KUNZMAN ASSOCIATES, INC.

9988 REDWOOD AVENUE PROJECT

TRAFFIC IMPACT ANALYSIS

April 24, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

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I. Introduction

The purpose of this report is to provide an assessment of the traffic impacts resulting from the proposed development of the 9988 Redwood Avenue project, and to identify the traffic mitigation measures necessary to maintain the established Level of Service standard for the elements of the impacted roadway system. The traffic issues related to the proposed land uses and development have been evaluated in the context of the California Environmental Quality Act.

The County of San Bernardino is the lead agency responsible for preparation of the traffic impact analysis, in accordance with the California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Year 2017, at which time it will be generating trips at its full potential.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided in Appendix A.

A. Project Description

The proposed development is located north of Hunter Street and west of Redwood Avenue in the County of San Bernardino. A vicinity map showing the project location is provided on Figure 1.

The project site is proposed to be developed with 215,000 square feet of high-cube warehouse distribution center. Access will be provided to Redwood Avenue. Figure 2 illustrates the project site plan.

B. Study Area

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Rosemary Drive, Iris Drive, Hunter Street, and Valley Boulevard. The north-south roadway expected to provide local access is Redwood Avenue.

A series of scoping discussions were conducted with the County of San Bernardino to define the desired analysis locations for each future analysis year. In addition, staff from the County of San Bernardino has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year [project Opening Year] and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or

exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana.

C. Analysis Methodology

The analysis of the traffic impacts from the proposed development and the assessment of the required mitigation measures were based on an evaluation of the existing and forecast traffic conditions in the vicinity of the site with and without the project. The following analysis years are considered in this report:

- Existing Conditions (2015)
- Existing Plus Project Conditions[1]
- Opening Year Conditions (2017)

Existing intersection traffic conditions were established through morning and evening peak hour traffic counts obtained by Kunzman Associates, Inc. in January 2015 (see Appendix B). In addition, truck classification counts were conducted at the study area intersections. The existing percent of trucks were used in the conversion of trucks to Passenger Car Equivalent's.

Project traffic volumes for all future projections were estimated using the manual approach. Trip generation has been estimated based on the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012 and the City of Fontana, Truck Trip Generation Study, August 2003.

The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model (SBTAM) Traffic Model Year 2008 and Year 2035 average daily traffic volume forecasts (see Appendix C). This difference defines the growth in traffic over the 35 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2015 and Year 2035. For this purpose, linear growth between the Year 2008 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2015 and Year 2035 is 20 years of the 35 year time frame, a factor of 0.57 (i.e., 20/35) was used.

The Buildout Year (2035) daily roadway segment volume forecasts have been determined using the growth increment approach on the SBTAM Traffic Model Year 2008 and Year 2035 volumes. The growth increment calculation worksheet is shown in Appendix C. Being that

[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time. This scenario is provided for informational purposes only, and will not be used for impact determinations or mitigation.

the SBTAM model only has traffic volumes for Valley Boulevard and does not have Redwood Avenue, Rosemary Drive, Iris Drive, or Hunter Street within its network, a growth rate was formulated for Opening Year (2017) traffic conditions. The Existing and Opening Year (2017) average daily traffic volumes for Valley Boulevard were used to determine the growth rate. The formula used is: (((2017 ADT - Existing ADT) / Existing ADT) / 2 years). Using the ADT data as shown In Appendix C, the annual growth rate is 2.14% (((19,500 - 18,700) / 18700) / 2).

Opening Year (2017) traffic volumes consist of Existing traffic volumes with an annual ambient growth rate of 2.14% applied over a two year period (1.0214^2 = 1.0428).

The County of San Bernardino staff stated that there are no cumulative developments within the study area to be included in this analysis. The City of Fontana provided a list of cumulative development in the study area. Cumulative development has been added to Opening Year (2017) traffic conditions.

Project traffic volumes were then added to the SBTAM Traffic Model traffic volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes for Buildout Year (2035) traffic volumes. The Opening Year (2017) traffic volumes have been interpolated from the Buildout Year (2035) traffic volumes based upon a portion of the future growth increment. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix C) based on the Highway Capacity Manual – Transportation Research Board Special Report 209. To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection. It should be noted that the signalized intersections are considered deficient (Level of Service F) if the overall intersection critical volume to capacity ratio equals or exceeds 1.0, even if the level of service defined by the delay value is below the defined Level of Service standard. The volume to capacity ratio is defined as the critical volumes divided by the intersection capacity. A volume to capacity ratio greater than 1.0 implies that the traffic volume demand is greater than the capacity of the intersection and as a result traffic may begin to queue during the analyzed peak hour.

