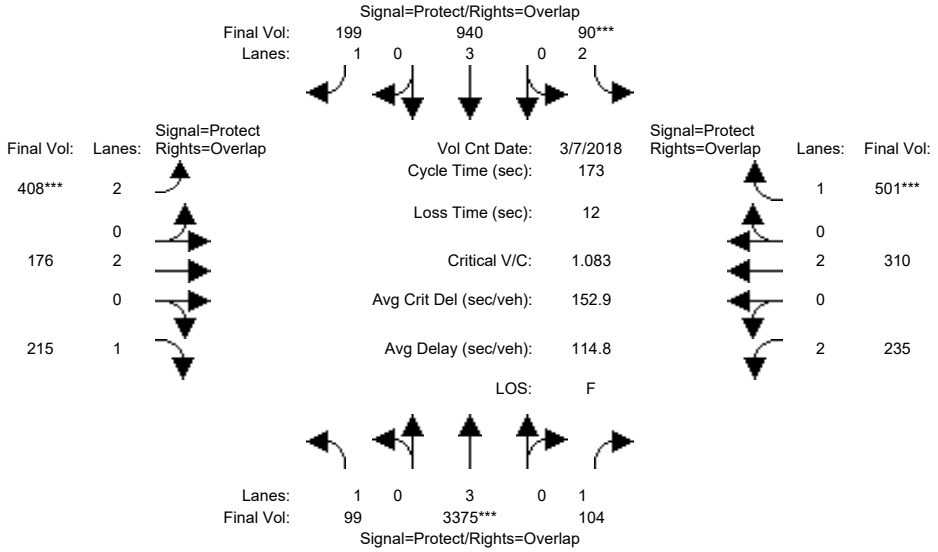


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	22	86	86	15	79	79	24	41	41	24	41	41
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:30 - 5:30 PM												
Base Vol:	234	1276	162	137	2612	140	347	544	748	360	200	87
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	234	1276	162	137	2612	140	347	544	748	360	200	87
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	234	1276	162	137	2612	140	347	544	748	360	200	87
User Adj:	1.00	0.67	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	234	855	162	137	2090	140	347	544	748	360	200	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	234	855	162	137	2090	140	347	544	748	360	200	87
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	234	855	162	137	2090	140	347	544	748	360	200	87
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.09	0.04	0.37	0.08	0.11	0.14	0.47	0.11	0.05	0.05
Crit Moves:	****				****				****	****		
Green Time:	22.0	86.0	110.0	15.0	79.0	107.4	28.4	53.0	75.0	24.0	48.6	63.6
Volume/Cap:	0.64	0.33	0.16	0.55	0.88	0.14	0.74	0.51	1.18	0.90	0.21	0.15
Uniform Del:	80.2	33.5	18.6	84.3	51.2	19.5	77.2	57.6	57.5	81.9	55.6	44.3
IncremntDel:	3.9	0.1	0.1	2.6	4.2	0.1	6.0	0.4	98.0	23.5	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.83	0.62	1.00	1.15	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	84.1	28.0	11.6	86.9	63.1	26.1	83.2	58.1	155.5	105.4	55.7	44.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	84.1	28.0	11.6	86.9	63.1	26.1	83.2	58.1	155.5	105.4	55.7	44.4
LOS by Move:	F	C	B+	F	E	C	F	E+	F	F	E+	D
HCM2kAvgQ:	9	8	3	4	38	5	12	13	63	14	4	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #5613: LAWRENCE EXPWY/REED AVE

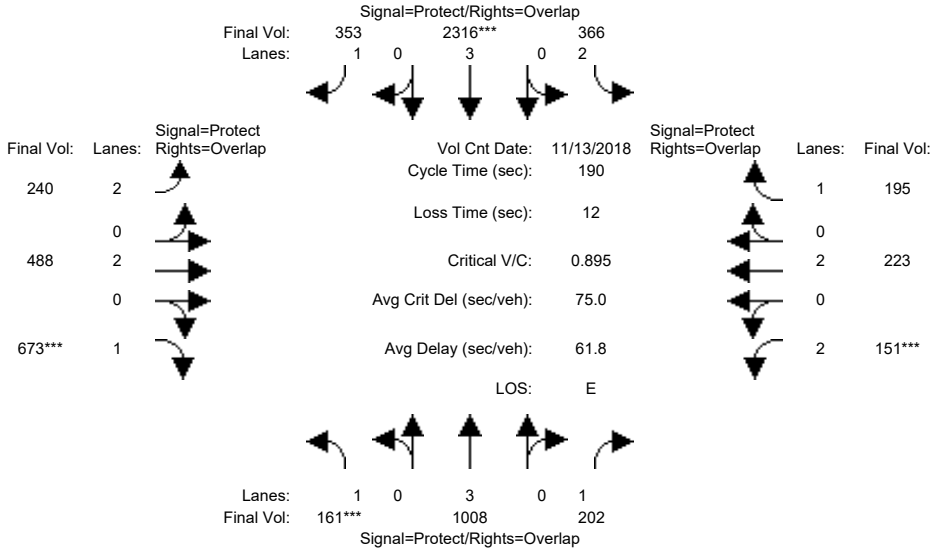


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	81	81	13	80	80	23	39	39	17	33	33
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	99	3879	104	90	1081	199	408	176	215	235	310	501
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	3879	104	90	1081	199	408	176	215	235	310	501
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	3879	104	90	1081	199	408	176	215	235	310	501
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	3375	104	90	940	199	408	176	215	235	310	501
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	3375	104	90	940	199	408	176	215	235	310	501
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	3375	104	90	940	199	408	176	215	235	310	501
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.59	0.06	0.03	0.16	0.11	0.13	0.05	0.12	0.07	0.08	0.29
Crit Moves:		****		****			****					****
Green Time:	14.1	80.5	97.8	13.2	79.7	102.8	23.1	38.5	52.6	17.3	32.5	45.7
Volume/Cap:	0.69	1.27	0.11	0.37	0.36	0.19	0.97	0.21	0.40	0.75	0.43	1.08
Uniform Del:	77.4	46.3	17.4	76.0	30.1	16.1	74.6	54.8	47.8	75.7	62.1	63.6
IncremntDel:	13.8	126	0.0	1.0	0.1	0.1	36.0	0.1	0.5	9.4	0.4	66.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.82	0.65	1.00	0.82	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	91.2	163	11.4	77.0	24.9	9.6	110.6	55.0	48.3	85.1	62.5	129.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	91.2	163	11.4	77.0	24.9	9.6	110.6	55.0	48.3	85.1	62.5	129.9
LOS by Move:	F	F	B+	E-	C	A	F	D-	D	F	E	F
HCM2kAvgQ:	5	85	1	3	8	3	15	4	9	7	7	36

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #5613: LAWRENCE EXPWY/REED AVE

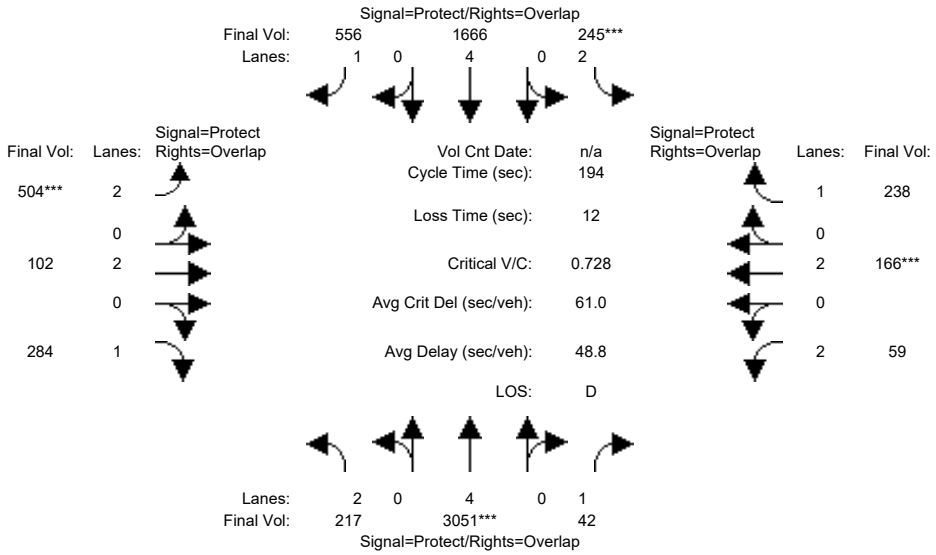


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	17	90	90	27	100	100	15	35	35	14	34	34
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:45 - 5:45 PM												
Base Vol:	161	1245	202	366	3216	353	240	488	673	151	223	195
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1245	202	366	3216	353	240	488	673	151	223	195
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	161	1245	202	366	3216	353	240	488	673	151	223	195
User Adj:	1.00	0.81	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1008	202	366	2316	353	240	488	673	151	223	195
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1008	202	366	2316	353	240	488	673	151	223	195
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1008	202	366	2316	353	240	488	673	151	223	195
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.18	0.12	0.12	0.41	0.20	0.08	0.13	0.38	0.05	0.06	0.11
Crit Moves:	****				****				****	****		
Green Time:	17.0	90.0	104.0	27.0	100	118.7	18.7	47.0	64.0	14.0	42.3	69.3
Volume/Cap:	1.03	0.37	0.21	0.82	0.77	0.32	0.78	0.52	1.14	0.65	0.26	0.31
Uniform Del:	86.5	32.0	22.0	79.1	35.9	16.8	83.6	61.7	63.0	85.6	61.0	43.1
IncremntDel:	79.6	0.1	0.1	11.2	1.3	0.2	11.6	0.5	82.7	6.4	0.2	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.80	0.69	1.00	1.27	1.45	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	166.1	25.8	15.2	90.3	47.0	24.4	95.2	62.3	145.7	92.0	61.1	43.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	166.1	25.8	15.2	90.3	47.0	24.4	95.2	62.3	145.7	92.0	61.1	43.4
LOS by Move:	F	C	B	F	D	C	F	E	F	F	E	D
HCM2kAvgQ:	12	9	4	12	37	14	9	12	54	5	5	8

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

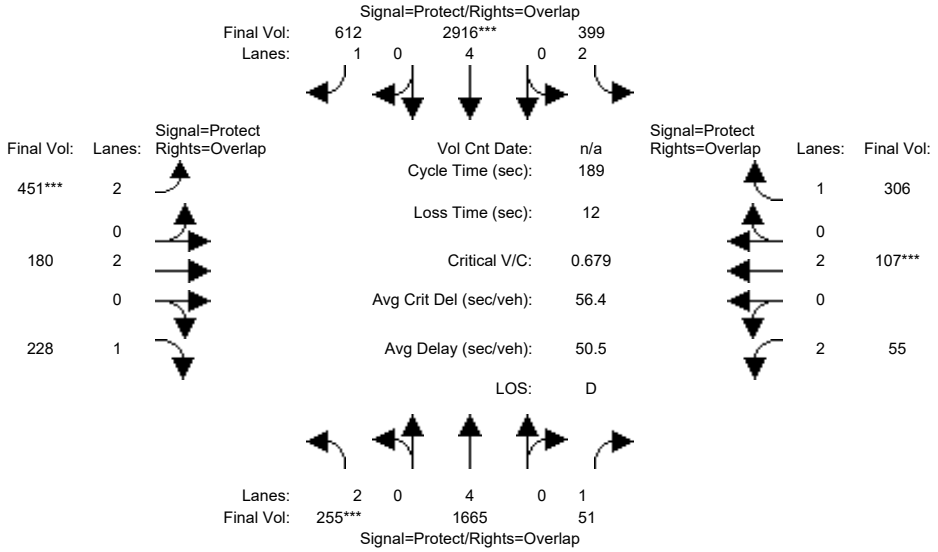


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	20	99	99	21	100	100	24	36	36	15	26	26
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module:												
Base Vol:	217	3051	42	245	1666	556	504	102	284	59	166	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	3051	42	245	1666	556	504	102	284	59	166	238
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	217	3051	42	245	1666	556	504	102	284	59	166	238
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	3051	42	245	1666	556	504	102	284	59	166	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	3051	42	245	1666	556	504	102	284	59	166	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	3051	42	245	1666	556	504	102	284	59	166	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.40	0.02	0.08	0.22	0.32	0.16	0.03	0.16	0.02	0.04	0.14
Crit Moves:		****		****			****				****	
Green Time:	19.6	98.8	114.2	20.7	99.8	124.2	24.4	35.5	55.1	15.4	26.4	47.1
Volume/Cap:	0.68	0.79	0.04	0.73	0.43	0.50	1.27	0.15	0.57	0.24	0.32	0.56
Uniform Del:	84.2	39.0	16.8	83.9	29.3	18.4	84.8	66.5	59.4	83.8	75.7	64.4
IncremntDel:	6.0	1.1	0.0	7.9	0.1	0.3	140.8	0.1	1.6	0.5	0.4	1.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.75	0.60	1.00	0.74	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	90.2	30.5	10.1	91.8	21.9	9.0	225.6	66.6	61.0	84.3	76.1	66.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.2	30.5	10.1	91.8	21.9	9.0	225.6	66.6	61.0	84.3	76.1	66.1
LOS by Move:	F	C	B+	F	C+	A	F	E	E	F	E-	E
HCM2kAvgQ:	7	29	1	10	11	9	28	2	15	2	5	13

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

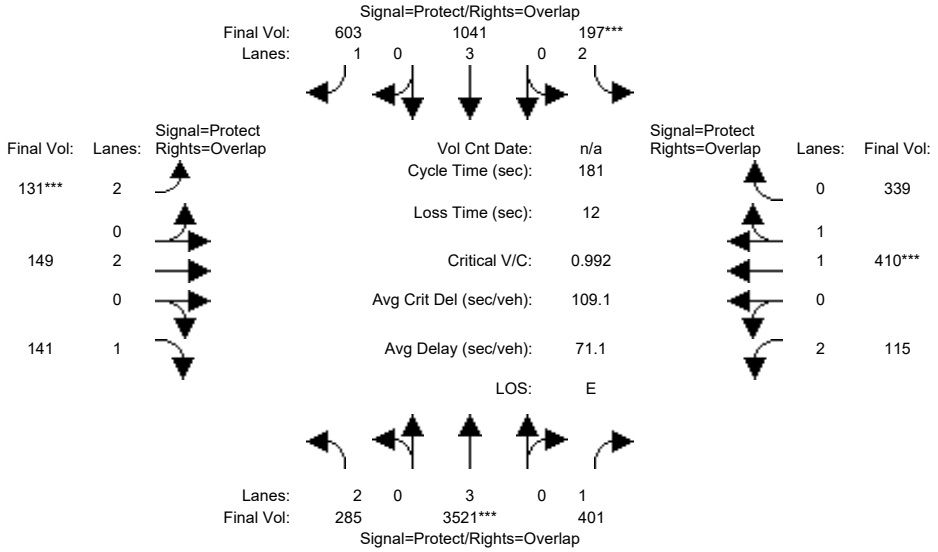


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	22	79	79	29	86	86	32	48	48	10	25	25
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module:												
Base Vol:	255	1665	51	399	2916	612	451	180	228	55	107	306
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	1665	51	399	2916	612	451	180	228	55	107	306
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	255	1665	51	399	2916	612	451	180	228	55	107	306
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	255	1665	51	399	2916	612	451	180	228	55	107	306
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	255	1665	51	399	2916	612	451	180	228	55	107	306
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	255	1665	51	399	2916	612	451	180	228	55	107	306
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.22	0.03	0.13	0.38	0.35	0.14	0.05	0.13	0.02	0.03	0.17
Crit Moves:	****				****		****				****	
Green Time:	21.5	78.4	88.7	28.6	85.4	117.6	32.2	47.2	68.7	10.3	25.3	53.8
Volume/Cap:	0.71	0.53	0.06	0.84	0.85	0.56	0.84	0.19	0.36	0.32	0.21	0.61
Uniform Del:	80.8	41.5	27.4	78.0	46.1	20.8	75.9	55.8	44.0	85.9	73.0	58.6
IncremntDel:	6.6	0.2	0.0	12.4	2.2	0.7	11.3	0.1	0.3	1.1	0.2	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.88	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	87.4	36.6	22.3	90.4	48.3	21.4	87.2	55.9	44.3	87.0	73.2	60.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	87.4	36.6	22.3	90.4	48.3	21.4	87.2	55.9	44.3	87.0	73.2	60.9
LOS by Move:	F	D+	C+	F	D	C+	F	E+	D	F	E	E
HCM2kAvgQ:	9	15	1	16	38	22	17	4	10	2	3	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #3: Lawrence Expwy & Kifer Rd

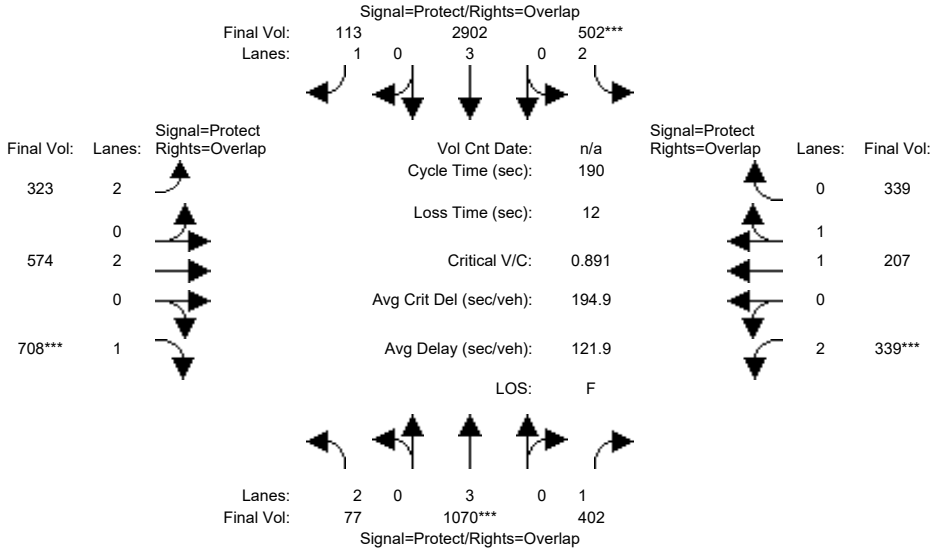


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	25	101	101	17	93	93	13	29	29	11	27	27
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module:												
Base Vol:	285	4047	401	197	1197	603	131	149	141	115	410	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	4047	401	197	1197	603	131	149	141	115	410	339
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	285	4047	401	197	1197	603	131	149	141	115	410	339
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	3521	401	197	1041	603	131	149	141	115	410	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	3521	401	197	1041	603	131	149	141	115	410	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	285	3521	401	197	1041	603	131	149	141	115	410	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.99	0.94
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.07	0.93
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	2010	1662
Capacity Analysis Module:												
Vol/Sat:	0.09	0.62	0.23	0.06	0.18	0.34	0.04	0.04	0.08	0.04	0.20	0.20
Crit Moves:		****		****			****				****	
Green Time:	25.2	101	111.8	17.1	93.1	105.9	12.8	28.8	54.0	10.8	26.9	44.0
Volume/Cap:	0.65	1.11	0.37	0.66	0.36	0.59	0.59	0.25	0.27	0.61	1.37	0.84
Uniform Del:	73.7	40.0	17.2	79.2	26.1	23.8	81.5	66.6	48.5	83.0	77.1	65.1
IncremntDel:	3.4	53.4	0.2	5.5	0.1	0.9	4.1	0.2	0.3	5.8	179	7.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.67	0.53	1.00	0.74	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	77.2	80.1	9.3	84.6	19.5	15.4	85.6	66.8	48.7	88.9	256	72.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.2	80.1	9.3	84.6	19.5	15.4	85.6	66.8	48.7	88.9	256	72.2
LOS by Move:	E-	F	A	F	B-	B	F	E	D	F	F	E
HCM2kAvgQ:	8	74	6	7	8	15	5	4	6	5	35	22

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #3: Lawrence Expwy & Kifer Rd

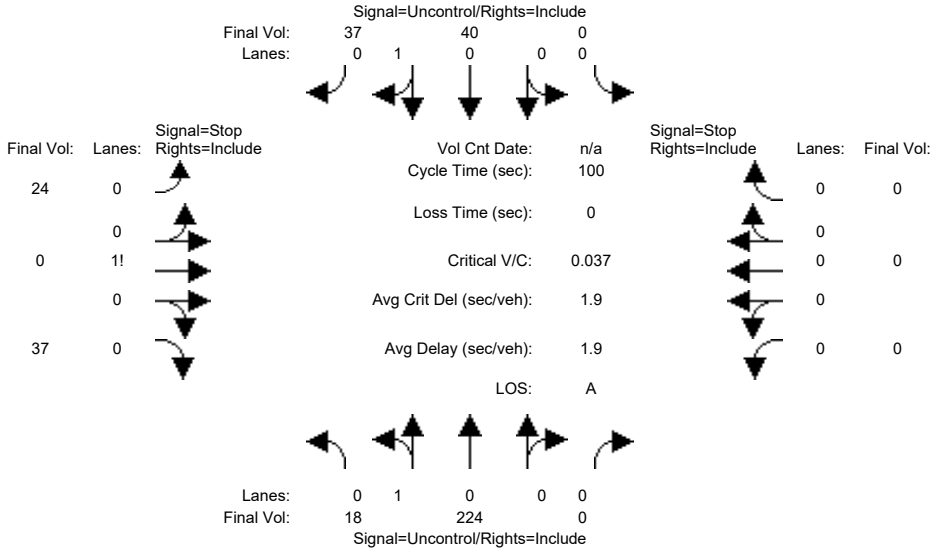


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	9	85	85	27	103	103	16	33	33	22	39	39
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module:												
Base Vol:	77	1337	402	502	3673	113	323	574	708	339	207	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	1337	402	502	3673	113	323	574	708	339	207	339
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	1337	402	502	3673	113	323	574	708	339	207	339
User Adj:	1.00	0.80	1.00	1.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	1070	402	502	2902	113	323	574	708	339	207	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	1070	402	502	2902	113	323	574	708	339	207	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	1070	402	502	2902	113	323	574	708	339	207	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.23	0.16	0.51	0.06	0.10	0.15	0.40	0.11	0.11	0.19
Crit Moves:		****		****					****	****		
Green Time:	8.9	84.9	106.6	26.9	103	118.9	15.8	33.0	41.9	21.7	38.9	65.8
Volume/Cap:	0.52	0.42	0.41	1.13	0.94	0.10	1.23	0.87	1.83	0.94	0.53	0.56
Uniform Del:	88.5	35.8	23.8	81.5	40.5	14.2	87.1	76.4	74.1	83.5	67.4	50.3
IncremntDel:	3.4	0.1	0.3	81.5	6.5	0.0	133.2	12.0	385.6	32.8	0.5	0.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.03	1.54	1.85	1.11	1.79	2.11	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	94.7	55.2	44.3	172.0	79.0	30.1	220.3	88.4	459.7	116.3	68.0	51.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	94.7	55.2	44.3	172.0	79.0	30.1	220.3	88.4	459.7	116.3	68.0	51.1
LOS by Move:	F	E+	D	F	E-	C	F	F	F	F	E	D-
HCM2kAvgQ:	3	18	21	25	58	5	18	19	86	15	11	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background AM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	18	224	0	0	40	37	24	0	37	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	224	0	0	40	37	24	0	37	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	224	0	0	40	37	24	0	37	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	224	0	0	40	37	24	0	37	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	224	0	0	40	37	24	0	37	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	77	xxxx	xxxxx	xxxx	xxxx	xxxxx	319	319	59	xxxx	xxxx	xxxxx
Potent Cap.:	1535	xxxx	xxxxx	xxxx	xxxx	xxxxx	679	601	1013	xxxx	xxxx	xxxxx
Move Cap.:	1535	xxxx	xxxxx	xxxx	xxxx	xxxxx	673	594	1013	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	0.00	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	845	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.6	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.6			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	18	224	0	0	40	37	24	0	37	0	0	0
ApproachDel:	xxxxxx			xxxxxx			9.6			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=61]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=380]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	18	224	0	0	40	37	24	0	37	0	0	0

Major Street Volume: 319
Minor Approach Volume: 61
Minor Approach Volume Threshold: 524

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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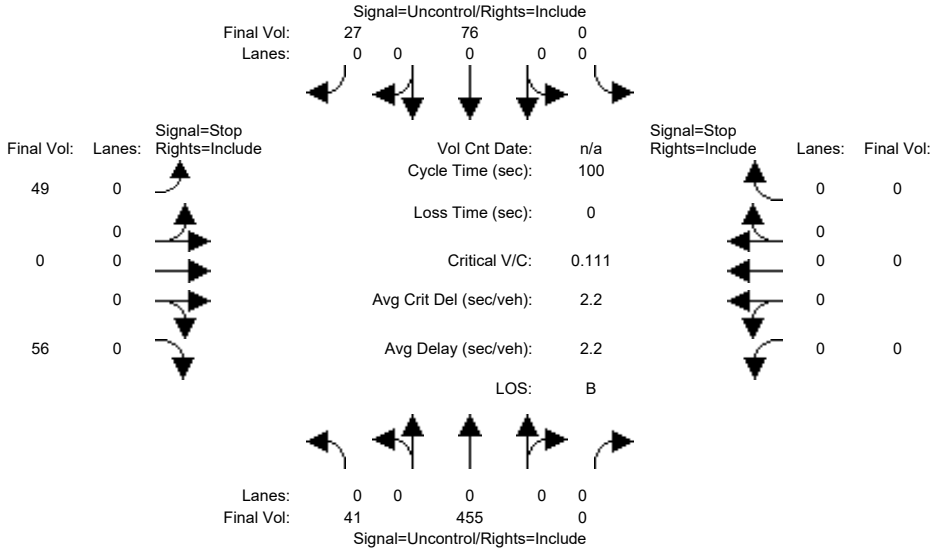
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background PM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	41	455	0	0	76	27	49	0	56	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	455	0	0	76	27	49	0	56	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	455	0	0	76	27	49	0	56	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	455	0	0	76	27	49	0	56	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	41	455	0	0	76	27	49	0	56	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	103	xxxx	xxxxx	xxxx	xxxx	xxxxx	627	627	90	xxxx	xxxx	xxxxx
Potent Cap.:	1502	xxxx	xxxxx	xxxx	xxxx	xxxxx	451	403	974	xxxx	xxxx	xxxxx
Move Cap.:	1502	xxxx	xxxxx	xxxx	xxxx	xxxxx	441	392	974	xxxx	xxxx	xxxxx
Volume/Cap:	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.11	0.00	0.06	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	623	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.9			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	41	455	0	0	76	27	49	0	56	0	0	0
ApproachDel:	xxxxxx			xxxxxx			11.9			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=105]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=704]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	41	455	0	0	76	27	49	0	56	0	0	0

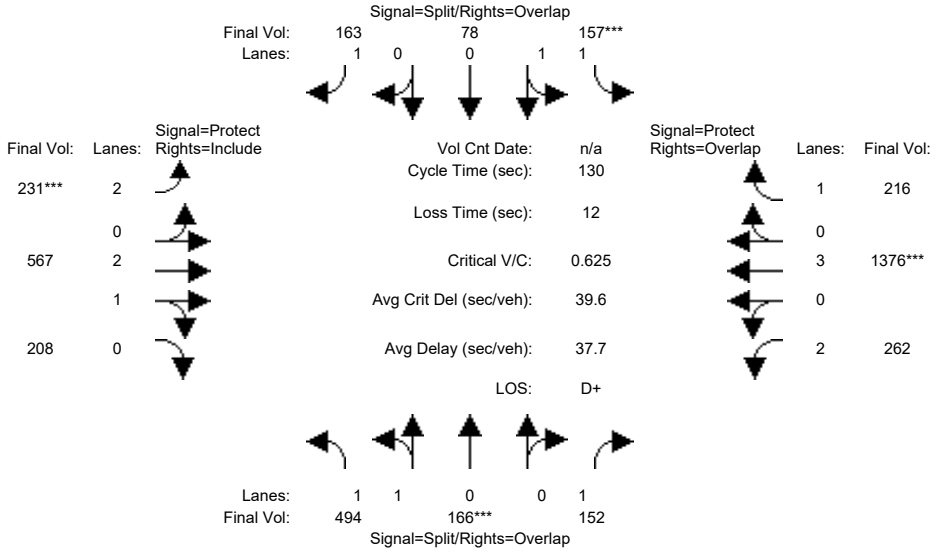
Major Street Volume: 599
Minor Approach Volume: 105
Minor Approach Volume Threshold: 356

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

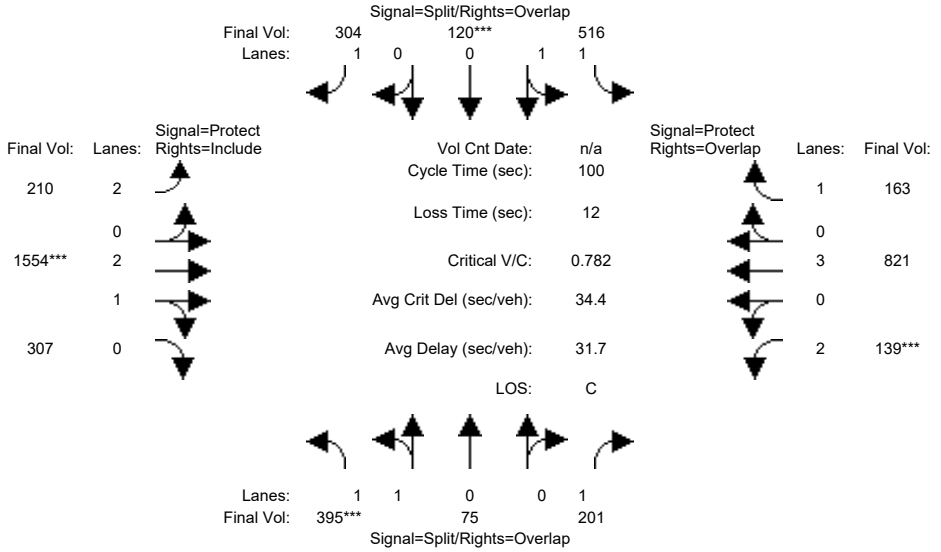


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	494	166	152	157	78	163	231	567	208	262	1376	216
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	494	166	152	157	78	163	231	567	208	262	1376	216
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	494	166	152	157	78	163	231	567	208	262	1376	216
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	494	166	152	157	78	163	231	567	208	262	1376	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	494	166	152	157	78	163	231	567	208	262	1376	216
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	494	166	152	157	78	163	231	567	208	262	1376	216
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	1.00	0.95	0.83	1.00	0.92
Lanes:	1.50	0.50	1.00	1.35	0.65	1.00	2.00	2.17	0.83	2.00	3.00	1.00
Final Sat.:	2657	893	1750	2371	1178	1750	3150	4095	1502	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.09	0.07	0.07	0.09	0.07	0.14	0.14	0.08	0.24	0.12
Crit Moves:		****		****			****				****	
Green Time:	38.7	38.7	63.3	13.8	13.8	29.0	15.3	40.9	40.9	24.6	50.3	64.0
Volume/Cap:	0.62	0.62	0.18	0.62	0.62	0.42	0.62	0.44	0.44	0.44	0.62	0.25
Uniform Del:	39.4	39.4	18.7	55.6	55.6	43.2	54.6	35.4	35.4	46.6	32.2	19.1
IncremntDel:	1.2	1.2	0.1	3.3	3.3	0.7	3.3	0.2	0.2	0.5	0.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.6	40.6	18.8	58.9	58.9	43.9	58.0	35.6	35.6	47.1	32.8	19.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.6	40.6	18.8	58.9	58.9	43.9	58.0	35.6	35.6	47.1	32.8	19.2
LOS by Move:	D	D	B-	E+	E+	D	E+	D+	D+	D	C-	B-
HCM2kAvgQ:	13	13	4	5	5	6	5	8	8	5	15	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

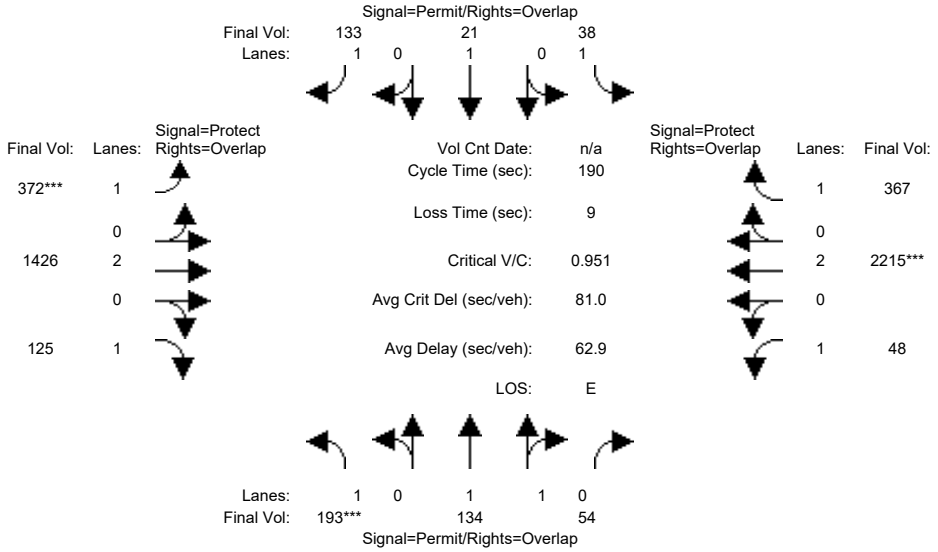


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	395	75	201	516	120	304	210	1554	307	139	821	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	75	201	516	120	304	210	1554	307	139	821	163
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	75	201	516	120	304	210	1554	307	139	821	163
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	75	201	516	120	304	210	1554	307	139	821	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	75	201	516	120	304	210	1554	307	139	821	163
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	75	201	516	120	304	210	1554	307	139	821	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	0.99	0.95	0.83	1.00	0.92
Lanes:	1.69	0.31	1.00	1.63	0.37	1.00	2.00	2.49	0.51	2.00	3.00	1.00
Final Sat.:	2983	566	1750	2880	670	1750	3150	4675	924	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.11	0.18	0.18	0.17	0.07	0.33	0.33	0.04	0.14	0.09
Crit Moves:	****				****			****			****	
Green Time:	16.7	16.7	23.7	22.5	22.5	38.5	16.0	41.8	41.8	7.0	32.8	55.4
Volume/Cap:	0.80	0.80	0.49	0.80	0.80	0.45	0.42	0.80	0.80	0.63	0.44	0.17
Uniform Del:	40.0	40.0	32.9	36.6	36.6	22.9	37.8	25.4	25.4	45.2	26.3	11.0
IncremntDel:	7.4	7.4	0.9	5.5	5.5	0.5	0.6	2.0	2.0	5.8	0.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	47.4	47.4	33.8	42.1	42.1	23.4	38.4	27.3	27.3	51.0	26.5	11.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.4	47.4	33.8	42.1	42.1	23.4	38.4	27.3	27.3	51.0	26.5	11.1
LOS by Move:	D	D	C-	D	D	C	D+	C	C	D-	C	B+
HCM2kAvgQ:	10	10	6	10	10	7	3	18	18	3	6	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

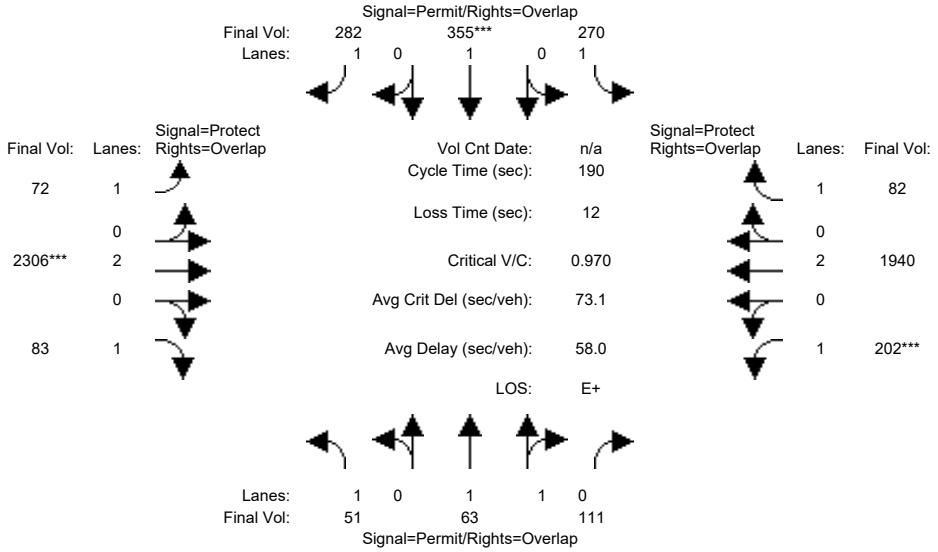


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	29	29	29	30	30	30	31	124	124	20	113	113
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module:												
Base Vol:	193	134	54	38	21	133	372	1426	125	48	2215	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	134	54	38	21	133	372	1426	125	48	2215	367
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	193	134	54	38	21	133	372	1426	125	48	2215	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	193	134	54	38	21	133	372	1426	125	48	2215	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	193	134	54	38	21	133	372	1426	125	48	2215	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	193	134	54	38	21	133	372	1426	125	48	2215	367
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.41	0.59	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2636	1062	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.05	0.05	0.02	0.01	0.08	0.21	0.38	0.07	0.03	0.58	0.21
Crit Moves:	****						****				****	
Green Time:	29.3	29.3	49.2	29.5	29.5	60.5	31.0	124	123.8	19.9	113	112.8
Volume/Cap:	0.72	0.33	0.20	0.14	0.07	0.24	1.30	0.58	0.11	0.26	0.98	0.35
Uniform Del:	76.4	71.6	55.0	69.3	68.5	47.8	79.5	18.5	12.4	78.3	37.6	19.8
IncremntDel:	8.8	0.3	0.1	0.2	0.1	0.2	159.3	0.3	0.0	0.8	14.9	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.13	2.25	2.25	1.00	1.00	1.00
Delay/Veh:	85.2	71.9	55.1	69.5	68.6	48.0	249.2	41.8	27.9	79.1	52.5	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	85.2	71.9	55.1	69.5	68.6	48.0	249.2	41.8	27.9	79.1	52.5	20.1
LOS by Move:	F	E	E+	E	E	D	F	D	C	E-	D-	C+
HCM2kAvgQ:	12	5	4	2	1	6	36	35	6	3	65	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

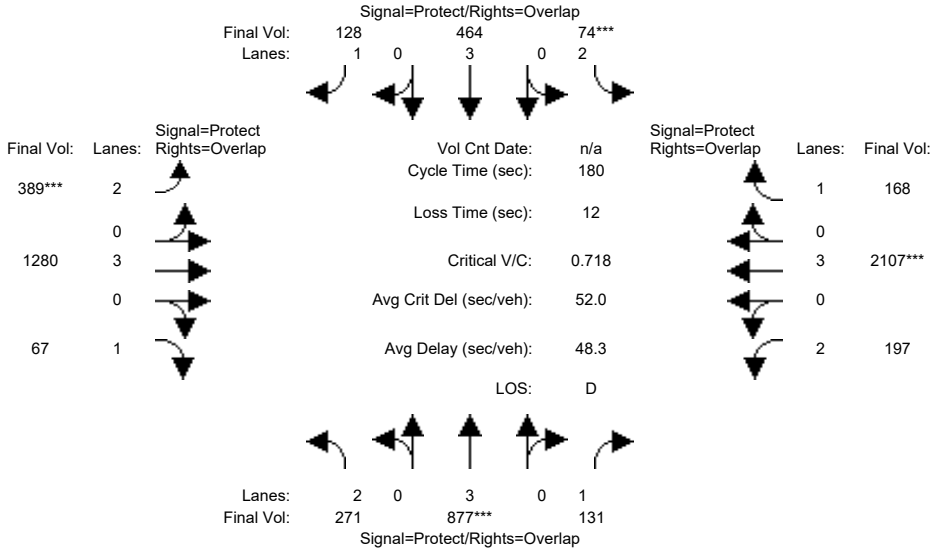


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	36	36	36	37	37	37	9	124	124	13	128	128
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module:												
Base Vol:	51	63	111	270	355	282	72	2306	83	202	1940	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	63	111	270	355	282	72	2306	83	202	1940	82
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	51	63	111	270	355	282	72	2306	83	202	1940	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	63	111	270	355	282	72	2306	83	202	1940	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	63	111	270	355	282	72	2306	83	202	1940	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	63	111	270	355	282	72	2306	83	202	1940	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	1900	1750	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.06	0.15	0.19	0.16	0.04	0.61	0.05	0.12	0.51	0.05
Crit Moves:					****			****		****		
Green Time:	37.0	37.0	54.0	37.0	37.0	46.3	9.3	124	124.0	17.0	132	131.7
Volume/Cap:	0.15	0.17	0.22	0.79	0.96	0.66	0.84	0.93	0.07	1.29	0.74	0.07
Uniform Del:	63.5	63.7	52.0	72.8	75.8	64.8	89.7	29.2	12.0	86.5	18.3	9.4
IncremntDel:	0.2	0.1	0.1	12.0	36.1	3.9	50.0	7.0	0.0	169.8	1.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	1.51	1.00	1.63	1.63
Delay/Veh:	63.7	63.8	52.1	84.8	112	68.7	139.7	51.1	18.2	256.3	30.9	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	63.7	63.8	52.1	84.8	112	68.7	139.7	51.1	18.2	256.3	30.9	15.3
LOS by Move:	E	E	D-	F	F	E	F	D-	B-	F	C	B
HCM2kAvgQ:	3	3	5	17	23	16	6	65	3	19	45	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

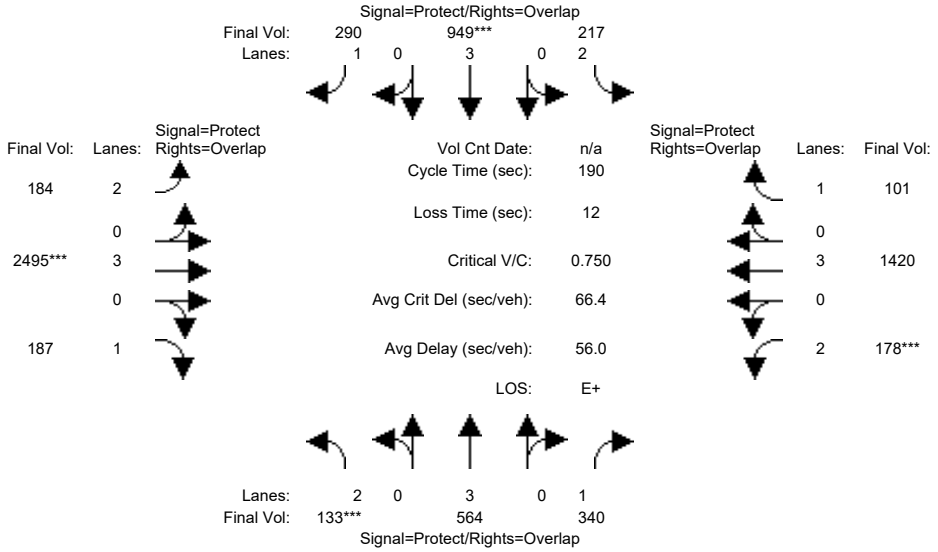


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	10	10	14	10	10	14	78	78	14	85	85
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module:												
Base Vol:	271	877	131	74	464	128	389	1280	67	197	2107	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	271	877	131	74	464	128	389	1280	67	197	2107	168
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	271	877	131	74	464	128	389	1280	67	197	2107	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	271	877	131	74	464	128	389	1280	67	197	2107	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	271	877	131	74	464	128	389	1280	67	197	2107	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	271	877	131	74	464	128	389	1280	67	197	2107	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.15	0.07	0.02	0.08	0.07	0.12	0.22	0.04	0.06	0.37	0.10
Crit Moves:		****		****			****				****	
Green Time:	19.7	40.2	56.6	13.9	34.6	60.4	25.8	97.4	117.1	16.4	88.4	102.3
Volume/Cap:	0.79	0.69	0.24	0.30	0.42	0.22	0.86	0.42	0.06	0.69	0.75	0.17
Uniform Del:	78.1	64.2	45.7	78.5	63.9	42.9	75.4	24.4	11.4	79.3	37.0	18.6
IncremntDel:	11.4	1.6	0.2	0.7	0.3	0.2	15.5	0.1	0.0	6.8	1.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.5	11.5	86.1	38.2	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.5	11.5	86.1	38.2	18.6
LOS by Move:	F	E	D	E-	E	D	F	C	B+	F	D+	B-
HCM2kAvgQ:	9	15	6	2	7	5	13	13	1	8	31	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

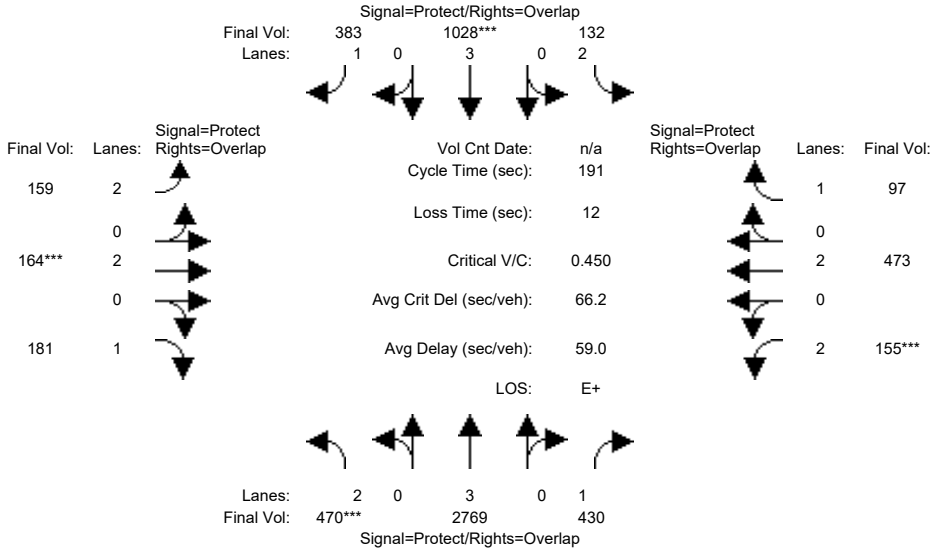


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	39	39	16	40	40	16	96	96	14	95	95
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module:												
Base Vol:	133	564	340	217	949	290	184	2495	187	178	1420	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	564	340	217	949	290	184	2495	187	178	1420	101
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	133	564	340	217	949	290	184	2495	187	178	1420	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	564	340	217	949	290	184	2495	187	178	1420	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	564	340	217	949	290	184	2495	187	178	1420	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	564	340	217	949	290	184	2495	187	178	1420	101
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.10	0.19	0.07	0.17	0.17	0.06	0.44	0.11	0.06	0.25	0.06
Crit Moves:	****				****			****			****	
Green Time:	15.0	39.7	53.7	16.3	41.1	58.6	17.6	108	122.9	14.0	104	120.7
Volume/Cap:	0.53	0.47	0.69	0.80	0.77	0.54	0.63	0.77	0.17	0.77	0.45	0.09
Uniform Del:	84.1	65.9	60.6	85.3	70.0	54.4	83.1	31.5	13.2	86.4	25.7	13.4
IncremntDel:	2.3	0.3	4.0	15.7	3.0	1.1	4.4	1.2	0.1	14.2	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.07	1.88	2.22	1.00	0.68	0.48
Delay/Veh:	86.4	66.2	64.7	101.0	73.1	55.5	93.2	60.3	29.5	100.6	17.7	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	66.2	64.7	101.0	73.1	55.5	93.2	60.3	29.5	100.6	17.7	6.5
LOS by Move:	F	E	E	F	E	E+	F	E	C	F	B	A
HCM2kAvgQ:	4	9	19	8	18	15	6	43	9	8	11	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