The Level of Service analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of two seconds per phase. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings has also been considered in the signalized intersection analysis. The following formula has been used to calculate the pedestrian minimum times for all Highway Capacity Manual runs:

[(Curb to curb distance) / (3.5 feet/second)] + 7 seconds.

For existing/existing plus project/Opening Year (2017) traffic conditions, saturation flow rates of 1,800 vehicles per hour of green for through and right turn lanes and 1,700 vehicles

per lane for single left turn lanes, 1,600 vehicles per lane for dual left turn lanes and 1,500 vehicles per lane for triple left turn lanes have been assumed for the capacity analysis.

The peak hour traffic volumes have been adjusted to peak 15 minute volumes for analysis purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. Where feasible improvements in accordance with the local jurisdiction's General Plan and which result in acceptable operations cannot be identified.

D. Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the County of San Bernardino requirements.

1. Definition of Deficiency

The definition of an intersection deficiency has been obtained from the County of San Bernardino General Plan. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E or F will be considered deficient.

The definition of an intersection deficiency has also been obtained from the City of Fontana General Plan. The General Plan states that peak hour intersection operations of Level of Service D or better are generally acceptable. Therefore, any intersection operating at Level of Service E to F will be considered deficient.

2. Definition of Significant Impact

The identification of significant impacts is a requirement of the California Environmental Quality Act. The County of San Bernardino General Plan and Circulation Element have been adopted in accordance with California Environmental Quality Act requirements, and any roadway improvements within the County of San Bernardino that are consistent with these documents are not considered a significant impact, so long as the project contributes its "fair share" funding for improvements.

A traffic impact is considered significant if the project both: i) contributes measurable traffic to and ii) substantially and adversely changes the Level of Service at any off-site location projected to experience deficient operations under foreseeable cumulative conditions, where feasible improvements consistent with the County of San Bernardino General Plan cannot be constructed.

Figure 1
Project Location Map

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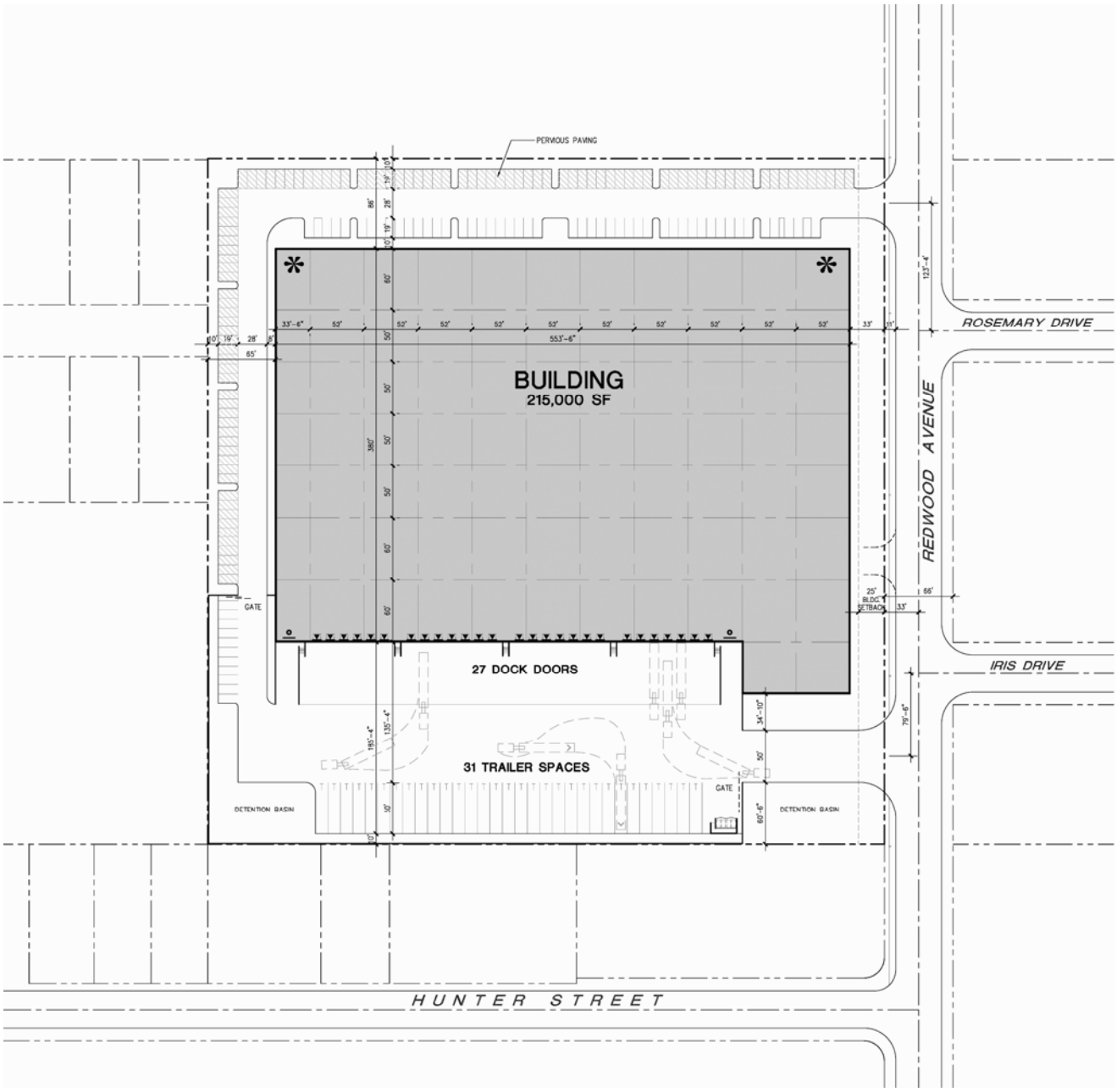
KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 2
Site Plan