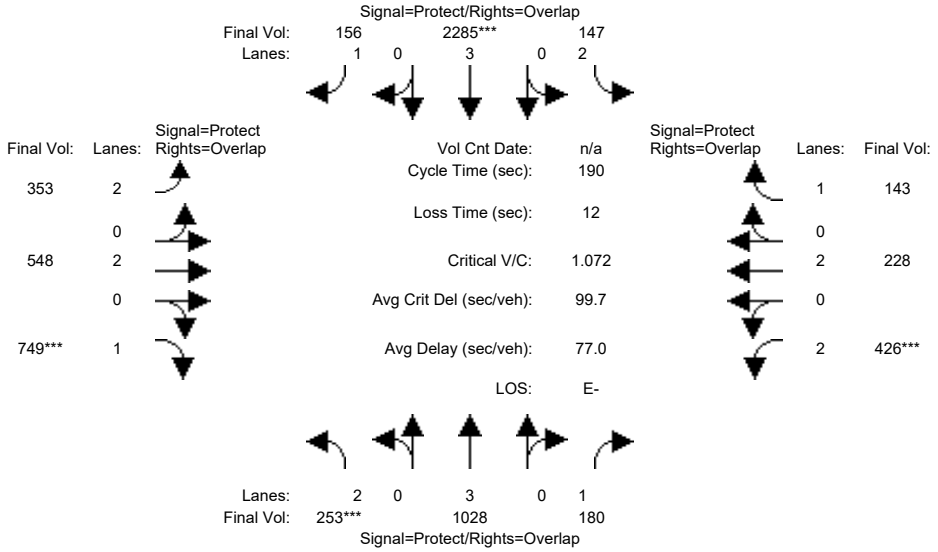


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	27	100	100	19	91	91	14	36	36	13	35	35
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module:												
Base Vol:	470	3147	430	132	1335	383	159	164	181	155	473	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	470	3147	430	132	1335	383	159	164	181	155	473	97
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	470	3147	430	132	1335	383	159	164	181	155	473	97
User Adj:	1.00	0.88	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	470	2769	430	132	1028	383	159	164	181	155	473	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	470	2769	430	132	1028	383	159	164	181	155	473	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	470	2769	430	132	1028	383	159	164	181	155	473	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.15	0.49	0.25	0.04	0.18	0.22	0.05	0.04	0.11	0.05	0.12	0.06
Crit Moves:	****				****			****		****		
Green Time:	26.7	99.8	112.9	18.9	90.8	104.9	14.1	36.3	63.0	13.1	35.3	54.2
Volume/Cap:	1.07	0.93	0.42	0.42	0.38	0.40	0.68	0.23	0.34	0.72	0.67	0.20
Uniform Del:	82.1	42.4	21.2	80.9	32.1	24.8	86.3	65.5	48.3	87.1	72.5	51.9
IncremntDel:	62.0	6.0	0.3	0.9	0.1	0.3	8.2	0.2	0.4	11.0	2.6	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.27	1.38	1.00	0.80	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	144.1	59.7	29.4	81.8	25.8	17.2	94.4	65.6	48.7	98.1	75.1	52.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.1	59.7	29.4	81.8	25.8	17.2	94.4	65.6	48.7	98.1	75.1	52.1
LOS by Move:	F	E+	C	F	C	B	F	E	D	F	E-	D-
HCM2kAvgQ:	22	54	19	4	9	9	6	4	8	6	13	4

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

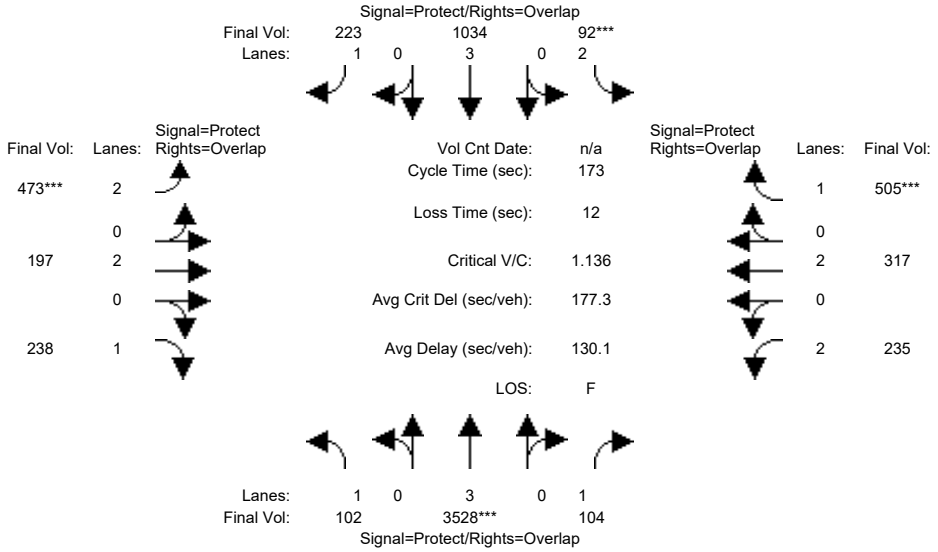


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	22	86	86	15	79	79	24	41	41	24	41	41
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module:												
Base Vol:	253	1535	180	147	2856	156	353	548	749	426	228	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	253	1535	180	147	2856	156	353	548	749	426	228	143
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	1535	180	147	2856	156	353	548	749	426	228	143
User Adj:	1.00	0.67	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	253	1028	180	147	2285	156	353	548	749	426	228	143
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	1028	180	147	2285	156	353	548	749	426	228	143
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	253	1028	180	147	2285	156	353	548	749	426	228	143
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.10	0.05	0.40	0.09	0.11	0.14	0.47	0.14	0.06	0.08
Crit Moves:	****				****				****	****		
Green Time:	22.0	86.0	110.0	15.0	79.0	107.4	28.4	53.0	75.0	24.0	48.6	63.6
Volume/Cap:	0.69	0.40	0.18	0.59	0.96	0.16	0.75	0.52	1.18	1.07	0.23	0.24
Uniform Del:	80.8	34.7	18.8	84.5	54.1	19.7	77.4	57.7	57.5	83.0	56.0	45.8
IncremntDel:	5.7	0.1	0.1	3.8	11.3	0.1	6.6	0.4	98.6	65.2	0.1	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.83	0.62	1.00	1.15	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	86.4	29.0	11.8	88.3	73.6	26.3	83.9	58.2	156.1	148.2	56.1	46.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	29.0	11.8	88.3	73.6	26.3	83.9	58.2	156.1	148.2	56.1	46.0
LOS by Move:	F	C	B+	F	E	C	F	E+	F	F	E+	D
HCM2kAvgQ:	9	10	3	5	44	6	12	13	63	19	5	6

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background AM

Intersection #5613: LAWRENCE EXPWY/REED AVE

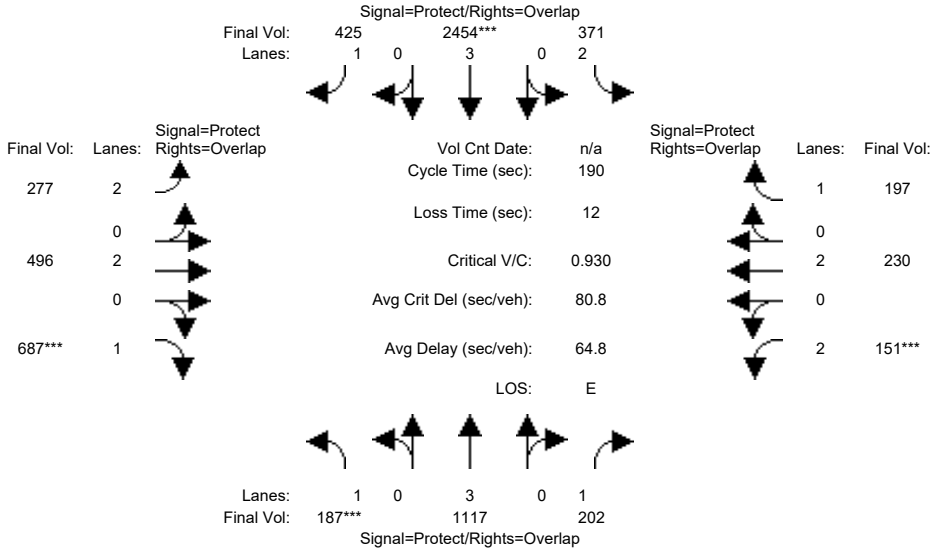


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	81	81	13	80	80	23	39	39	17	33	33
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module:												
Base Vol:	102	4055	104	92	1188	223	473	197	238	235	317	505
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	4055	104	92	1188	223	473	197	238	235	317	505
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	4055	104	92	1188	223	473	197	238	235	317	505
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	3528	104	92	1034	223	473	197	238	235	317	505
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	3528	104	92	1034	223	473	197	238	235	317	505
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	3528	104	92	1034	223	473	197	238	235	317	505
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.62	0.06	0.03	0.18	0.13	0.15	0.05	0.14	0.07	0.08	0.29
Crit Moves:		****		****			****					****
Green Time:	14.1	80.5	97.8	13.2	79.7	102.8	23.1	38.5	52.6	17.3	32.5	45.7
Volume/Cap:	0.72	1.33	0.11	0.38	0.39	0.21	1.12	0.23	0.45	0.75	0.44	1.09
Uniform Del:	77.5	46.3	17.4	76.0	30.7	16.3	75.0	55.1	48.5	75.7	62.2	63.6
IncremntDel:	15.8	151	0.0	1.0	0.1	0.1	82.4	0.1	0.6	9.4	0.4	69.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.82	0.65	1.00	0.82	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	93.3	189	11.4	77.0	25.4	9.7	157.4	55.3	49.1	85.1	62.7	132.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.3	189	11.4	77.0	25.4	9.7	157.4	55.3	49.1	85.1	62.7	132.8
LOS by Move:	F	F	B+	E-	C	A	F	E+	D	F	E	F
HCM2kAvgQ:	6	96	2	3	9	3	20	4	11	8	7	37

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background PM

Intersection #5613: LAWRENCE EXPWY/REED AVE

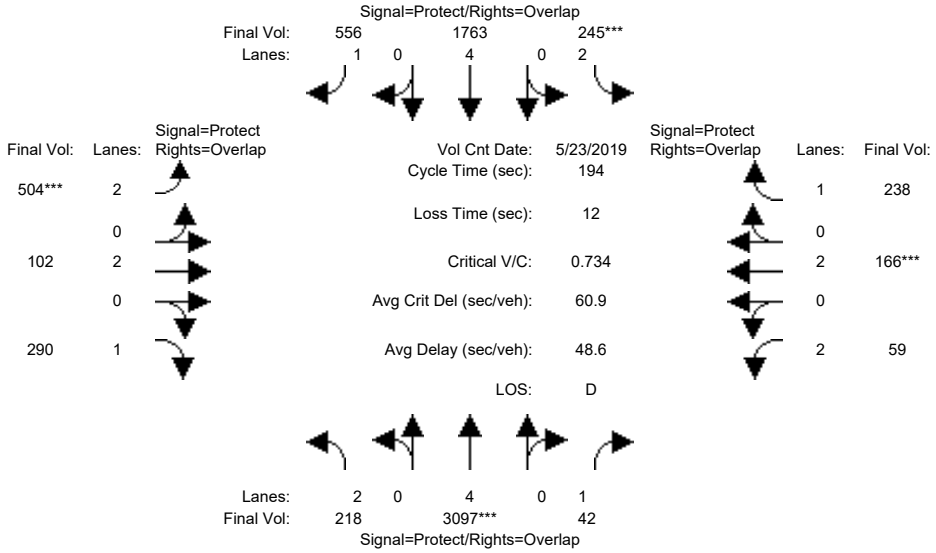


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	17	90	90	27	100	100	15	35	35	14	34	34
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module:												
Base Vol:	187	1379	202	371	3409	425	277	496	687	151	230	197
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	1379	202	371	3409	425	277	496	687	151	230	197
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	1379	202	371	3409	425	277	496	687	151	230	197
User Adj:	1.00	0.81	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	1117	202	371	2454	425	277	496	687	151	230	197
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	1117	202	371	2454	425	277	496	687	151	230	197
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	1117	202	371	2454	425	277	496	687	151	230	197
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.12	0.12	0.43	0.24	0.09	0.13	0.39	0.05	0.06	0.11
Crit Moves:	****				****				****	****		
Green Time:	17.4	90.3	104.3	27.1	100	120.0	20.0	46.6	64.0	14.0	40.6	67.7
Volume/Cap:	1.17	0.41	0.21	0.83	0.82	0.38	0.84	0.53	1.17	0.65	0.28	0.32
Uniform Del:	86.3	32.5	21.8	79.2	37.4	17.1	83.4	62.3	63.0	85.6	62.5	44.3
IncremntDel:	122.5	0.1	0.1	11.9	1.9	0.2	16.8	0.6	91.9	6.4	0.2	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.80	0.68	1.00	1.27	1.46	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	208.8	26.2	15.0	91.1	49.6	25.1	100.2	62.9	154.9	92.0	62.7	44.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	208.8	26.2	15.0	91.1	49.6	25.1	100.2	62.9	154.9	92.0	62.7	44.6
LOS by Move:	F	C	B	F	D	C	F	E	F	F	E	D
HCM2kAvgQ:	16	10	4	12	40	17	10	12	57	5	5	9

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

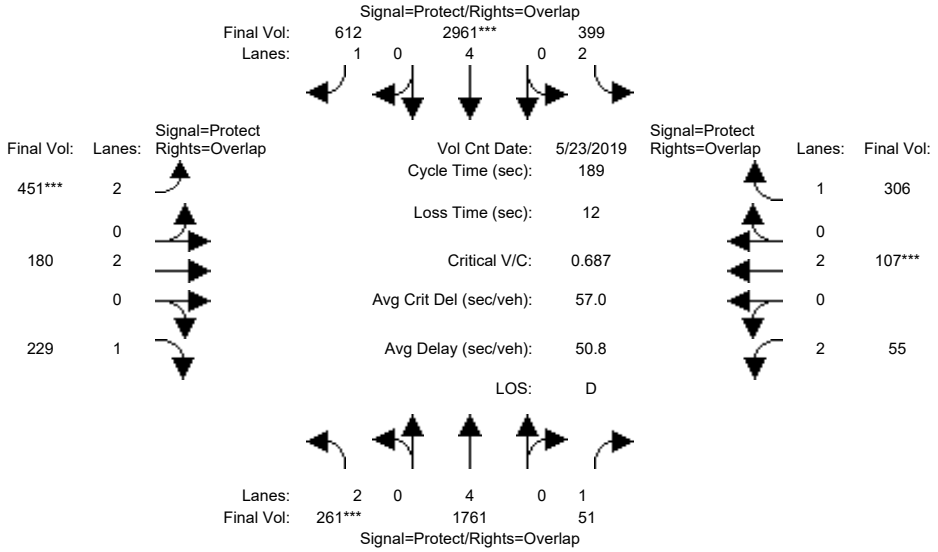


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	20	99	99	21	100	100	24	36	36	15	26	26
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 23 May 2019 << 7:45 AM - 8:45 AM												
Base Vol:	217	3051	42	245	1666	556	504	102	284	59	166	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	3051	42	245	1666	556	504	102	284	59	166	238
Added Vol:	1	46	0	0	97	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	218	3097	42	245	1763	556	504	102	290	59	166	238
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	3097	42	245	1763	556	504	102	290	59	166	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	3097	42	245	1763	556	504	102	290	59	166	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	3097	42	245	1763	556	504	102	290	59	166	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.41	0.02	0.08	0.23	0.32	0.16	0.03	0.17	0.02	0.04	0.14
Crit Moves:		****		****			****				****	
Green Time:	19.6	98.8	114.2	20.7	99.8	124.2	24.4	35.5	55.1	15.4	26.4	47.1
Volume/Cap:	0.69	0.80	0.04	0.73	0.45	0.50	1.27	0.15	0.58	0.24	0.32	0.56
Uniform Del:	84.2	39.4	16.8	83.9	29.8	18.4	84.8	66.5	59.6	83.8	75.7	64.4
IncremntDel:	6.1	1.2	0.0	7.9	0.1	0.3	140.8	0.1	1.8	0.5	0.4	1.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.75	0.60	1.00	0.74	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	90.3	30.9	10.1	91.8	22.2	9.0	225.6	66.6	61.4	84.3	76.1	66.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.3	30.9	10.1	91.8	22.2	9.0	225.6	66.6	61.4	84.3	76.1	66.1
LOS by Move:	F	C	B+	F	C+	A	F	E	E	F	E-	E
HCM2kAvgQ:	7	30	1	10	12	9	28	2	16	2	5	13

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

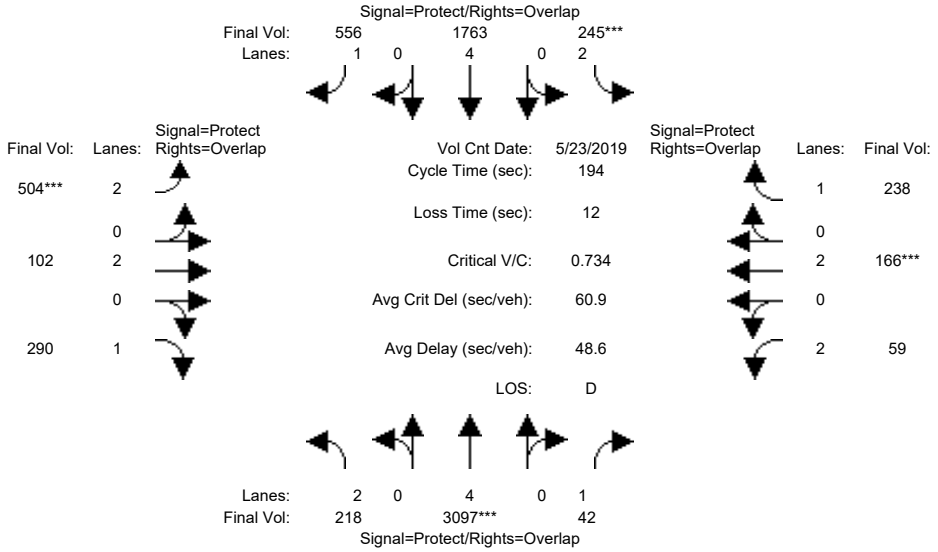


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	22	79	79	29	86	86	32	48	48	10	25	25
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 23 May 2019 <<												
Base Vol:	255	1665	51	399	2916	612	451	180	228	55	107	306
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	1665	51	399	2916	612	451	180	228	55	107	306
Added Vol:	6	96	0	0	45	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	261	1761	51	399	2961	612	451	180	229	55	107	306
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	261	1761	51	399	2961	612	451	180	229	55	107	306
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	1761	51	399	2961	612	451	180	229	55	107	306
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	261	1761	51	399	2961	612	451	180	229	55	107	306
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.03	0.13	0.39	0.35	0.14	0.05	0.13	0.02	0.03	0.17
Crit Moves:	****				****		****				****	
Green Time:	21.5	78.4	88.7	28.6	85.4	117.6	32.2	47.2	68.7	10.3	25.3	53.8
Volume/Cap:	0.73	0.56	0.06	0.84	0.86	0.56	0.84	0.19	0.36	0.32	0.21	0.61
Uniform Del:	80.9	42.1	27.4	78.0	46.6	20.8	75.9	55.8	44.0	85.9	73.0	58.6
IncremntDel:	7.4	0.2	0.0	12.4	2.5	0.7	11.3	0.1	0.3	1.1	0.2	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.88	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	88.3	37.2	22.3	90.4	49.0	21.4	87.2	55.9	44.4	87.0	73.2	60.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.3	37.2	22.3	90.4	49.0	21.4	87.2	55.9	44.4	87.0	73.2	60.9
LOS by Move:	F	D+	C+	F	D	C+	F	E+	D	F	E	E
HCM2kAvgQ:	9	16	1	16	40	22	17	4	10	2	3	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

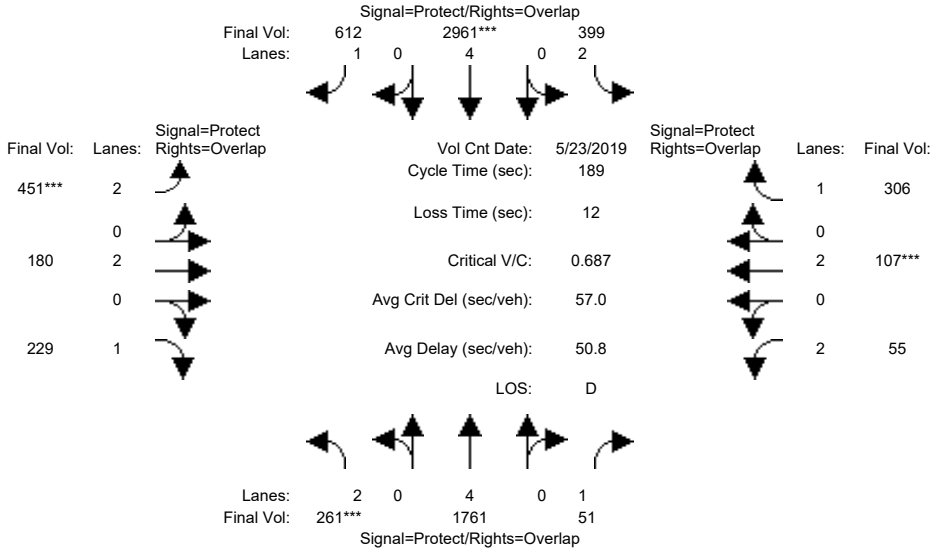


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	20	99	99	21	100	100	24	36	36	15	26	26
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 23 May 2019 << 7:45 AM - 8:45 AM												
Base Vol:	217	3051	42	245	1666	556	504	102	284	59	166	238
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	217	3051	42	245	1666	556	504	102	284	59	166	238
Added Vol:	1	46	0	0	97	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	218	3097	42	245	1763	556	504	102	290	59	166	238
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	3097	42	245	1763	556	504	102	290	59	166	238
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	3097	42	245	1763	556	504	102	290	59	166	238
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	3097	42	245	1763	556	504	102	290	59	166	238
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.07	0.41	0.02	0.08	0.23	0.32	0.16	0.03	0.17	0.02	0.04	0.14
Crit Moves:		****		****			****				****	
Green Time:	19.6	98.8	114.2	20.7	99.8	124.2	24.4	35.5	55.1	15.4	26.4	47.1
Volume/Cap:	0.69	0.80	0.04	0.73	0.45	0.50	1.27	0.15	0.58	0.24	0.32	0.56
Uniform Del:	84.2	39.4	16.8	83.9	29.8	18.4	84.8	66.5	59.6	83.8	75.7	64.4
IncremntDel:	6.1	1.2	0.0	7.9	0.1	0.3	140.8	0.1	1.8	0.5	0.4	1.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.75	0.60	1.00	0.74	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	90.3	30.9	10.1	91.8	22.2	9.0	225.6	66.6	61.4	84.3	76.1	66.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	90.3	30.9	10.1	91.8	22.2	9.0	225.6	66.6	61.4	84.3	76.1	66.1
LOS by Move:	F	C	B+	F	C+	A	F	E	E	F	E-	E
HCM2kAvgQ:	7	30	1	10	12	9	28	2	16	2	5	13

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #1: Lawrence Expwy & Oakmead Pkwy

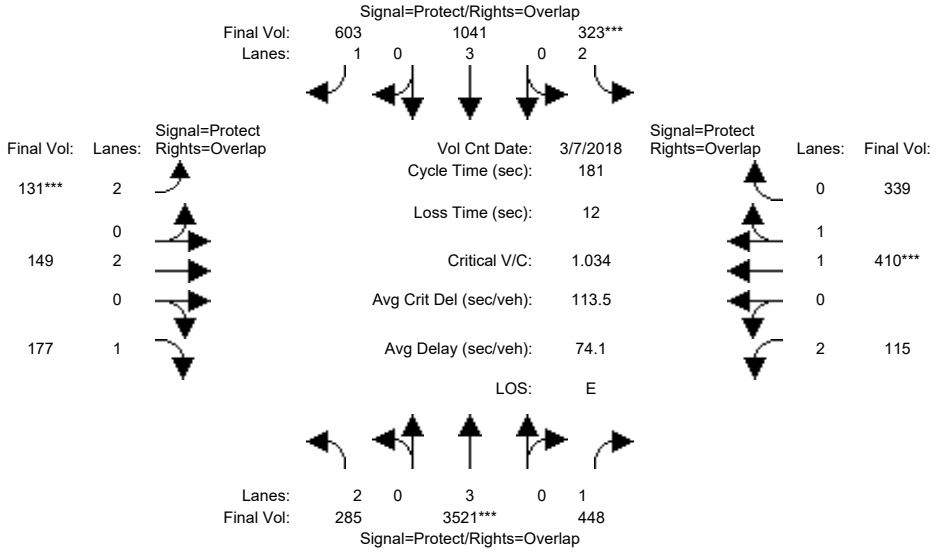


Street Name:	Lawrence Expwy						Oakmead Pkwy					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	22	79	79	29	86	86	32	48	48	10	25	25
Y+R:	6.4	6.2	6.2	6.3	6.2	6.2	5.6	5.5	5.5	5.6	5.6	5.6
Volume Module: >> Count Date: 23 May 2019 <<												
Base Vol:	255	1665	51	399	2916	612	451	180	228	55	107	306
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	1665	51	399	2916	612	451	180	228	55	107	306
Added Vol:	6	96	0	0	45	0	0	0	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	261	1761	51	399	2961	612	451	180	229	55	107	306
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	261	1761	51	399	2961	612	451	180	229	55	107	306
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	1761	51	399	2961	612	451	180	229	55	107	306
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	261	1761	51	399	2961	612	451	180	229	55	107	306
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	7600	1750	3150	7600	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.03	0.13	0.39	0.35	0.14	0.05	0.13	0.02	0.03	0.17
Crit Moves:	****				****		****				****	
Green Time:	21.5	78.4	88.7	28.6	85.4	117.6	32.2	47.2	68.7	10.3	25.3	53.8
Volume/Cap:	0.73	0.56	0.06	0.84	0.86	0.56	0.84	0.19	0.36	0.32	0.21	0.61
Uniform Del:	80.9	42.1	27.4	78.0	46.6	20.8	75.9	55.8	44.0	85.9	73.0	58.6
IncremntDel:	7.4	0.2	0.0	12.4	2.5	0.7	11.3	0.1	0.3	1.1	0.2	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.88	0.81	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	88.3	37.2	22.3	90.4	49.0	21.4	87.2	55.9	44.4	87.0	73.2	60.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.3	37.2	22.3	90.4	49.0	21.4	87.2	55.9	44.4	87.0	73.2	60.9
LOS by Move:	F	D+	C+	F	D	C+	F	E+	D	F	E	E
HCM2kAvgQ:	9	16	1	16	40	22	17	4	10	2	3	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #3: Lawrence Expwy & Kifer Rd

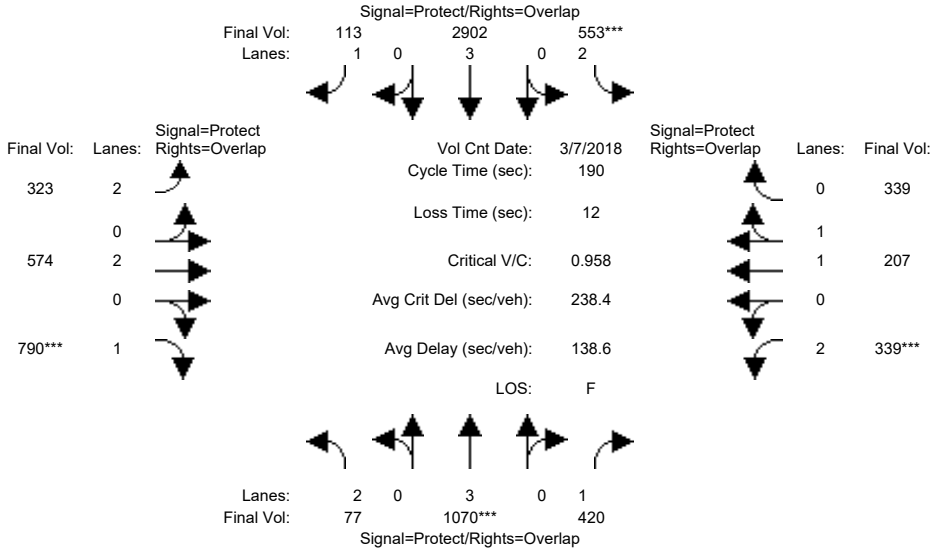


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	25	101	101	17	93	93	13	29	29	11	27	27
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	285	4047	401	197	1197	603	131	149	141	115	410	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	4047	401	197	1197	603	131	149	141	115	410	339
Added Vol:	0	0	47	126	0	0	0	0	36	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	285	4047	448	323	1197	603	131	149	177	115	410	339
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	3521	448	323	1041	603	131	149	177	115	410	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	3521	448	323	1041	603	131	149	177	115	410	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	285	3521	448	323	1041	603	131	149	177	115	410	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.99	0.94
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.07	0.93
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	2010	1662
Capacity Analysis Module:												
Vol/Sat:	0.09	0.62	0.26	0.10	0.18	0.34	0.04	0.04	0.10	0.04	0.20	0.20
Crit Moves:		****			****			****			****	
Green Time:	25.2	101	111.8	17.1	93.1	105.9	12.8	28.8	54.0	10.8	26.9	44.0
Volume/Cap:	0.65	1.11	0.41	1.09	0.36	0.59	0.59	0.25	0.34	0.61	1.37	0.84
Uniform Del:	73.7	40.0	17.8	81.9	26.1	23.8	81.5	66.6	49.6	83.0	77.1	65.1
IncremntDel:	3.4	53.4	0.3	76.8	0.1	0.9	4.1	0.2	0.4	5.8	179	7.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.67	0.53	1.00	0.74	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	77.2	80.1	9.7	158.7	19.5	15.4	85.6	66.8	50.0	88.9	256	72.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.2	80.1	9.7	158.7	19.5	15.4	85.6	66.8	50.0	88.9	256	72.2
LOS by Move:	E-	F	A	F	B-	B	F	E	D	F	F	E
HCM2kAvgQ:	8	74	7	16	8	15	5	4	8	5	35	22

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #3: Lawrence Expwy & Kifer Rd

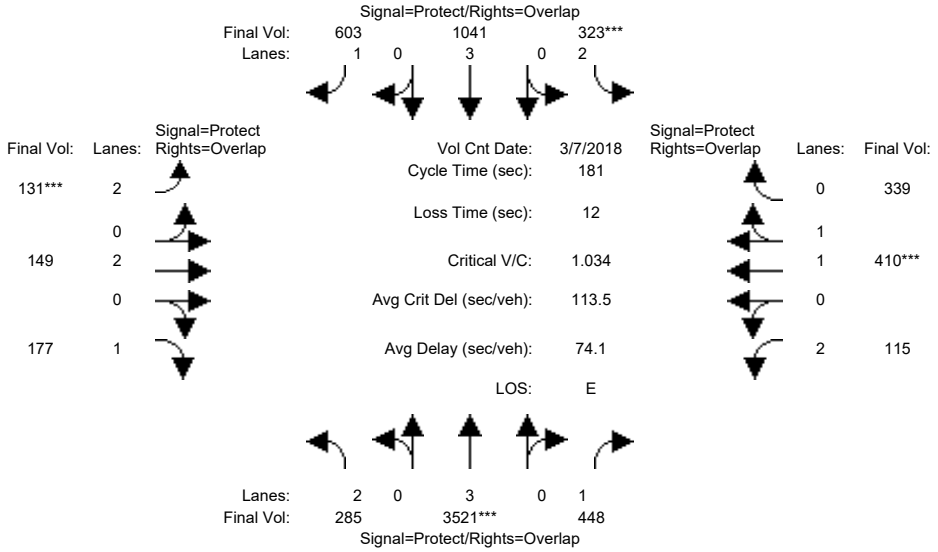


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	9	85	85	27	103	103	16	33	33	22	39	39
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 4:15 PM - 5:15 PM												
Base Vol:	77	1337	402	502	3673	113	323	574	708	339	207	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	1337	402	502	3673	113	323	574	708	339	207	339
Added Vol:	0	0	18	51	0	0	0	0	82	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	1337	420	553	3673	113	323	574	790	339	207	339
User Adj:	1.00	0.80	1.00	1.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	1070	420	553	2902	113	323	574	790	339	207	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	1070	420	553	2902	113	323	574	790	339	207	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	1070	420	553	2902	113	323	574	790	339	207	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.24	0.18	0.51	0.06	0.10	0.15	0.45	0.11	0.11	0.19
Crit Moves:		****		****					****	****		
Green Time:	8.9	84.9	106.6	26.9	103	118.9	15.8	33.0	41.9	21.7	38.9	65.8
Volume/Cap:	0.52	0.42	0.43	1.24	0.94	0.10	1.23	0.87	2.05	0.94	0.53	0.56
Uniform Del:	88.5	35.8	24.1	81.5	40.5	14.2	87.1	76.4	74.1	83.5	67.4	50.3
IncremntDel:	3.4	0.1	0.3	125.8	6.5	0.0	133.2	12.0	480.2	32.8	0.5	0.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.03	1.54	1.85	1.11	1.79	2.11	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	94.7	55.2	44.9	216.3	79.0	30.1	220.3	88.4	554.3	116.3	68.0	51.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	94.7	55.2	44.9	216.3	79.0	30.1	220.3	88.4	554.3	116.3	68.0	51.1
LOS by Move:	F	E+	D	F	E-	C	F	F	F	F	E	D-
HCM2kAvgQ:	3	18	22	29	58	5	18	19	102	15	11	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #3: Lawrence Expwy & Kifer Rd

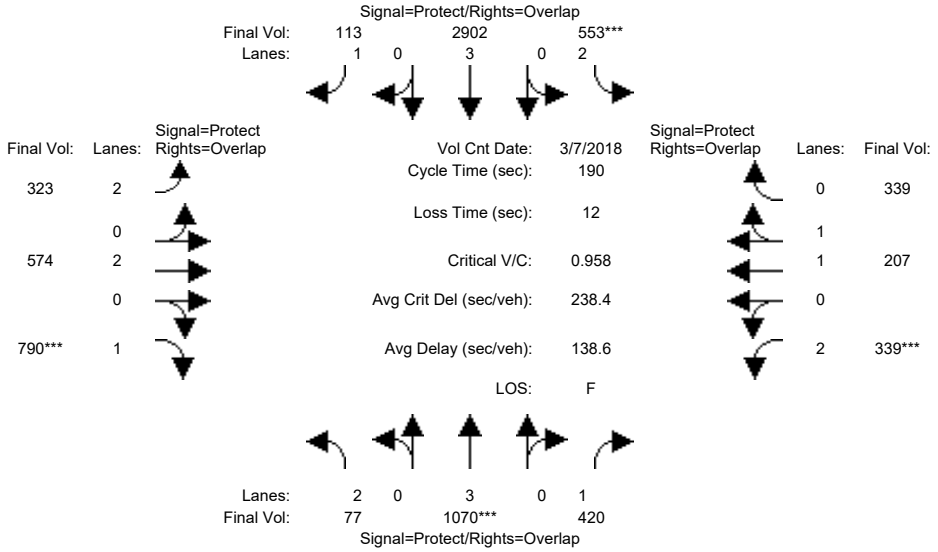


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	25	101	101	17	93	93	13	29	29	11	27	27
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	285	4047	401	197	1197	603	131	149	141	115	410	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	285	4047	401	197	1197	603	131	149	141	115	410	339
Added Vol:	0	0	47	126	0	0	0	0	36	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	285	4047	448	323	1197	603	131	149	177	115	410	339
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	285	3521	448	323	1041	603	131	149	177	115	410	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	285	3521	448	323	1041	603	131	149	177	115	410	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	285	3521	448	323	1041	603	131	149	177	115	410	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.99	0.94
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.07	0.93
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	2010	1662
Capacity Analysis Module:												
Vol/Sat:	0.09	0.62	0.26	0.10	0.18	0.34	0.04	0.04	0.10	0.04	0.20	0.20
Crit Moves:		****			****			****			****	
Green Time:	25.2	101	111.8	17.1	93.1	105.9	12.8	28.8	54.0	10.8	26.9	44.0
Volume/Cap:	0.65	1.11	0.41	1.09	0.36	0.59	0.59	0.25	0.34	0.61	1.37	0.84
Uniform Del:	73.7	40.0	17.8	81.9	26.1	23.8	81.5	66.6	49.6	83.0	77.1	65.1
IncremntDel:	3.4	53.4	0.3	76.8	0.1	0.9	4.1	0.2	0.4	5.8	179	7.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.67	0.53	1.00	0.74	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	77.2	80.1	9.7	158.7	19.5	15.4	85.6	66.8	50.0	88.9	256	72.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	77.2	80.1	9.7	158.7	19.5	15.4	85.6	66.8	50.0	88.9	256	72.2
LOS by Move:	E-	F	A	F	B-	B	F	E	D	F	F	E
HCM2kAvgQ:	8	74	7	16	8	15	5	4	8	5	35	22

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #3: Lawrence Expwy & Kifer Rd

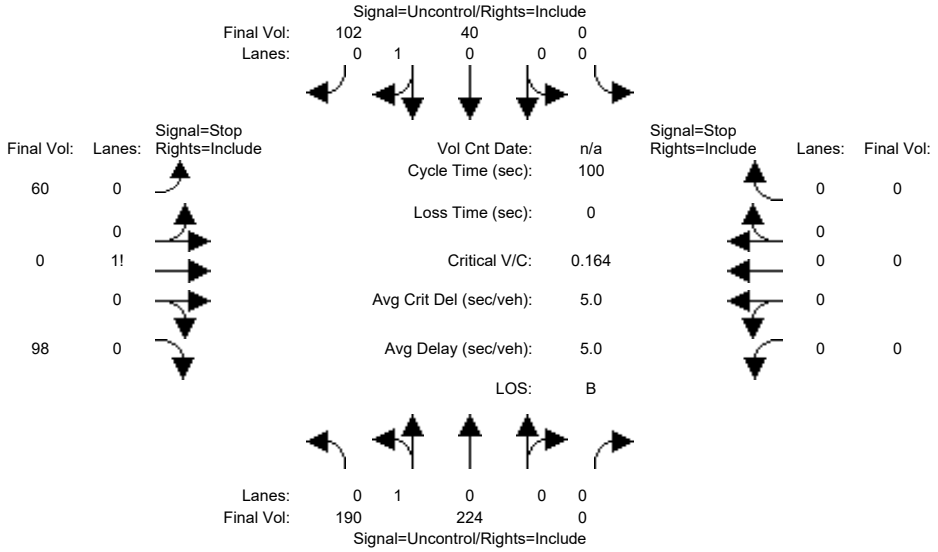


Street Name:	Lawrence Expwy						Kifer Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	9	85	85	27	103	103	16	33	33	22	39	39
Y+R:	5.9	6.2	6.2	6.1	6.2	6.2	5.8	5.5	5.5	5.9	5.5	5.5
Volume Module: >> Count Date: 7 Mar 2018 << 4:15 PM - 5:15 PM												
Base Vol:	77	1337	402	502	3673	113	323	574	708	339	207	339
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	1337	402	502	3673	113	323	574	708	339	207	339
Added Vol:	0	0	18	51	0	0	0	0	82	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	1337	420	553	3673	113	323	574	790	339	207	339
User Adj:	1.00	0.80	1.00	1.00	0.79	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	1070	420	553	2902	113	323	574	790	339	207	339
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	1070	420	553	2902	113	323	574	790	339	207	339
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	1070	420	553	2902	113	323	574	790	339	207	339
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1750	3150	1900	1750
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.24	0.18	0.51	0.06	0.10	0.15	0.45	0.11	0.11	0.19
Crit Moves:		****		****					****	****		
Green Time:	8.9	84.9	106.6	26.9	103	118.9	15.8	33.0	41.9	21.7	38.9	65.8
Volume/Cap:	0.52	0.42	0.43	1.24	0.94	0.10	1.23	0.87	2.05	0.94	0.53	0.56
Uniform Del:	88.5	35.8	24.1	81.5	40.5	14.2	87.1	76.4	74.1	83.5	67.4	50.3
IncremntDel:	3.4	0.1	0.3	125.8	6.5	0.0	133.2	12.0	480.2	32.8	0.5	0.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.03	1.54	1.85	1.11	1.79	2.11	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	94.7	55.2	44.9	216.3	79.0	30.1	220.3	88.4	554.3	116.3	68.0	51.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	94.7	55.2	44.9	216.3	79.0	30.1	220.3	88.4	554.3	116.3	68.0	51.1
LOS by Move:	F	E+	D	F	E-	C	F	F	F	F	E	D-
HCM2kAvgQ:	3	18	22	29	58	5	18	19	102	15	11	17

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	18	224	0	0	40	37	24	0	37	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	224	0	0	40	37	24	0	37	0	0	0
Added Vol:	172	0	0	0	0	65	36	0	61	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	190	224	0	0	40	102	60	0	98	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	190	224	0	0	40	102	60	0	98	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	190	224	0	0	40	102	60	0	98	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	142	xxxx	xxxxx	xxxx	xxxx	xxxxx	695	695	91	xxxx	xxxx	xxxxx
Potent Cap.:	1453	xxxx	xxxxx	xxxx	xxxx	xxxxx	411	368	972	xxxx	xxxx	xxxxx
Move Cap.:	1453	xxxx	xxxxx	xxxx	xxxx	xxxxx	365	314	972	xxxx	xxxx	xxxxx
Volume/Cap:	0.13	xxxx	xxxx	xxxx	xxxx	xxxx	0.16	0.00	0.10	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	596	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.2			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	190	224	0	0	40	102	60	0	98	0	0	0
ApproachDel:	xxxxxx			xxxxxx			13.2			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=158]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=714]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	190	224	0	0	40	102	60	0	98	0	0	0

Major Street Volume: 556
Minor Approach Volume: 158
Minor Approach Volume Threshold: 376

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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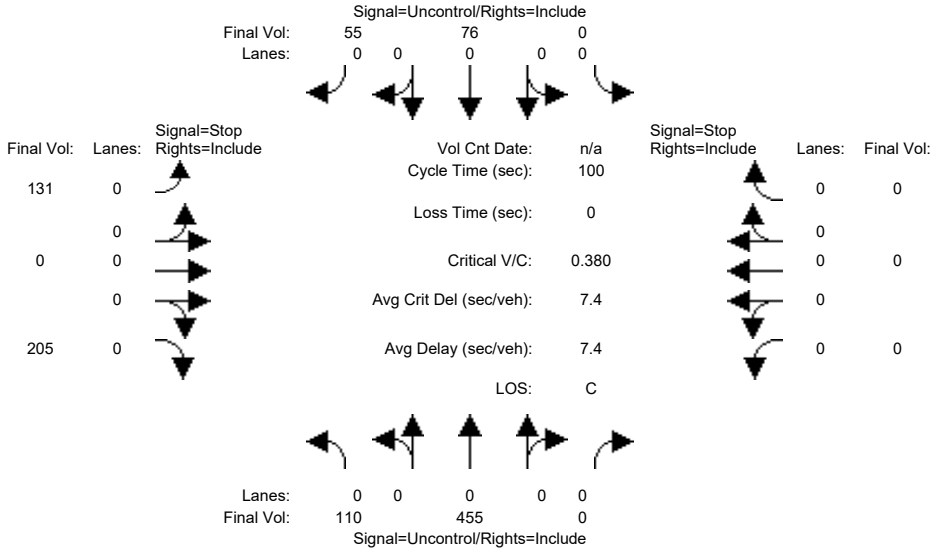
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	41	455	0	0	76	27	49	0	56	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	455	0	0	76	27	49	0	56	0	0	0
Added Vol:	69	0	0	0	0	28	82	0	149	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	110	455	0	0	76	55	131	0	205	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	110	455	0	0	76	55	131	0	205	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	110	455	0	0	76	55	131	0	205	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	131	xxxx	xxxxx	xxxx	xxxx	xxxxx	779	779	104	xxxx	xxxx	xxxxx
Potent Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	367	330	957	xxxx	xxxx	xxxxx
Move Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	345	303	957	xxxx	xxxx	xxxxx
Volume/Cap:	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	0.38	0.00	0.21	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	566	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	3.9	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	C	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			20.2			xxxxxx		
ApproachLOS:	*			*			C			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

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Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	110	455	0	0	76	55	131	0	205	0	0	0
ApproachDel:	xxxxxx			xxxxxx			20.2			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=336]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1032]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	110	455	0	0	76	55	131	0	205	0	0	0

Major Street Volume: 696
Minor Approach Volume: 336
Minor Approach Volume Threshold: 316

SIGNAL WARRANT DISCLAIMER
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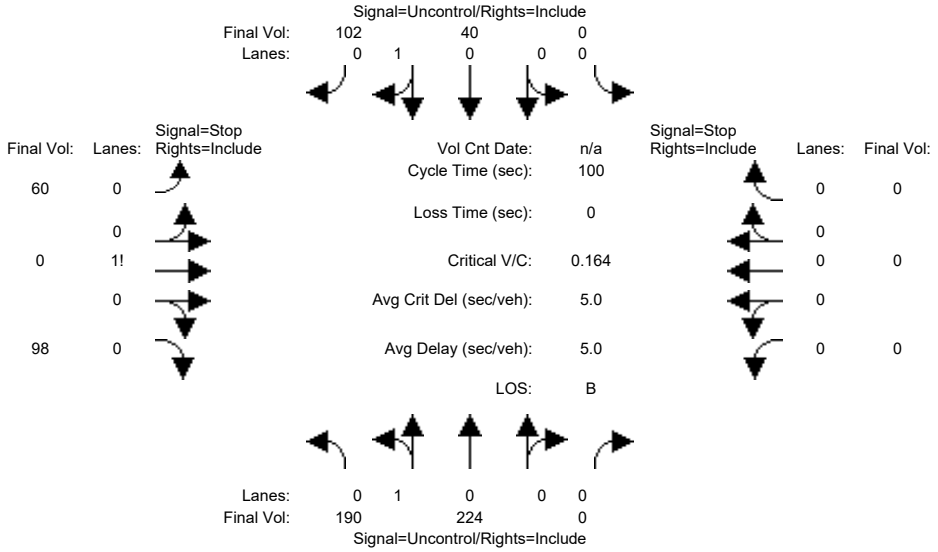
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	18	224	0	0	40	37	24	0	37	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	18	224	0	0	40	37	24	0	37	0	0	0
Added Vol:	172	0	0	0	0	65	36	0	61	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	190	224	0	0	40	102	60	0	98	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	190	224	0	0	40	102	60	0	98	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	190	224	0	0	40	102	60	0	98	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	142	xxxx	xxxxx	xxxx	xxxx	xxxxx	695	695	91	xxxx	xxxx	xxxxx
Potent Cap.:	1453	xxxx	xxxxx	xxxx	xxxx	xxxxx	411	368	972	xxxx	xxxx	xxxxx
Move Cap.:	1453	xxxx	xxxxx	xxxx	xxxx	xxxxx	365	314	972	xxxx	xxxx	xxxxx
Volume/Cap:	0.13	xxxx	xxxx	xxxx	xxxx	xxxx	0.16	0.00	0.10	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	596	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			13.2			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	190	224	0	0	40	102	60	0	98	0	0	0
ApproachDel:	xxxxxx			xxxxxx			13.2			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=158]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=714]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	190	224	0	0	40	102	60	0	98	0	0	0

Major Street Volume: 556
Minor Approach Volume: 158
Minor Approach Volume Threshold: 376

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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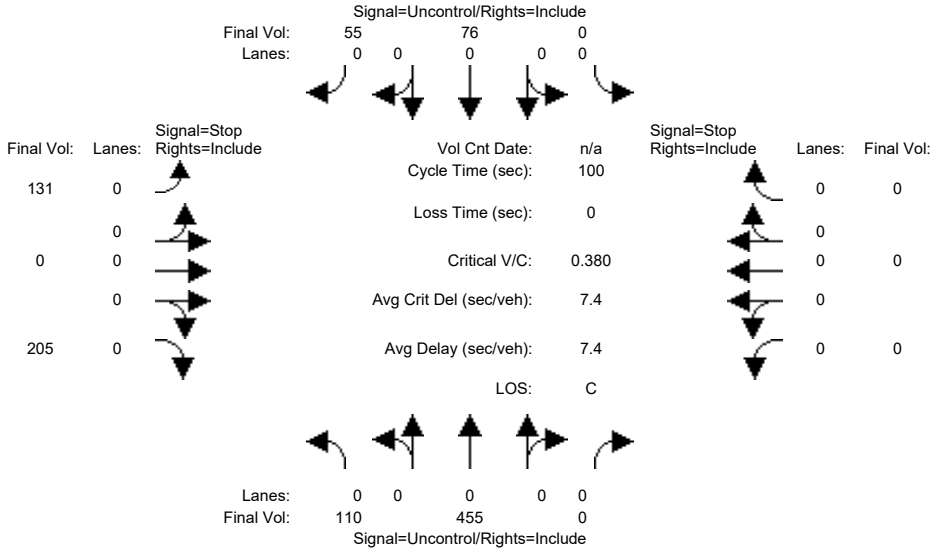
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #8: San Zeno Way & Sonora Court



Street Name:	San Zeno Way						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	41	455	0	0	76	27	49	0	56	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	455	0	0	76	27	49	0	56	0	0	0
Added Vol:	69	0	0	0	0	28	82	0	149	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	110	455	0	0	76	55	131	0	205	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	110	455	0	0	76	55	131	0	205	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	110	455	0	0	76	55	131	0	205	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	131	xxxx	xxxxx	xxxx	xxxx	xxxxx	779	779	104	xxxx	xxxx	xxxxx
Potent Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	367	330	957	xxxx	xxxx	xxxxx
Move Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	345	303	957	xxxx	xxxx	xxxxx
Volume/Cap:	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	0.38	0.00	0.21	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	566	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	3.9	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	C	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			20.2			xxxxxx		
ApproachLOS:	*			*			C			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	110	455	0	0	76	55	131	0	205	0	0	0
ApproachDel:	xxxxxx			xxxxxx			20.2			xxxxxx		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.9]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=336]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1032]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #8 San Zeno Way & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Initial Vol:	110	455	0	0	76	55	131	0	205	0	0	0

Major Street Volume: 696
Minor Approach Volume: 336
Minor Approach Volume Threshold: 316

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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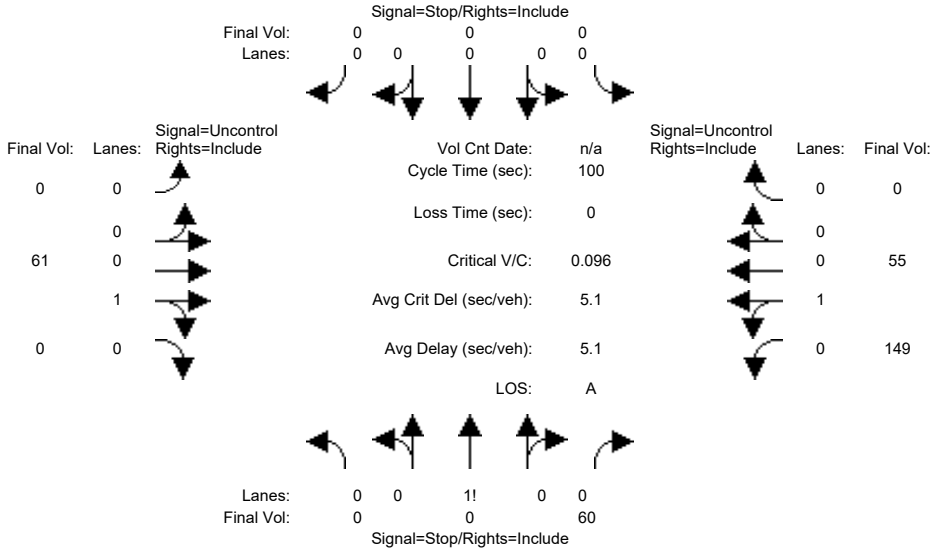
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #9: 1154 Sonora Court Dwy & Sonora Court



Street Name:	1154 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	61	0	0	55	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	61	0	0	55	0
Added Vol:	0	0	60	0	0	0	0	0	0	149	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	60	0	0	0	0	61	0	149	55	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	60	0	0	0	0	61	0	149	55	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	60	0	0	0	0	61	0	149	55	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	61	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	61	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	1010	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	1010	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	8.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	8.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 1154 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  1  0  0    0  1  0  0  0
Initial Vol:    0    0    60     0    0     0     0   61     0   149   55     0
ApproachDel:       8.8           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=60]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=325]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
              Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #9 1154 Sonora Court Dwy & Sonora Court
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  1  0  0    0  1  0  0  0
Initial Vol:    0    0    60     0    0     0     0   61     0   149   55     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             265
Minor Approach Volume:           60
Minor Approach Volume Threshold: 574
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```
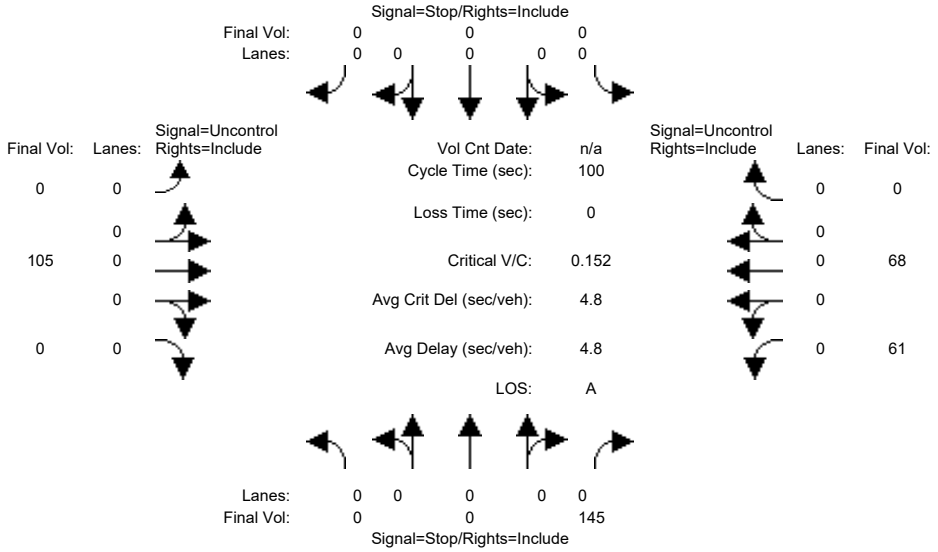

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #9: 1154 Sonora Court Dwy & Sonora Court



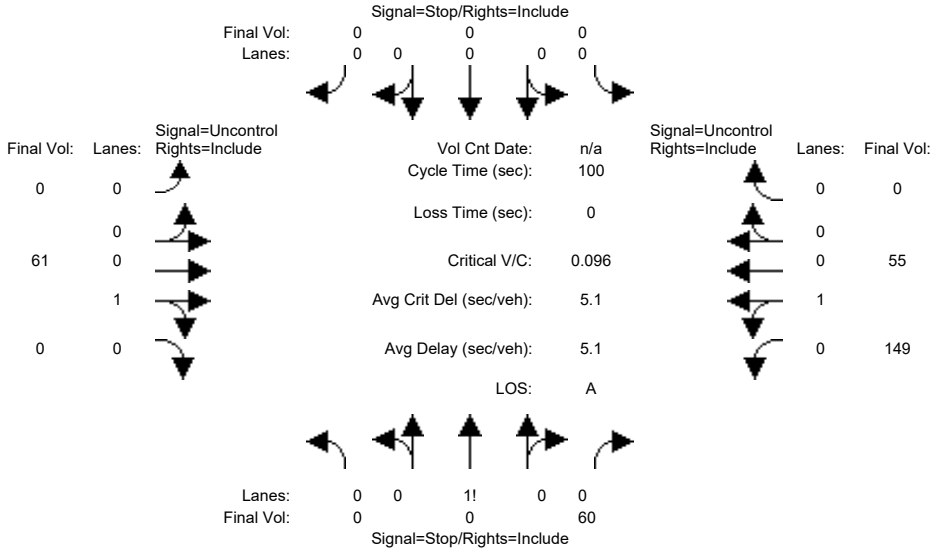

```
Street Name:      1154 Sonora Court Dwy                Sonora Court
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0  105     0     0   68     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0  105     0     0   68     0
Added Vol:      0    0   145     0    0     0     0    0     0    61    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0   145     0    0     0     0  105     0    61   68     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0   145     0    0     0     0  105     0    61   68     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0   145     0    0     0     0  105     0    61   68     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   105  xxxx xxxx xxxxx  xxxx xxxx xxxxx   105 xxxx xxxxx
Potent Cap.: xxxx xxxx   955  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1499 xxxx xxxxx
Move Cap.:   xxxx xxxx   955  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1499 xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.15  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.04 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.5  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx   9.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx
LOS by Move:    *    *     A     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.1 xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     A    *     *
ApproachDel:       9.4           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         A                *                *                *
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #9 1154 Sonora Court Dwy & Sonora Court
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```



```
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  1  0  0    0  1  0  0  0
Initial Vol:    0    0   145     0    0     0     0  105     0    61   68     0
ApproachDel:       9.4           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=145]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=379]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
              Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #9 1154 Sonora Court Dwy & Sonora Court
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  1    0  0  0  0  0    0  0  1  0  0    0  1  0  0  0
Initial Vol:    0    0   145     0    0     0     0  105     0    61   68     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             234
Minor Approach Volume:           145
Minor Approach Volume Threshold: 607
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #9: 1154 Sonora Court Dwy & Sonora Court



Street Name:	1154 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	61	0	0	55	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	61	0	0	55	0
Added Vol:	0	0	60	0	0	0	0	0	0	149	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	60	0	0	0	0	61	0	149	55	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	60	0	0	0	0	61	0	149	55	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	60	0	0	0	0	61	0	149	55	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	61	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	61	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	1010	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	1010	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1555	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.10	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	8.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:		8.8			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 1154 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	60	0	0	0	0	61	0	149	55	0
ApproachDel:	8.8			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=325]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 1154 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	60	0	0	0	0	61	0	149	55	0

Major Street Volume: 265
Minor Approach Volume: 60
Minor Approach Volume Threshold: 574

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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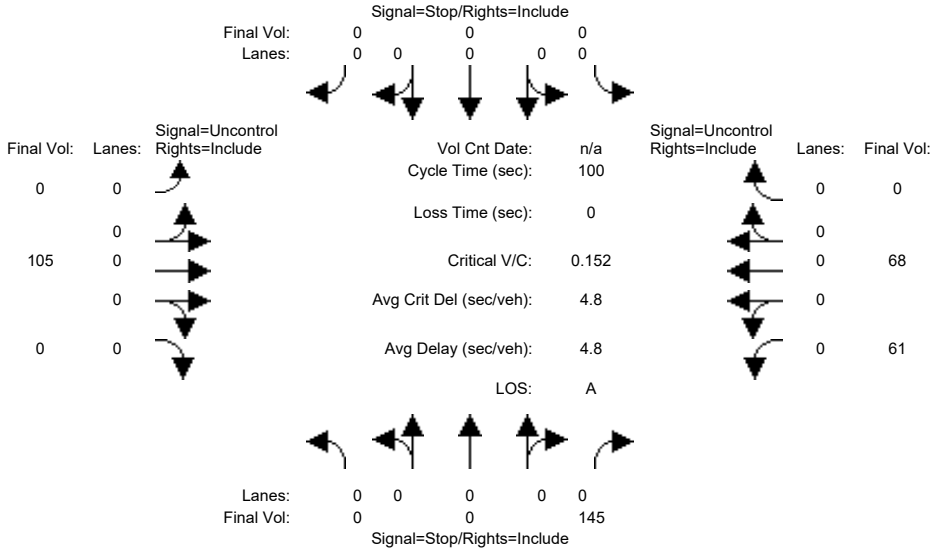
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #9: 1154 Sonora Court Dwy & Sonora Court



Street Name:	1154 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	105	0	0	68	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	105	0	0	68	0
Added Vol:	0	0	145	0	0	0	0	0	0	61	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	145	0	0	0	0	105	0	61	68	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	145	0	0	0	0	105	0	61	68	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	145	0	0	0	0	105	0	61	68	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	105	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	105	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	955	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1499	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	955	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1499	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.15	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.5	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	9.4			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #9 1154 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	145	0	0	0	0	105	0	61	68	0
ApproachDel:	9.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=145]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=379]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #9 1154 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	145	0	0	0	0	105	0	61	68	0

Major Street Volume: 234
Minor Approach Volume: 145
Minor Approach Volume Threshold: 607

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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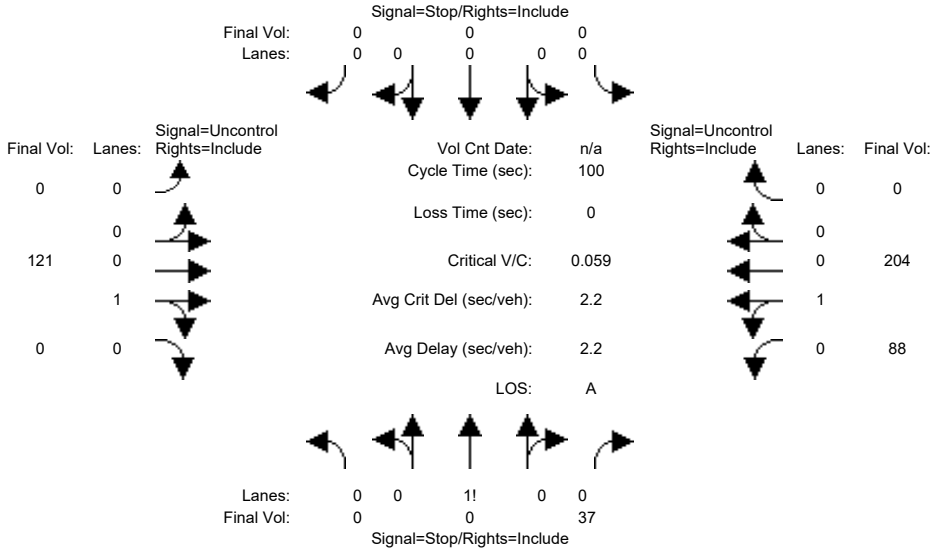
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #10: 1170 Sonora Court Dwy & Sonora Court



Street Name:	1170 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	61	0	0	55	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	61	0	0	55	0
Added Vol:	0	0	37	0	0	0	0	60	0	88	149	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	0	0	0	0	121	0	88	204	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	0	0	0	0	121	0	88	204	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	37	0	0	0	0	121	0	88	204	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	121	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	121	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1479	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1479	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	9.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	1	0	0 0
Initial Vol:	0	0	37		0	0	0		0	121	0		88	204	0	
ApproachDel:	9.0				xxxxxx				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=37]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=450]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	1	0	0 0
Initial Vol:	0	0	37		0	0	0		0	121	0		88	204	0	

Major Street Volume: 413
Minor Approach Volume: 37
Minor Approach Volume Threshold: 455

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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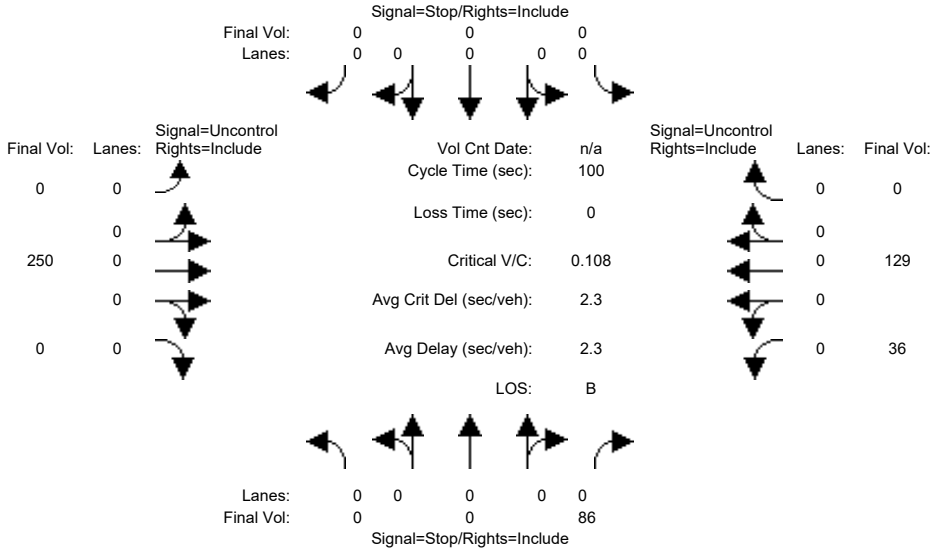
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #10: 1170 Sonora Court Dwy & Sonora Court



Street Name:	1170 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	105	0	0	68	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	105	0	0	68	0
Added Vol:	0	0	86	0	0	0	0	145	0	36	61	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	86	0	0	0	0	250	0	36	129	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	86	0	0	0	0	250	0	36	129	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	86	0	0	0	0	250	0	36	129	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	250	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	250	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	794	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1327	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	794	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1327	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	1	0	0 0
Initial Vol:	0	0	86		0	0	0		0	250	0		36	129	0	
ApproachDel:	10.1				xxxxxx				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=501]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	1	0 0	0	1	0	0 0
Initial Vol:	0	0	86		0	0	0		0	250	0		36	129	0	

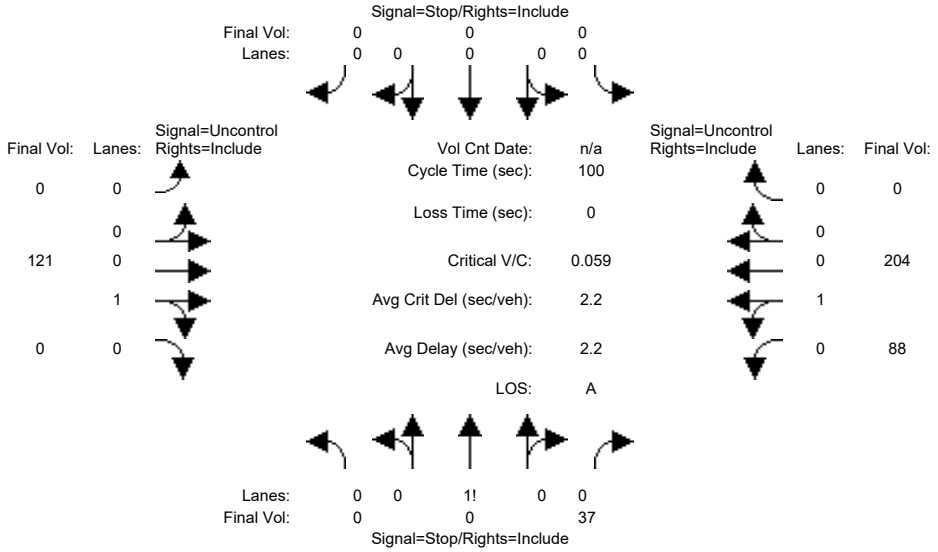
Major Street Volume: 415
Minor Approach Volume: 86
Minor Approach Volume Threshold: 454

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project AM

Intersection #10: 1170 Sonora Court Dwy & Sonora Court



Street Name:	1170 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	61	0	0	55	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	61	0	0	55	0
Added Vol:	0	0	37	0	0	0	0	60	0	88	149	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	0	0	0	0	121	0	88	204	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	0	0	0	0	121	0	88	204	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	37	0	0	0	0	121	0	88	204	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	121	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	121	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1479	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	936	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1479	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	9.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	37	0	0	0	0	121	0	88	204	0
ApproachDel:	9.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=37]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=450]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	37	0	0	0	0	121	0	88	204	0

Major Street Volume: 413
Minor Approach Volume: 37
Minor Approach Volume Threshold: 455

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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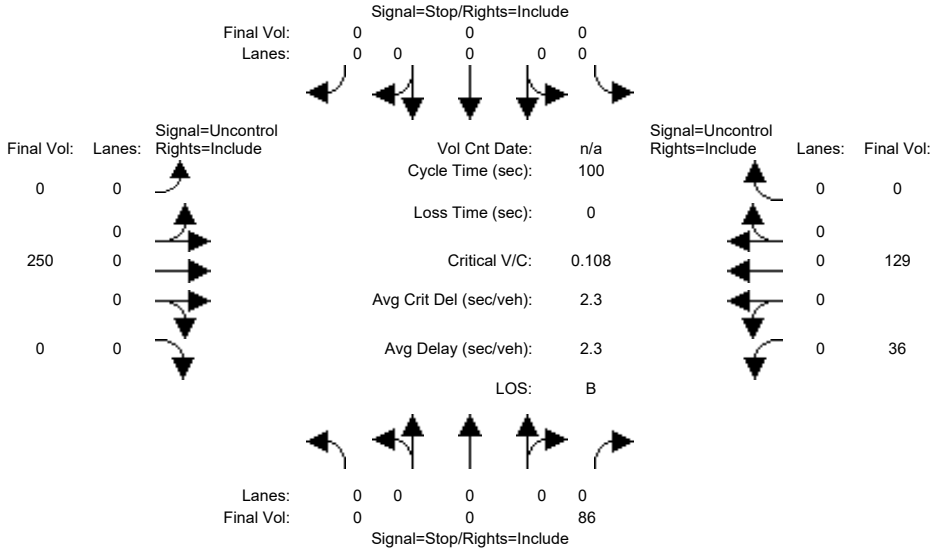
Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background + Project PM

Intersection #10: 1170 Sonora Court Dwy & Sonora Court



Street Name:	1170 Sonora Court Dwy						Sonora Court					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	105	0	0	68	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	105	0	0	68	0
Added Vol:	0	0	86	0	0	0	0	145	0	36	61	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	86	0	0	0	0	250	0	36	129	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	86	0	0	0	0	250	0	36	129	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	86	0	0	0	0	250	0	36	129	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	250	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	250	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	794	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1327	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	794	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1327	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.11	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.4	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	86	0	0	0	0	250	0	36	129	0
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=86]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=501]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #10 1170 Sonora Court Dwy & Sonora Court

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 1 0 0			0 1 0 0 0		
Initial Vol:	0	0	86	0	0	0	0	250	0	36	129	0

Major Street Volume: 415
Minor Approach Volume: 86
Minor Approach Volume Threshold: 454

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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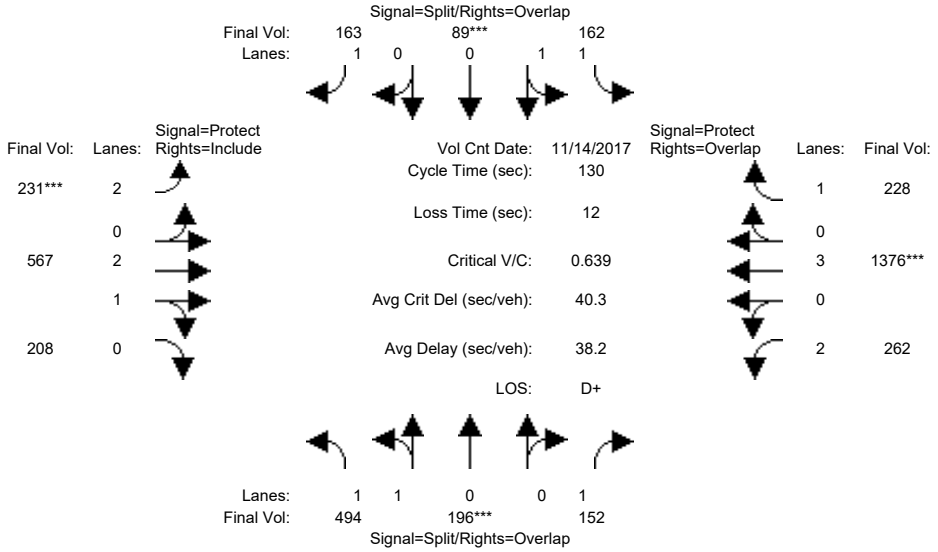
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

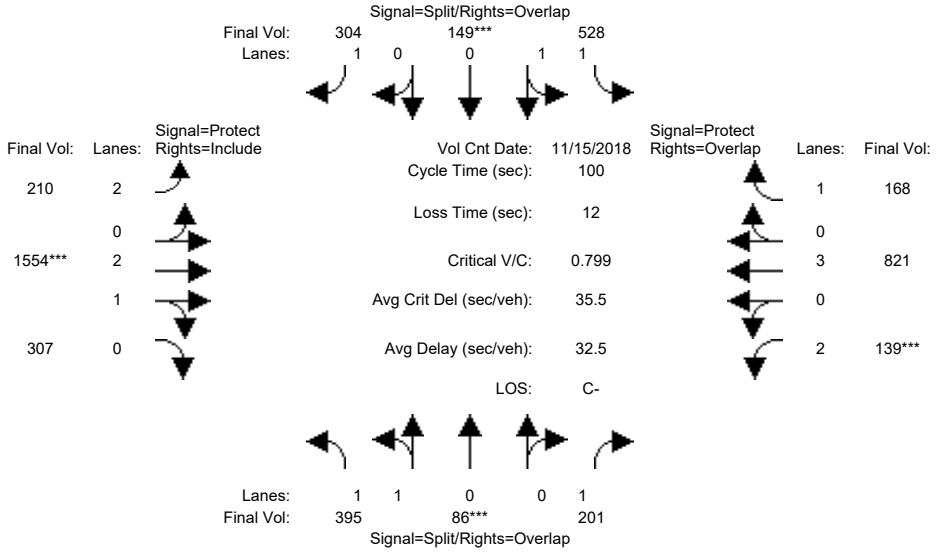


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Nov 2017 << 7:45 AM - 8:45 AM												
Base Vol:	494	166	152	157	78	163	231	567	208	262	1376	216
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	494	166	152	157	78	163	231	567	208	262	1376	216
Added Vol:	0	30	0	5	11	0	0	0	0	0	0	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	494	196	152	162	89	163	231	567	208	262	1376	228
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	494	196	152	162	89	163	231	567	208	262	1376	228
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	494	196	152	162	89	163	231	567	208	262	1376	228
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	494	196	152	162	89	163	231	567	208	262	1376	228
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	1.00	0.95	0.83	1.00	0.92
Lanes:	1.44	0.56	1.00	1.30	0.70	1.00	2.00	2.17	0.83	2.00	3.00	1.00
Final Sat.:	2541	1008	1750	2291	1259	1750	3150	4095	1502	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.09	0.07	0.07	0.09	0.07	0.14	0.14	0.08	0.24	0.13
Crit Moves:		****			****		****				****	
Green Time:	39.6	39.6	63.6	14.4	14.4	29.3	14.9	40.0	40.0	24.0	49.1	63.5
Volume/Cap:	0.64	0.64	0.18	0.64	0.64	0.41	0.64	0.45	0.45	0.45	0.64	0.27
Uniform Del:	39.1	39.1	18.6	55.3	55.3	43.0	55.0	36.1	36.1	47.1	33.2	19.5
IncremntDel:	1.3	1.3	0.1	3.5	3.5	0.7	3.8	0.2	0.2	0.6	0.7	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.3	40.3	18.7	58.8	58.8	43.7	58.8	36.3	36.3	47.7	33.8	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.3	40.3	18.7	58.8	58.8	43.7	58.8	36.3	36.3	47.7	33.8	19.7
LOS by Move:	D	D	B-	E+	E+	D	E+	D+	D+	D	C-	B-
HCM2kAvgQ:	13	13	4	5	5	6	5	8	8	5	15	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

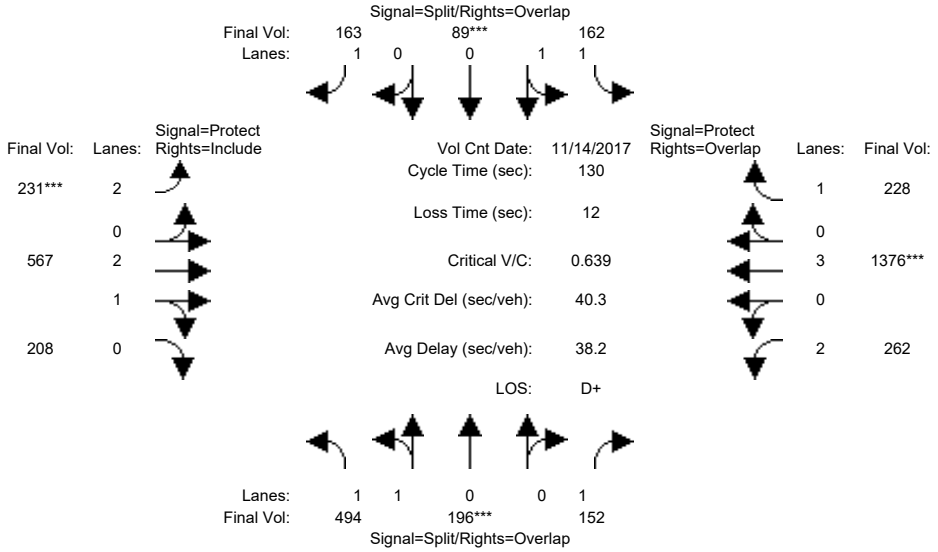


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	395	75	201	516	120	304	210	1554	307	139	821	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	75	201	516	120	304	210	1554	307	139	821	163
Added Vol:	0	11	0	12	29	0	0	0	0	0	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	86	201	528	149	304	210	1554	307	139	821	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	86	201	528	149	304	210	1554	307	139	821	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	86	201	528	149	304	210	1554	307	139	821	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	86	201	528	149	304	210	1554	307	139	821	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	0.99	0.95	0.83	1.00	0.92
Lanes:	1.65	0.35	1.00	1.57	0.43	1.00	2.00	2.49	0.51	2.00	3.00	1.00
Final Sat.:	2915	635	1750	2769	781	1750	3150	4675	924	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.11	0.19	0.19	0.17	0.07	0.33	0.33	0.04	0.14	0.10
Crit Moves:		****			****			****			****	
Green Time:	16.7	16.7	23.7	23.5	23.5	39.1	15.7	40.9	40.9	7.0	32.2	55.7
Volume/Cap:	0.81	0.81	0.49	0.81	0.81	0.44	0.43	0.81	0.81	0.63	0.45	0.17
Uniform Del:	40.2	40.2	32.9	36.2	36.2	22.4	38.1	26.2	26.2	45.2	26.8	10.9
IncremntDel:	8.4	8.4	0.9	6.1	6.1	0.5	0.6	2.3	2.3	5.8	0.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.6	48.6	33.8	42.3	42.3	22.9	38.7	28.5	28.5	51.0	27.0	11.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.6	48.6	33.8	42.3	42.3	22.9	38.7	28.5	28.5	51.0	27.0	11.0
LOS by Move:	D	D	C-	D	D	C+	D+	C	C	D-	C	B+
HCM2kAvgQ:	10	10	6	10	10	7	3	18	18	3	6	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

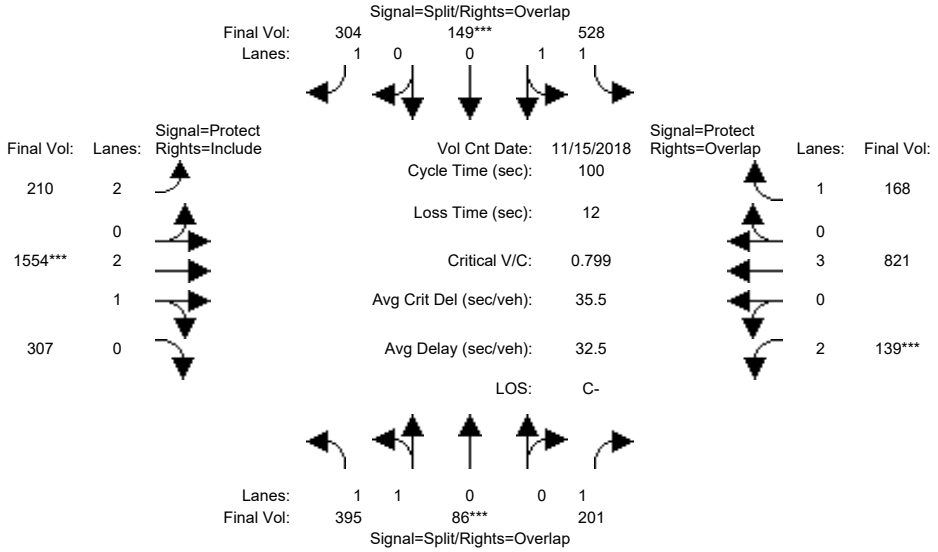


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Nov 2017 << 7:45 AM - 8:45 AM												
Base Vol:	494	166	152	157	78	163	231	567	208	262	1376	216
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	494	166	152	157	78	163	231	567	208	262	1376	216
Added Vol:	0	30	0	5	11	0	0	0	0	0	0	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	494	196	152	162	89	163	231	567	208	262	1376	228
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	494	196	152	162	89	163	231	567	208	262	1376	228
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	494	196	152	162	89	163	231	567	208	262	1376	228
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	494	196	152	162	89	163	231	567	208	262	1376	228
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	1.00	0.95	0.83	1.00	0.92
Lanes:	1.44	0.56	1.00	1.30	0.70	1.00	2.00	2.17	0.83	2.00	3.00	1.00
Final Sat.:	2541	1008	1750	2291	1259	1750	3150	4095	1502	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.19	0.19	0.09	0.07	0.07	0.09	0.07	0.14	0.14	0.08	0.24	0.13
Crit Moves:		****			****		****				****	
Green Time:	39.6	39.6	63.6	14.4	14.4	29.3	14.9	40.0	40.0	24.0	49.1	63.5
Volume/Cap:	0.64	0.64	0.18	0.64	0.64	0.41	0.64	0.45	0.45	0.45	0.64	0.27
Uniform Del:	39.1	39.1	18.6	55.3	55.3	43.0	55.0	36.1	36.1	47.1	33.2	19.5
IncremntDel:	1.3	1.3	0.1	3.5	3.5	0.7	3.8	0.2	0.2	0.6	0.7	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	40.3	40.3	18.7	58.8	58.8	43.7	58.8	36.3	36.3	47.7	33.8	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.3	40.3	18.7	58.8	58.8	43.7	58.8	36.3	36.3	47.7	33.8	19.7
LOS by Move:	D	D	B-	E+	E+	D	E+	D+	D+	D	C-	B-
HCM2kAvgQ:	13	13	4	5	5	6	5	8	8	5	15	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #1214: LAWRENCE RAMPS / EL CAMINO REAL

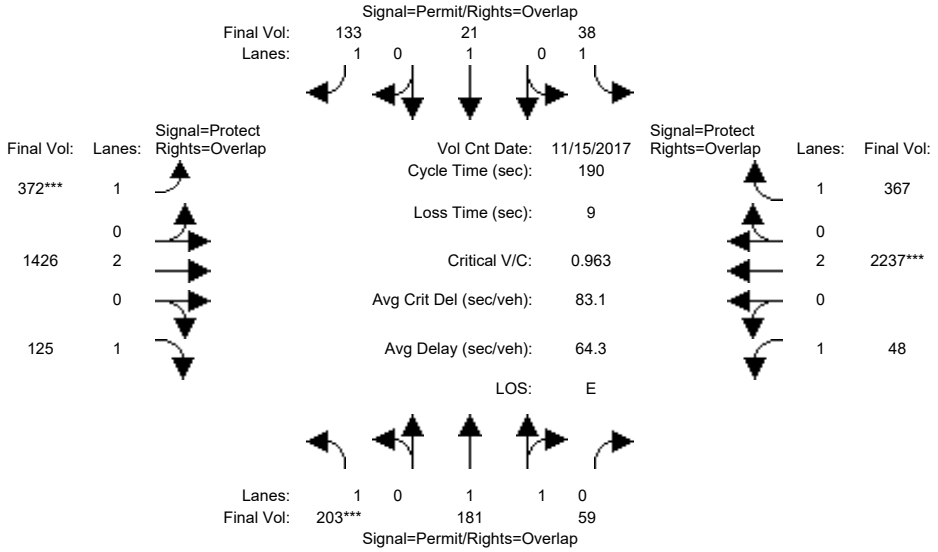


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 15 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	395	75	201	516	120	304	210	1554	307	139	821	163
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	395	75	201	516	120	304	210	1554	307	139	821	163
Added Vol:	0	11	0	12	29	0	0	0	0	0	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	395	86	201	528	149	304	210	1554	307	139	821	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	395	86	201	528	149	304	210	1554	307	139	821	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	395	86	201	528	149	304	210	1554	307	139	821	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	395	86	201	528	149	304	210	1554	307	139	821	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.92	0.93	0.95	0.92	0.83	0.99	0.95	0.83	1.00	0.92
Lanes:	1.65	0.35	1.00	1.57	0.43	1.00	2.00	2.49	0.51	2.00	3.00	1.00
Final Sat.:	2915	635	1750	2769	781	1750	3150	4675	924	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.11	0.19	0.19	0.17	0.07	0.33	0.33	0.04	0.14	0.10
Crit Moves:		****			****			****			****	
Green Time:	16.7	16.7	23.7	23.5	23.5	39.1	15.7	40.9	40.9	7.0	32.2	55.7
Volume/Cap:	0.81	0.81	0.49	0.81	0.81	0.44	0.43	0.81	0.81	0.63	0.45	0.17
Uniform Del:	40.2	40.2	32.9	36.2	36.2	22.4	38.1	26.2	26.2	45.2	26.8	10.9
IncremntDel:	8.4	8.4	0.9	6.1	6.1	0.5	0.6	2.3	2.3	5.8	0.2	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.6	48.6	33.8	42.3	42.3	22.9	38.7	28.5	28.5	51.0	27.0	11.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.6	48.6	33.8	42.3	42.3	22.9	38.7	28.5	28.5	51.0	27.0	11.0
LOS by Move:	D	D	C-	D	D	C+	D+	C	C	D-	C	B+
HCM2kAvgQ:	10	10	6	10	10	7	3	18	18	3	6	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

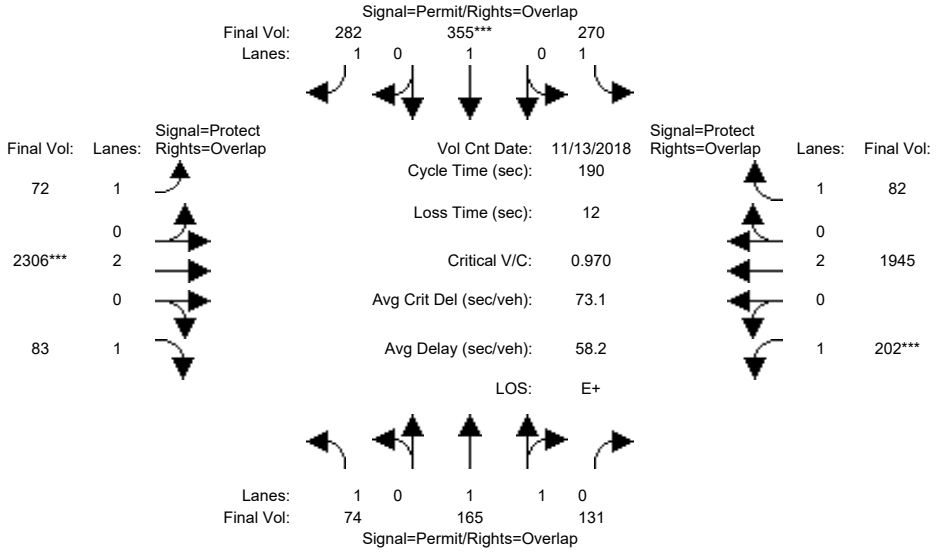


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	29	29	29	30	30	30	31	124	124	20	113	113
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 15 Nov 2017 << 8:00 AM - 9:00 AM												
Base Vol:	193	134	54	38	21	133	372	1426	125	48	2215	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	134	54	38	21	133	372	1426	125	48	2215	367
Added Vol:	10	47	5	0	0	0	0	0	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	203	181	59	38	21	133	372	1426	125	48	2237	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	181	59	38	21	133	372	1426	125	48	2237	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	181	59	38	21	133	372	1426	125	48	2237	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	203	181	59	38	21	133	372	1426	125	48	2237	367
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.49	0.51	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2790	909	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.06	0.06	0.02	0.01	0.08	0.21	0.38	0.07	0.03	0.59	0.21
Crit Moves:	****						****				****	
Green Time:	29.3	29.3	49.2	29.5	29.5	60.5	31.0	124	123.8	19.9	113	112.8
Volume/Cap:	0.75	0.42	0.25	0.14	0.07	0.24	1.30	0.58	0.11	0.26	0.99	0.35
Uniform Del:	76.9	72.7	55.8	69.3	68.5	47.8	79.5	18.5	12.4	78.3	38.1	19.8
IncremntDel:	11.3	0.5	0.1	0.2	0.1	0.2	159.3	0.3	0.0	0.8	16.9	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.13	2.25	2.25	1.00	1.00	1.00
Delay/Veh:	88.2	73.2	55.9	69.5	68.6	48.0	249.2	41.8	27.9	79.1	55.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.2	73.2	55.9	69.5	68.6	48.0	249.2	41.8	27.9	79.1	55.1	20.1
LOS by Move:	F	E	E+	E	E	D	F	D	C	E-	E+	C+
HCM2kAvgQ:	12	6	5	2	1	6	36	35	6	3	67	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

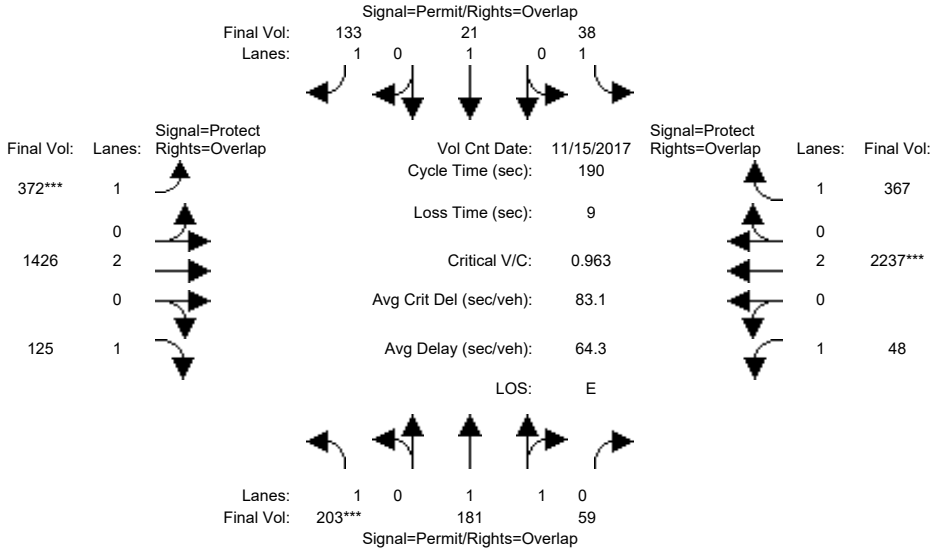


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	36	36	36	37	37	37	9	124	124	13	128	128
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	51	63	111	270	355	282	72	2306	83	202	1940	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	63	111	270	355	282	72	2306	83	202	1940	82
Added Vol:	23	102	20	0	0	0	0	0	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	74	165	131	270	355	282	72	2306	83	202	1945	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	74	165	131	270	355	282	72	2306	83	202	1945	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	165	131	270	355	282	72	2306	83	202	1945	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	165	131	270	355	282	72	2306	83	202	1945	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.09	0.91	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2061	1637	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.08	0.15	0.19	0.16	0.04	0.61	0.05	0.12	0.51	0.05
Crit Moves:					****			****		****		
Green Time:	37.0	37.0	54.0	37.0	37.0	46.3	9.3	124	124.0	17.0	132	131.7
Volume/Cap:	0.22	0.41	0.28	0.79	0.96	0.66	0.84	0.93	0.07	1.29	0.74	0.07
Uniform Del:	64.3	67.0	52.9	72.8	75.8	64.8	89.7	29.2	12.0	86.5	18.3	9.4
IncremntDel:	0.3	0.4	0.1	12.0	36.1	3.9	50.0	7.0	0.0	169.8	1.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	1.51	1.00	1.63	1.63
Delay/Veh:	64.6	67.3	53.1	84.8	112	68.7	139.7	51.1	18.2	256.3	31.0	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.6	67.3	53.1	84.8	112	68.7	139.7	51.1	18.2	256.3	31.0	15.3
LOS by Move:	E	E	D-	F	F	E	F	D-	B-	F	C	B
HCM2kAvgQ:	4	7	7	16	22	16	6	65	3	19	45	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

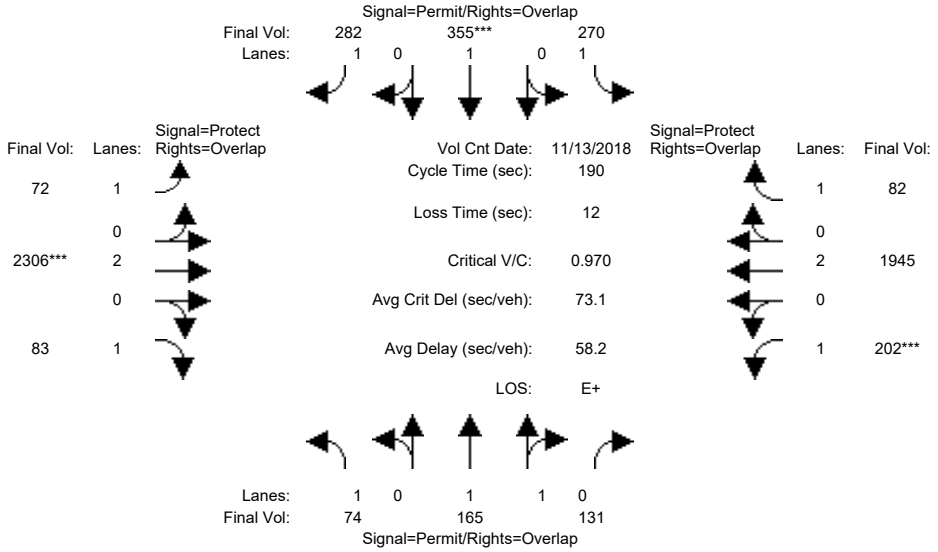


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	29	29	29	30	30	30	31	124	124	20	113	113
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 15 Nov 2017 << 8:00 AM - 9:00 AM												
Base Vol:	193	134	54	38	21	133	372	1426	125	48	2215	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	193	134	54	38	21	133	372	1426	125	48	2215	367
Added Vol:	10	47	5	0	0	0	0	0	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	203	181	59	38	21	133	372	1426	125	48	2237	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	203	181	59	38	21	133	372	1426	125	48	2237	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	203	181	59	38	21	133	372	1426	125	48	2237	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	203	181	59	38	21	133	372	1426	125	48	2237	367
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.49	0.51	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2790	909	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.12	0.06	0.06	0.02	0.01	0.08	0.21	0.38	0.07	0.03	0.59	0.21
Crit Moves:	****						****				****	
Green Time:	29.3	29.3	49.2	29.5	29.5	60.5	31.0	124	123.8	19.9	113	112.8
Volume/Cap:	0.75	0.42	0.25	0.14	0.07	0.24	1.30	0.58	0.11	0.26	0.99	0.35
Uniform Del:	76.9	72.7	55.8	69.3	68.5	47.8	79.5	18.5	12.4	78.3	38.1	19.8
IncremntDel:	11.3	0.5	0.1	0.2	0.1	0.2	159.3	0.3	0.0	0.8	16.9	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.13	2.25	2.25	1.00	1.00	1.00
Delay/Veh:	88.2	73.2	55.9	69.5	68.6	48.0	249.2	41.8	27.9	79.1	55.1	20.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	88.2	73.2	55.9	69.5	68.6	48.0	249.2	41.8	27.9	79.1	55.1	20.1
LOS by Move:	F	E	E+	E	E	D	F	D	C	E-	E+	C+
HCM2kAvgQ:	12	6	5	2	1	6	36	35	6	3	67	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5325: CENTRAL EXPWY/CORVIN DR-OAKMEAD PKWY

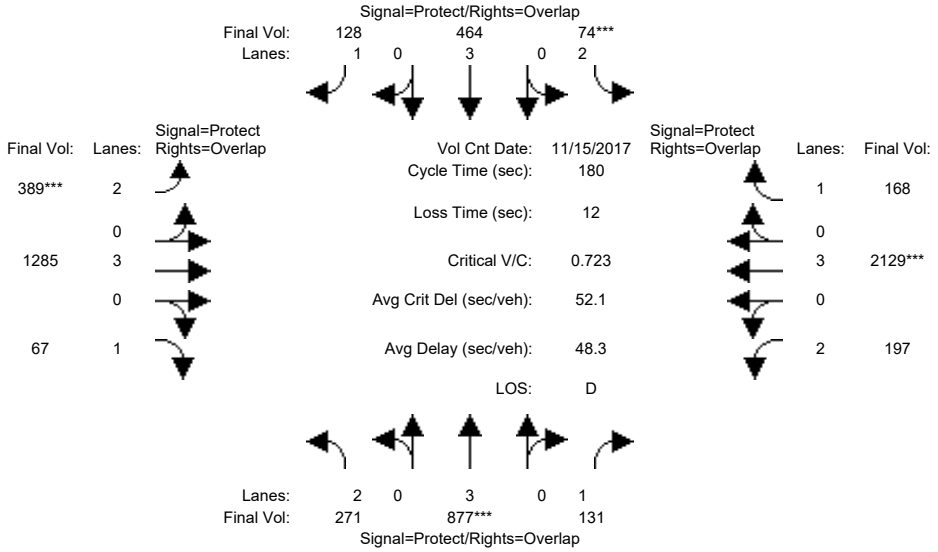


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	36	36	36	37	37	37	9	124	124	13	128	128
Y+R:	5.7	5.7	5.7	5.5	5.5	5.5	5.0	6.2	6.2	5.1	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	51	63	111	270	355	282	72	2306	83	202	1940	82
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	63	111	270	355	282	72	2306	83	202	1940	82
Added Vol:	23	102	20	0	0	0	0	0	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	74	165	131	270	355	282	72	2306	83	202	1945	82
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	74	165	131	270	355	282	72	2306	83	202	1945	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	165	131	270	355	282	72	2306	83	202	1945	82
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	165	131	270	355	282	72	2306	83	202	1945	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	1.09	0.91	1.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1750	2061	1637	1750	1900	1750	1750	3800	1750	1750	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.08	0.15	0.19	0.16	0.04	0.61	0.05	0.12	0.51	0.05
Crit Moves:					****			****		****		
Green Time:	37.0	37.0	54.0	37.0	37.0	46.3	9.3	124	124.0	17.0	132	131.7
Volume/Cap:	0.22	0.41	0.28	0.79	0.96	0.66	0.84	0.93	0.07	1.29	0.74	0.07
Uniform Del:	64.3	67.0	52.9	72.8	75.8	64.8	89.7	29.2	12.0	86.5	18.3	9.4
IncremntDel:	0.3	0.4	0.1	12.0	36.1	3.9	50.0	7.0	0.0	169.8	1.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.51	1.51	1.00	1.63	1.63
Delay/Veh:	64.6	67.3	53.1	84.8	112	68.7	139.7	51.1	18.2	256.3	31.0	15.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.6	67.3	53.1	84.8	112	68.7	139.7	51.1	18.2	256.3	31.0	15.3
LOS by Move:	E	E	D-	F	F	E	F	D-	B-	F	C	B
HCM2kAvgQ:	4	7	7	16	22	16	6	65	3	19	45	3

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

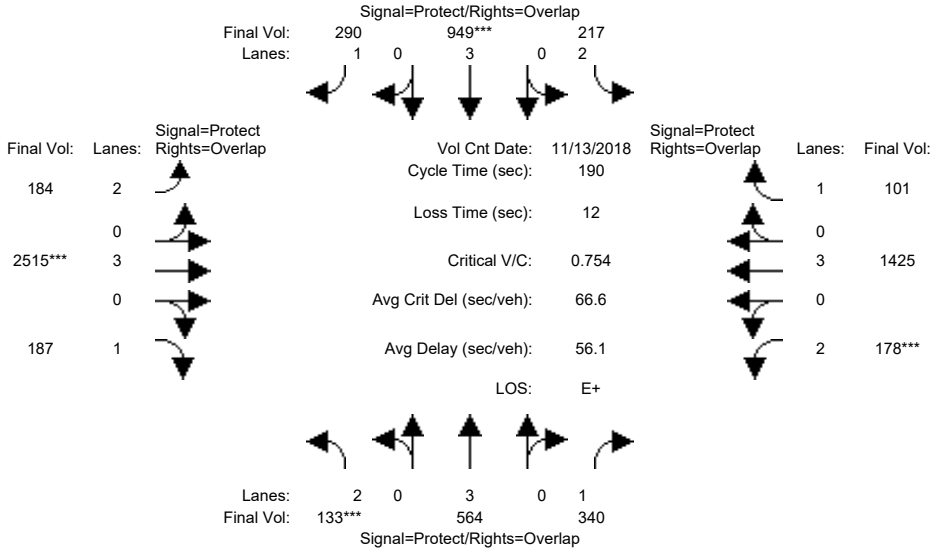


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	10	10	14	10	10	14	78	78	14	85	85
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 15 Nov 2017 << 8:00 AM - 9:00 AM												
Base Vol:	271	877	131	74	464	128	389	1280	67	197	2107	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	271	877	131	74	464	128	389	1280	67	197	2107	168
Added Vol:	0	0	0	0	0	0	0	5	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	271	877	131	74	464	128	389	1285	67	197	2129	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	271	877	131	74	464	128	389	1285	67	197	2129	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	271	877	131	74	464	128	389	1285	67	197	2129	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	271	877	131	74	464	128	389	1285	67	197	2129	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.15	0.07	0.02	0.08	0.07	0.12	0.23	0.04	0.06	0.37	0.10
Crit Moves:		****		****			****				****	
Green Time:	19.7	40.2	56.6	13.9	34.6	60.4	25.8	97.4	117.1	16.4	88.4	102.3
Volume/Cap:	0.79	0.69	0.24	0.30	0.42	0.22	0.86	0.42	0.06	0.69	0.76	0.17
Uniform Del:	78.1	64.2	45.7	78.5	63.9	42.9	75.4	24.5	11.4	79.3	37.2	18.6
IncremntDel:	11.4	1.6	0.2	0.7	0.3	0.2	15.5	0.1	0.0	6.8	1.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.6	11.5	86.1	38.5	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.6	11.5	86.1	38.5	18.6
LOS by Move:	F	E	D	E-	E	D	F	C	B+	F	D+	B-
HCM2kAvgQ:	9	14	5	2	7	5	13	13	1	8	32	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

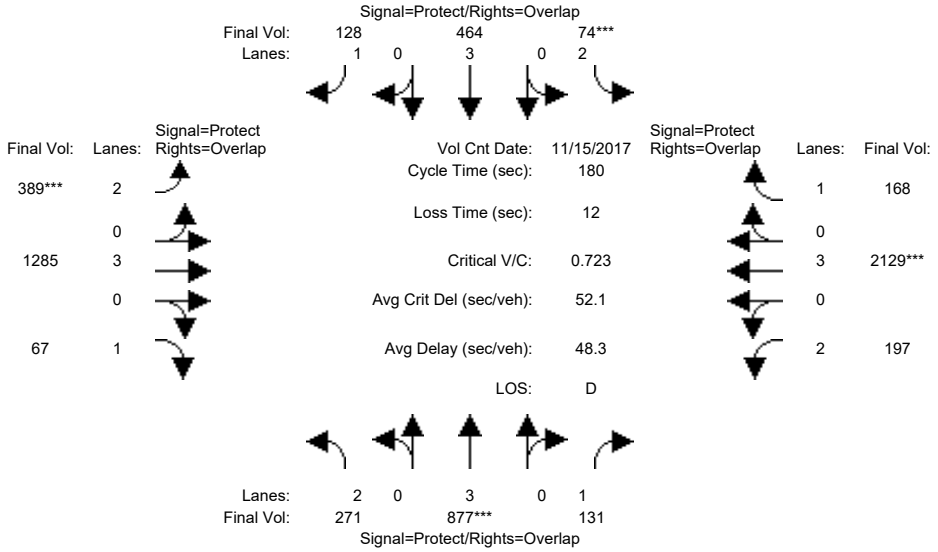


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	39	39	16	40	40	16	96	96	14	95	95
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	133	564	340	217	949	290	184	2495	187	178	1420	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	564	340	217	949	290	184	2495	187	178	1420	101
Added Vol:	0	0	0	0	0	0	0	20	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	133	564	340	217	949	290	184	2515	187	178	1425	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	564	340	217	949	290	184	2515	187	178	1425	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	564	340	217	949	290	184	2515	187	178	1425	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	564	340	217	949	290	184	2515	187	178	1425	101
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.10	0.19	0.07	0.17	0.17	0.06	0.44	0.11	0.06	0.25	0.06
Crit Moves:	****				****			****			****	
Green Time:	15.0	39.6	53.6	16.2	40.8	58.4	17.6	108	123.2	14.0	105	120.8
Volume/Cap:	0.53	0.47	0.69	0.81	0.77	0.54	0.63	0.77	0.16	0.77	0.45	0.09
Uniform Del:	84.1	66.1	60.8	85.3	70.3	54.6	83.1	31.5	13.2	86.4	25.6	13.4
IncremntDel:	2.3	0.3	4.1	16.2	3.2	1.1	4.4	1.2	0.1	14.2	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.07	1.88	2.23	1.00	0.68	0.48
Delay/Veh:	86.4	66.4	64.9	101.5	73.4	55.7	93.1	60.5	29.4	100.6	17.5	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	66.4	64.9	101.5	73.4	55.7	93.1	60.5	29.4	100.6	17.5	6.5
LOS by Move:	F	E	E	F	E	E+	F	E	C	F	B	A
HCM2kAvgQ:	4	9	19	8	17	15	6	43	9	8	11	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

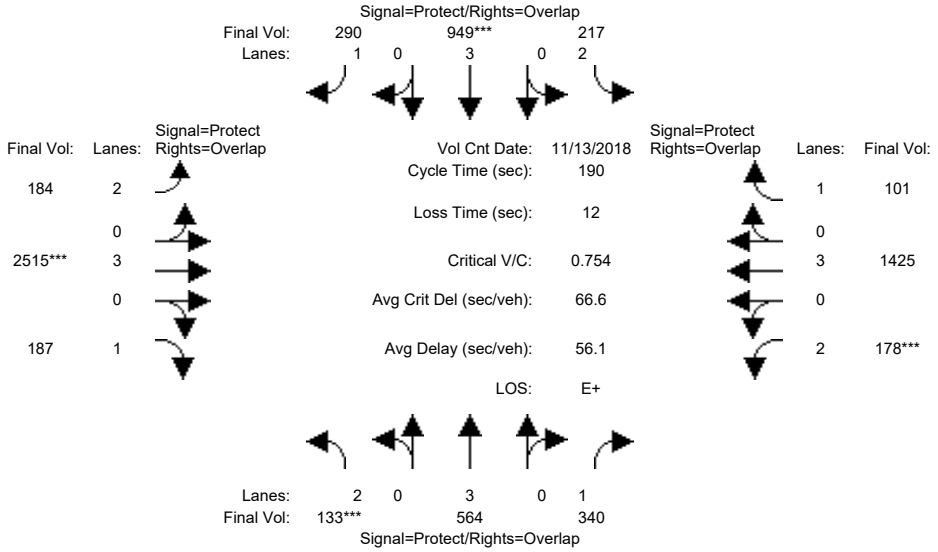


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	14	10	10	14	10	10	14	78	78	14	85	85
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 15 Nov 2017 << 8:00 AM - 9:00 AM												
Base Vol:	271	877	131	74	464	128	389	1280	67	197	2107	168
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	271	877	131	74	464	128	389	1280	67	197	2107	168
Added Vol:	0	0	0	0	0	0	0	5	0	0	22	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	271	877	131	74	464	128	389	1285	67	197	2129	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	271	877	131	74	464	128	389	1285	67	197	2129	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	271	877	131	74	464	128	389	1285	67	197	2129	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	271	877	131	74	464	128	389	1285	67	197	2129	168
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.09	0.15	0.07	0.02	0.08	0.07	0.12	0.23	0.04	0.06	0.37	0.10
Crit Moves:		****		****			****				****	
Green Time:	19.7	40.2	56.6	13.9	34.6	60.4	25.8	97.4	117.1	16.4	88.4	102.3
Volume/Cap:	0.79	0.69	0.24	0.30	0.42	0.22	0.86	0.42	0.06	0.69	0.76	0.17
Uniform Del:	78.1	64.2	45.7	78.5	63.9	42.9	75.4	24.5	11.4	79.3	37.2	18.6
IncremntDel:	11.4	1.6	0.2	0.7	0.3	0.2	15.5	0.1	0.0	6.8	1.3	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.6	11.5	86.1	38.5	18.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	89.5	65.8	46.0	79.2	64.2	43.1	90.9	24.6	11.5	86.1	38.5	18.6
LOS by Move:	F	E	D	E-	E	D	F	C	B+	F	D+	B-
HCM2kAvgQ:	9	14	5	2	7	5	13	13	1	8	32	5

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5329: CENTRAL EXPWY/BOWERS AVE

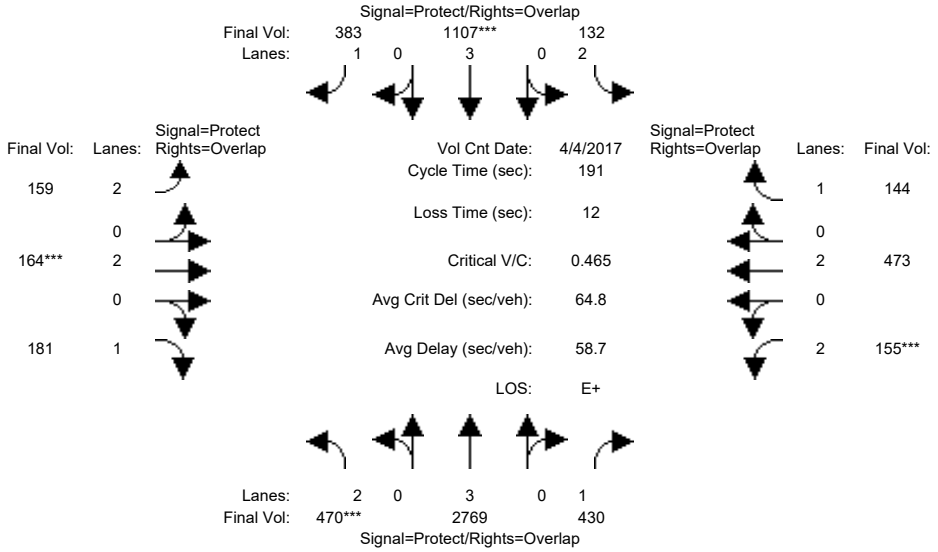


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	15	39	39	16	40	40	16	96	96	14	95	95
Y+R:	7.3	6.3	6.3	7.3	6.1	6.1	5.5	6.2	6.2	5.8	6.2	6.2
Volume Module: >> Count Date: 13 Nov 2018 << 5:15 - 6:15 PM												
Base Vol:	133	564	340	217	949	290	184	2495	187	178	1420	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	133	564	340	217	949	290	184	2495	187	178	1420	101
Added Vol:	0	0	0	0	0	0	0	20	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	133	564	340	217	949	290	184	2515	187	178	1425	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	564	340	217	949	290	184	2515	187	178	1425	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	564	340	217	949	290	184	2515	187	178	1425	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	564	340	217	949	290	184	2515	187	178	1425	101
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	5700	1750	3150	5700	1750
Capacity Analysis Module:												
Vol/Sat:	0.04	0.10	0.19	0.07	0.17	0.17	0.06	0.44	0.11	0.06	0.25	0.06
Crit Moves:	****				****			****			****	
Green Time:	15.0	39.6	53.6	16.2	40.8	58.4	17.6	108	123.2	14.0	105	120.8
Volume/Cap:	0.53	0.47	0.69	0.81	0.77	0.54	0.63	0.77	0.16	0.77	0.45	0.09
Uniform Del:	84.1	66.1	60.8	85.3	70.3	54.6	83.1	31.5	13.2	86.4	25.6	13.4
IncremntDel:	2.3	0.3	4.1	16.2	3.2	1.1	4.4	1.2	0.1	14.2	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.07	1.88	2.23	1.00	0.68	0.48
Delay/Veh:	86.4	66.4	64.9	101.5	73.4	55.7	93.1	60.5	29.4	100.6	17.5	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	66.4	64.9	101.5	73.4	55.7	93.1	60.5	29.4	100.6	17.5	6.5
LOS by Move:	F	E	E	F	E	E+	F	E	C	F	B	A
HCM2kAvgQ:	4	9	19	8	17	15	6	43	9	8	11	1

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

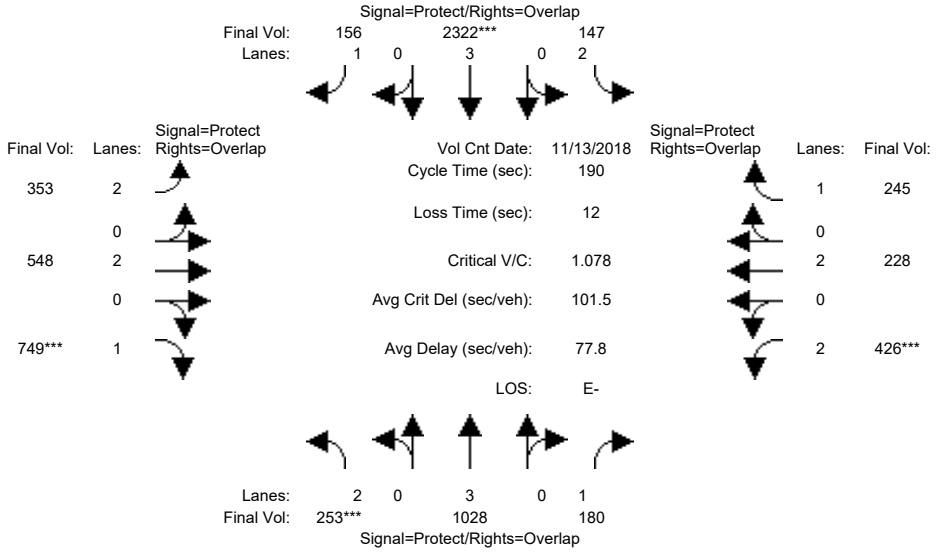


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	27	100	100	19	91	91	14	36	36	13	35	35
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 4 Apr 2017 << 7:45 AM - 8:45 AM												
Base Vol:	470	3147	430	132	1335	383	159	164	181	155	473	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	470	3147	430	132	1335	383	159	164	181	155	473	97
Added Vol:	0	0	0	0	103	0	0	0	0	0	0	47
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	470	3147	430	132	1438	383	159	164	181	155	473	144
User Adj:	1.00	0.88	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	470	2769	430	132	1107	383	159	164	181	155	473	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	470	2769	430	132	1107	383	159	164	181	155	473	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	470	2769	430	132	1107	383	159	164	181	155	473	144
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.15	0.49	0.25	0.04	0.19	0.22	0.05	0.04	0.11	0.05	0.12	0.08
Crit Moves:	****				****			****		****		
Green Time:	26.7	99.8	112.9	18.9	90.8	104.9	14.1	36.3	63.0	13.1	35.3	54.2
Volume/Cap:	1.07	0.93	0.42	0.42	0.41	0.40	0.68	0.23	0.34	0.72	0.67	0.29
Uniform Del:	82.1	42.4	21.2	80.9	32.6	24.8	86.3	65.5	48.3	87.1	72.5	53.4
IncremntDel:	62.0	6.0	0.3	0.9	0.1	0.3	8.2	0.2	0.4	11.0	2.6	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.27	1.38	1.00	0.80	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	144.1	59.7	29.4	81.8	26.3	17.2	94.4	65.6	48.7	98.1	75.1	53.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.1	59.7	29.4	81.8	26.3	17.2	94.4	65.6	48.7	98.1	75.1	53.7
LOS by Move:	F	E+	C	F	C	B	F	E	D	F	E-	D-
HCM2kAvgQ:	22	54	19	4	10	9	6	4	8	6	13	7

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

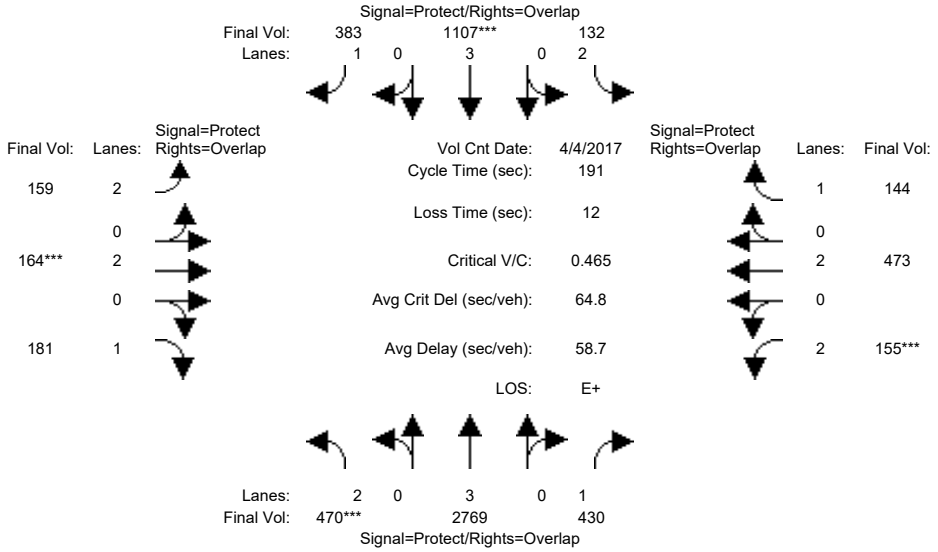


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	22	86	86	15	79	79	24	41	41	24	41	41
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:30 - 5:30 PM												
Base Vol:	253	1535	180	147	2856	156	353	548	749	426	228	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	253	1535	180	147	2856	156	353	548	749	426	228	143
Added Vol:	0	0	0	0	46	0	0	0	0	0	0	102
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	1535	180	147	2902	156	353	548	749	426	228	245
User Adj:	1.00	0.67	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	253	1028	180	147	2322	156	353	548	749	426	228	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	1028	180	147	2322	156	353	548	749	426	228	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	253	1028	180	147	2322	156	353	548	749	426	228	245
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.10	0.05	0.41	0.09	0.11	0.14	0.47	0.14	0.06	0.14
Crit Moves:	****				****				****	****		
Green Time:	22.0	86.0	110.0	15.0	79.0	107.4	28.4	53.0	75.0	24.0	48.6	63.6
Volume/Cap:	0.69	0.40	0.18	0.59	0.98	0.16	0.75	0.52	1.18	1.07	0.23	0.42
Uniform Del:	80.8	34.7	18.8	84.5	54.7	19.7	77.4	57.7	57.5	83.0	56.0	48.9
IncremntDel:	5.7	0.1	0.1	3.8	14.0	0.1	6.6	0.4	98.6	65.2	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.83	0.62	1.00	1.15	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	86.4	29.0	11.8	88.3	76.9	26.3	83.9	58.2	156.1	148.2	56.1	49.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	29.0	11.8	88.3	76.9	26.3	83.9	58.2	156.1	148.2	56.1	49.4
LOS by Move:	F	C	B+	F	E-	C	F	E+	F	F	E+	D
HCM2kAvgQ:	9	10	3	5	46	6	12	13	63	19	5	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

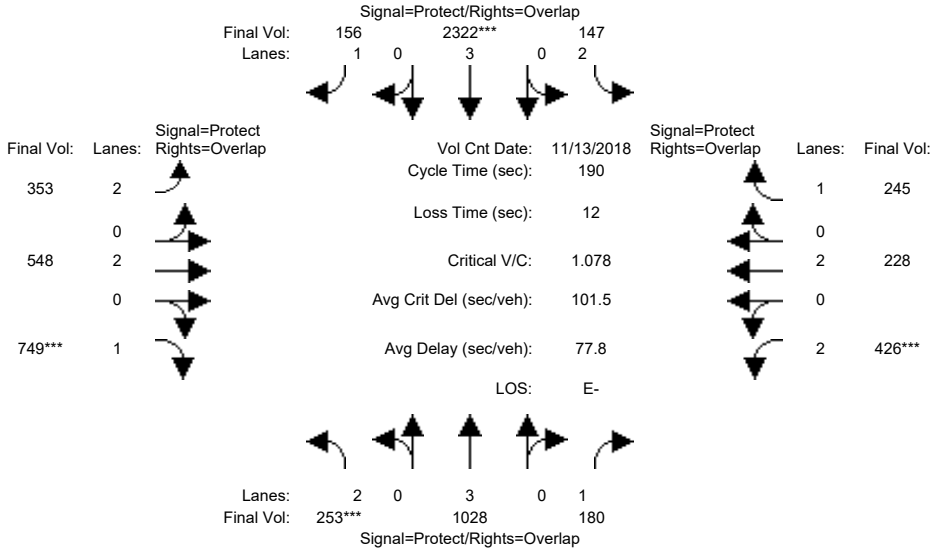


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	27	100	100	19	91	91	14	36	36	13	35	35
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 4 Apr 2017 << 7:45 AM - 8:45 AM												
Base Vol:	470	3147	430	132	1335	383	159	164	181	155	473	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	470	3147	430	132	1335	383	159	164	181	155	473	97
Added Vol:	0	0	0	0	103	0	0	0	0	0	0	47
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	470	3147	430	132	1438	383	159	164	181	155	473	144
User Adj:	1.00	0.88	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	470	2769	430	132	1107	383	159	164	181	155	473	144
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	470	2769	430	132	1107	383	159	164	181	155	473	144
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	470	2769	430	132	1107	383	159	164	181	155	473	144
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.15	0.49	0.25	0.04	0.19	0.22	0.05	0.04	0.11	0.05	0.12	0.08
Crit Moves:	****				****			****		****		
Green Time:	26.7	99.8	112.9	18.9	90.8	104.9	14.1	36.3	63.0	13.1	35.3	54.2
Volume/Cap:	1.07	0.93	0.42	0.42	0.41	0.40	0.68	0.23	0.34	0.72	0.67	0.29
Uniform Del:	82.1	42.4	21.2	80.9	32.6	24.8	86.3	65.5	48.3	87.1	72.5	53.4
IncremntDel:	62.0	6.0	0.3	0.9	0.1	0.3	8.2	0.2	0.4	11.0	2.6	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.27	1.38	1.00	0.80	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	144.1	59.7	29.4	81.8	26.3	17.2	94.4	65.6	48.7	98.1	75.1	53.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.1	59.7	29.4	81.8	26.3	17.2	94.4	65.6	48.7	98.1	75.1	53.7
LOS by Move:	F	E+	C	F	C	B	F	E	D	F	E-	D-
HCM2kAvgQ:	22	54	19	4	10	9	6	4	8	6	13	7

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5611: LAWRENCE EXPWY/ARQUES AVE

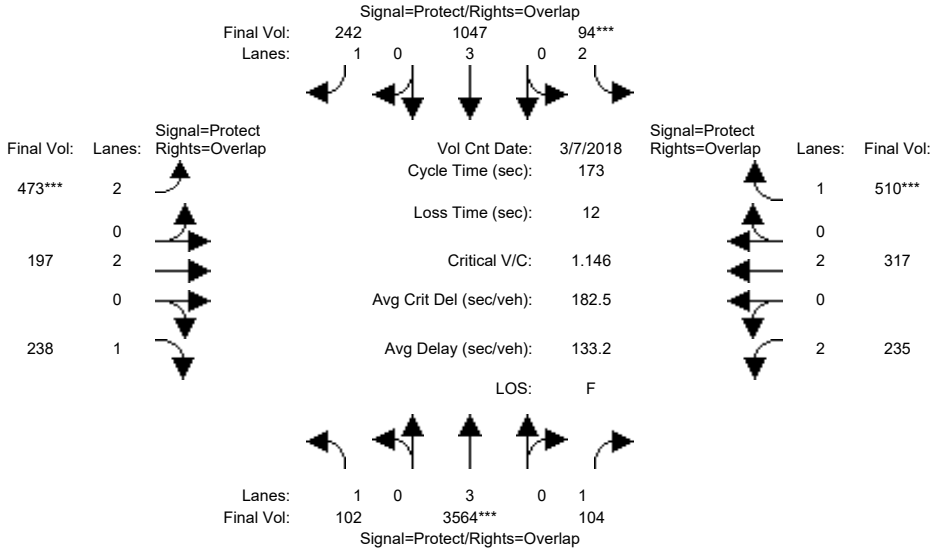


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	22	86	86	15	79	79	24	41	41	24	41	41
Y+R:	6.3	6.2	6.2	6.1	6.2	6.2	5.9	5.7	5.7	5.9	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:30 - 5:30 PM												
Base Vol:	253	1535	180	147	2856	156	353	548	749	426	228	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	253	1535	180	147	2856	156	353	548	749	426	228	143
Added Vol:	0	0	0	0	46	0	0	0	0	0	0	102
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	1535	180	147	2902	156	353	548	749	426	228	245
User Adj:	1.00	0.67	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	253	1028	180	147	2322	156	353	548	749	426	228	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	1028	180	147	2322	156	353	548	749	426	228	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	253	1028	180	147	2322	156	353	548	749	426	228	245
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.84	0.83	1.00	0.92
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3150	5700	1750	3150	5700	1750	3150	3800	1601	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.10	0.05	0.41	0.09	0.11	0.14	0.47	0.14	0.06	0.14
Crit Moves:	****				****				****	****		
Green Time:	22.0	86.0	110.0	15.0	79.0	107.4	28.4	53.0	75.0	24.0	48.6	63.6
Volume/Cap:	0.69	0.40	0.18	0.59	0.98	0.16	0.75	0.52	1.18	1.07	0.23	0.42
Uniform Del:	80.8	34.7	18.8	84.5	54.7	19.7	77.4	57.7	57.5	83.0	56.0	48.9
IncremntDel:	5.7	0.1	0.1	3.8	14.0	0.1	6.6	0.4	98.6	65.2	0.1	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.83	0.62	1.00	1.15	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	86.4	29.0	11.8	88.3	76.9	26.3	83.9	58.2	156.1	148.2	56.1	49.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	86.4	29.0	11.8	88.3	76.9	26.3	83.9	58.2	156.1	148.2	56.1	49.4
LOS by Move:	F	C	B+	F	E-	C	F	E+	F	F	E+	D
HCM2kAvgQ:	9	10	3	5	46	6	12	13	63	19	5	11

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5613: LAWRENCE EXPWY/REED AVE

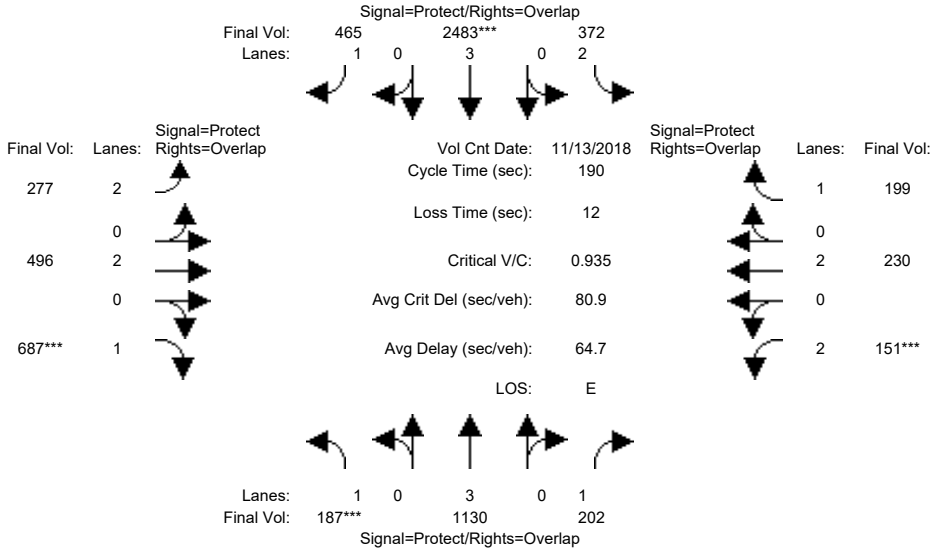


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	81	81	13	80	80	23	39	39	17	33	33
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	102	4055	104	92	1188	223	473	197	238	235	317	505
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	4055	104	92	1188	223	473	197	238	235	317	505
Added Vol:	0	42	0	2	15	19	0	0	0	0	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	4097	104	94	1203	242	473	197	238	235	317	510
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	3564	104	94	1047	242	473	197	238	235	317	510
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	3564	104	94	1047	242	473	197	238	235	317	510
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	3564	104	94	1047	242	473	197	238	235	317	510
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.63	0.06	0.03	0.18	0.14	0.15	0.05	0.14	0.07	0.08	0.29
Crit Moves:		****		****			****					****
Green Time:	14.1	80.5	97.8	13.2	79.7	102.8	23.1	38.5	52.6	17.3	32.5	45.7
Volume/Cap:	0.72	1.34	0.11	0.39	0.40	0.23	1.12	0.23	0.45	0.75	0.44	1.10
Uniform Del:	77.5	46.3	17.4	76.1	30.8	16.5	75.0	55.1	48.5	75.7	62.2	63.6
IncremntDel:	15.8	157	0.0	1.1	0.1	0.1	82.4	0.1	0.6	9.4	0.4	72.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.82	0.65	1.00	0.82	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	93.3	195	11.4	77.1	25.4	9.8	157.4	55.3	49.1	85.1	62.7	136.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.3	195	11.4	77.1	25.4	9.8	157.4	55.3	49.1	85.1	62.7	136.5
LOS by Move:	F	F	B+	E-	C	A	F	E+	D	F	E	F
HCM2kAvgQ:	5	96	1	3	9	4	20	4	11	7	7	37

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5613: LAWRENCE EXPWY/REED AVE

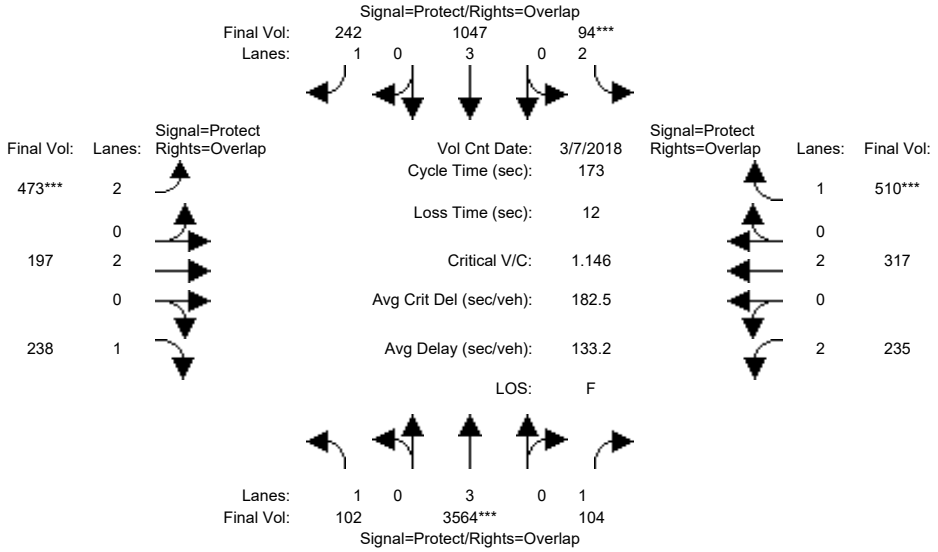


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	17	90	90	27	100	100	15	35	35	14	34	34
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:45 - 5:45 PM												
Base Vol:	187	1379	202	371	3409	425	277	496	687	151	230	197
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	1379	202	371	3409	425	277	496	687	151	230	197
Added Vol:	0	16	0	1	40	40	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	1395	202	372	3449	465	277	496	687	151	230	199
User Adj:	1.00	0.81	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	1130	202	372	2483	465	277	496	687	151	230	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	1130	202	372	2483	465	277	496	687	151	230	199
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	1130	202	372	2483	465	277	496	687	151	230	199
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.12	0.12	0.44	0.27	0.09	0.13	0.39	0.05	0.06	0.11
Crit Moves:	****				****				****	****		
Green Time:	17.4	90.3	104.3	27.1	100	120.0	20.0	46.6	64.0	14.0	40.6	67.7
Volume/Cap:	1.17	0.42	0.21	0.83	0.83	0.42	0.84	0.53	1.17	0.65	0.28	0.32
Uniform Del:	86.3	32.6	21.8	79.2	37.8	17.6	83.4	62.3	63.0	85.6	62.5	44.4
IncremntDel:	122.5	0.1	0.1	12.1	2.0	0.3	16.8	0.6	91.9	6.4	0.2	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.80	0.68	1.00	1.27	1.46	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	208.8	26.3	15.0	91.3	50.2	25.9	100.2	62.9	154.9	92.0	62.7	44.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	208.8	26.3	15.0	91.3	50.2	25.9	100.2	62.9	154.9	92.0	62.7	44.7
LOS by Move:	F	C	B	F	D	C	F	E	F	F	E	D
HCM2kAvgQ:	16	11	4	12	41	19	10	12	57	5	5	9

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #5613: LAWRENCE EXPWY/REED AVE

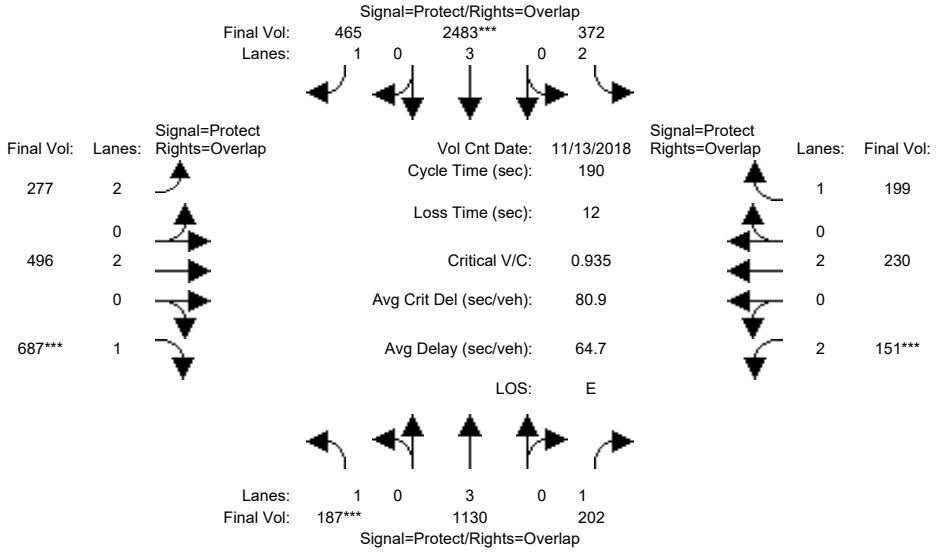


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	14	81	81	13	80	80	23	39	39	17	33	33
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 7 Mar 2018 << 8:00 AM - 9:00 AM												
Base Vol:	102	4055	104	92	1188	223	473	197	238	235	317	505
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	4055	104	92	1188	223	473	197	238	235	317	505
Added Vol:	0	42	0	2	15	19	0	0	0	0	0	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	4097	104	94	1203	242	473	197	238	235	317	510
User Adj:	1.00	0.87	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	102	3564	104	94	1047	242	473	197	238	235	317	510
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	3564	104	94	1047	242	473	197	238	235	317	510
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	102	3564	104	94	1047	242	473	197	238	235	317	510
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.06	0.63	0.06	0.03	0.18	0.14	0.15	0.05	0.14	0.07	0.08	0.29
Crit Moves:		****		****			****					****
Green Time:	14.1	80.5	97.8	13.2	79.7	102.8	23.1	38.5	52.6	17.3	32.5	45.7
Volume/Cap:	0.72	1.34	0.11	0.39	0.40	0.23	1.12	0.23	0.45	0.75	0.44	1.10
Uniform Del:	77.5	46.3	17.4	76.1	30.8	16.5	75.0	55.1	48.5	75.7	62.2	63.6
IncremntDel:	15.8	157	0.0	1.1	0.1	0.1	82.4	0.1	0.6	9.4	0.4	72.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.82	0.65	1.00	0.82	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	93.3	195	11.4	77.1	25.4	9.8	157.4	55.3	49.1	85.1	62.7	136.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.3	195	11.4	77.1	25.4	9.8	157.4	55.3	49.1	85.1	62.7	136.5
LOS by Move:	F	F	B+	E-	C	A	F	E+	D	F	E	F
HCM2kAvgQ:	5	96	1	3	9	4	20	4	11	7	7	37

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #5613: LAWRENCE EXPWY/REED AVE

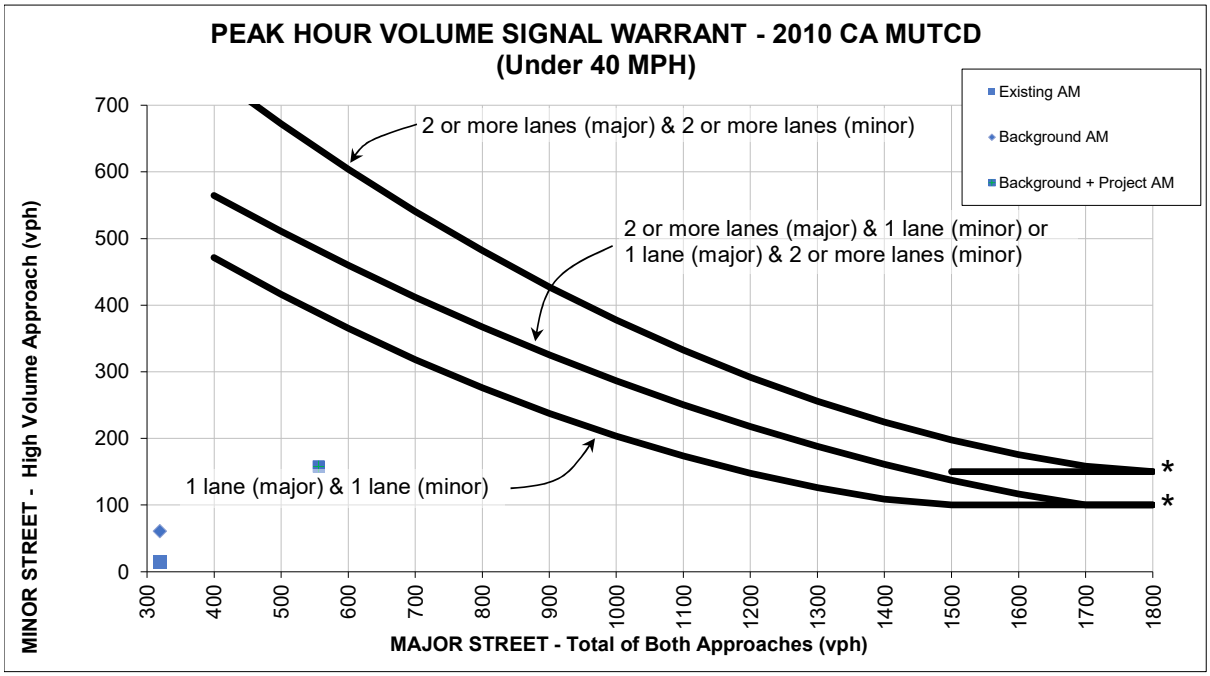


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	17	90	90	27	100	100	15	35	35	14	34	34
Y+R:	6.0	6.2	6.2	6.1	6.2	6.2	5.7	5.6	5.6	5.6	5.7	5.7
Volume Module: >> Count Date: 13 Nov 2018 << 4:45 - 5:45 PM												
Base Vol:	187	1379	202	371	3409	425	277	496	687	151	230	197
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	187	1379	202	371	3409	425	277	496	687	151	230	197
Added Vol:	0	16	0	1	40	40	0	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	187	1395	202	372	3449	465	277	496	687	151	230	199
User Adj:	1.00	0.81	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	1130	202	372	2483	465	277	496	687	151	230	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	1130	202	372	2483	465	277	496	687	151	230	199
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	1130	202	372	2483	465	277	496	687	151	230	199
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	1.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1750	5700	1750	3150	5700	1750	3150	3800	1750	3150	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.12	0.12	0.44	0.27	0.09	0.13	0.39	0.05	0.06	0.11
Crit Moves:	****				****				****	****		
Green Time:	17.4	90.3	104.3	27.1	100	120.0	20.0	46.6	64.0	14.0	40.6	67.7
Volume/Cap:	1.17	0.42	0.21	0.83	0.83	0.42	0.84	0.53	1.17	0.65	0.28	0.32
Uniform Del:	86.3	32.6	21.8	79.2	37.8	17.6	83.4	62.3	63.0	85.6	62.5	44.4
IncremntDel:	122.5	0.1	0.1	12.1	2.0	0.3	16.8	0.6	91.9	6.4	0.2	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	0.80	0.68	1.00	1.27	1.46	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	208.8	26.3	15.0	91.3	50.2	25.9	100.2	62.9	154.9	92.0	62.7	44.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	208.8	26.3	15.0	91.3	50.2	25.9	100.2	62.9	154.9	92.0	62.7	44.7
LOS by Move:	F	C	B	F	D	C	F	E	F	F	E	D
HCM2kAvgQ:	16	11	4	12	41	19	10	12	57	5	5	9

Note: Queue reported is the number of cars per lane.

Appendix D
Signal Warrants

San Zeno Way & Sonora Court

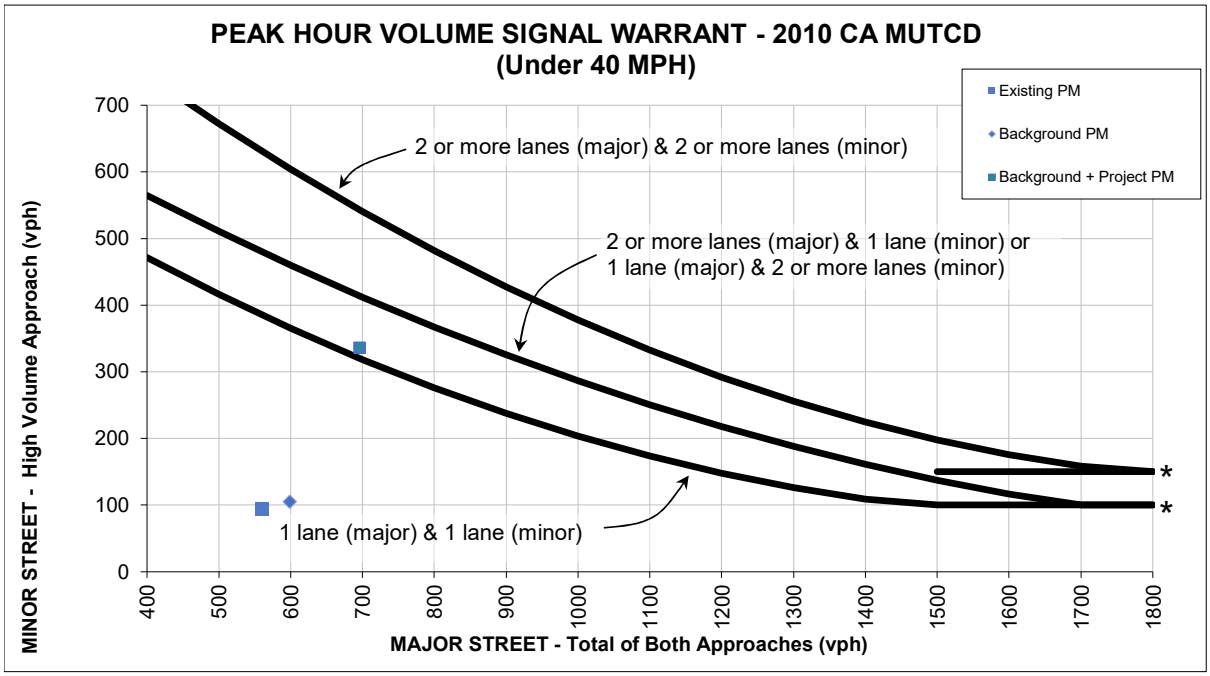


* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH

		Approach Lanes		AM Peak Hour Volumes					
		One	2 or More	Existing AM	Background AM	Background + Project AM			
Major Street - Both Approaches	San Zeno Way	x		320	319	556			
Minor Street - Highest Approach	Sonora Court	x		15	61	158			
	Warrant Met?			No	No	No			

San Zeno Way & Sonora Court



* NOTE: 150 vph applies as the lower threshold volume for a minor street approach with 2 or more lanes and 100 vph applies as the lower threshold volume for a minor street approach with 1 lane.

Peak Hour Volume Warrant Per 2003 MUTCD- Under 40 MPH

		Approach Lanes		PM Peak Hour Volumes					
		One	2 or More	Existing PM	Background PM	Background + Project PM			
Major Street - Both Approaches	San Zeno Way	x		560	599	696			
Minor Street - Highest Approach	Sonora Court	x		94	105	336			
		Warrant Met?		No	No	Yes			