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II. Existing Conditions

A. Existing Roadway System

Figure 3 identifies the existing conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Rosemary Drive, Iris Drive, Hunter Street, and Valley Boulevard. The north-south roadway expected to provide local access is Redwood Avenue.

B. Existing Volumes

Figure 4 depicts the existing average daily traffic volumes. The existing average daily traffic volumes were obtained and factored from peak hour counts (see Appendix B) by Kunzman Associates, Inc. using the following formula for each intersection leg:

PM Peak Hour (Approach + Exit Volume) x 11.5 = Daily Leg Volume.

This is a conservative estimate and may over estimate the average daily traffic volumes.

Existing intersection traffic conditions were established through morning and evening peak hour traffic counts obtained by Kunzman Associates, Inc. from January 2015 (see Appendix B) and shown on Figures 5 and 6, respectively. Explicit peak hour factors have been calculated using the data collected for this effort as well. The morning and evening peak hour traffic volumes were identified by counting the two-hour periods from 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM.

In addition, truck classification counts were conducted at the study area intersections. The existing percent of trucks were used in the conversion of trucks to Passenger Car Equivalent's (see Appendix B).

C. Existing Level of Service

The Existing delay and Level of Service for intersections in the vicinity of the project are shown in Table 1. For Existing traffic conditions, the study area intersections currently operate within acceptable Levels of Service during the peak hours. Existing delay worksheets are provided in Appendix D.

D. Planned Transportation Improvements and Relationship to General Plan

The County of San Bernardino General Plan Circulation Element is shown on Figure 7. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 7. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the

Land Use Element of the General Plan. The County of San Bernardino General Plan roadway cross-sections are shown on Figure 8.

The City of Fontana General Plan Circulation Element is shown on Figure 9. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 9. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Fontana General Plan roadway cross-sections are shown on Figure 10.

Table 1

Existing Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Redwood Avenue (NS) at:																
Rosemary Drive (EW) - #2	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	9.8-A	9.8-A
Iris Drive (EW) - #3	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.0-B	9.9-A
Hunter Street (EW) - #5	County of SB	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	10.2-B	10.3-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	TS	0.5	0.5	d	0.5	0.5	d	1	2	d	1	2	d	18.1-B	18.0-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Figure 3
Existing Through Travel Lanes and Intersection Controls

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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 4
Existing Average Daily Traffic Volumes

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KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes

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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes

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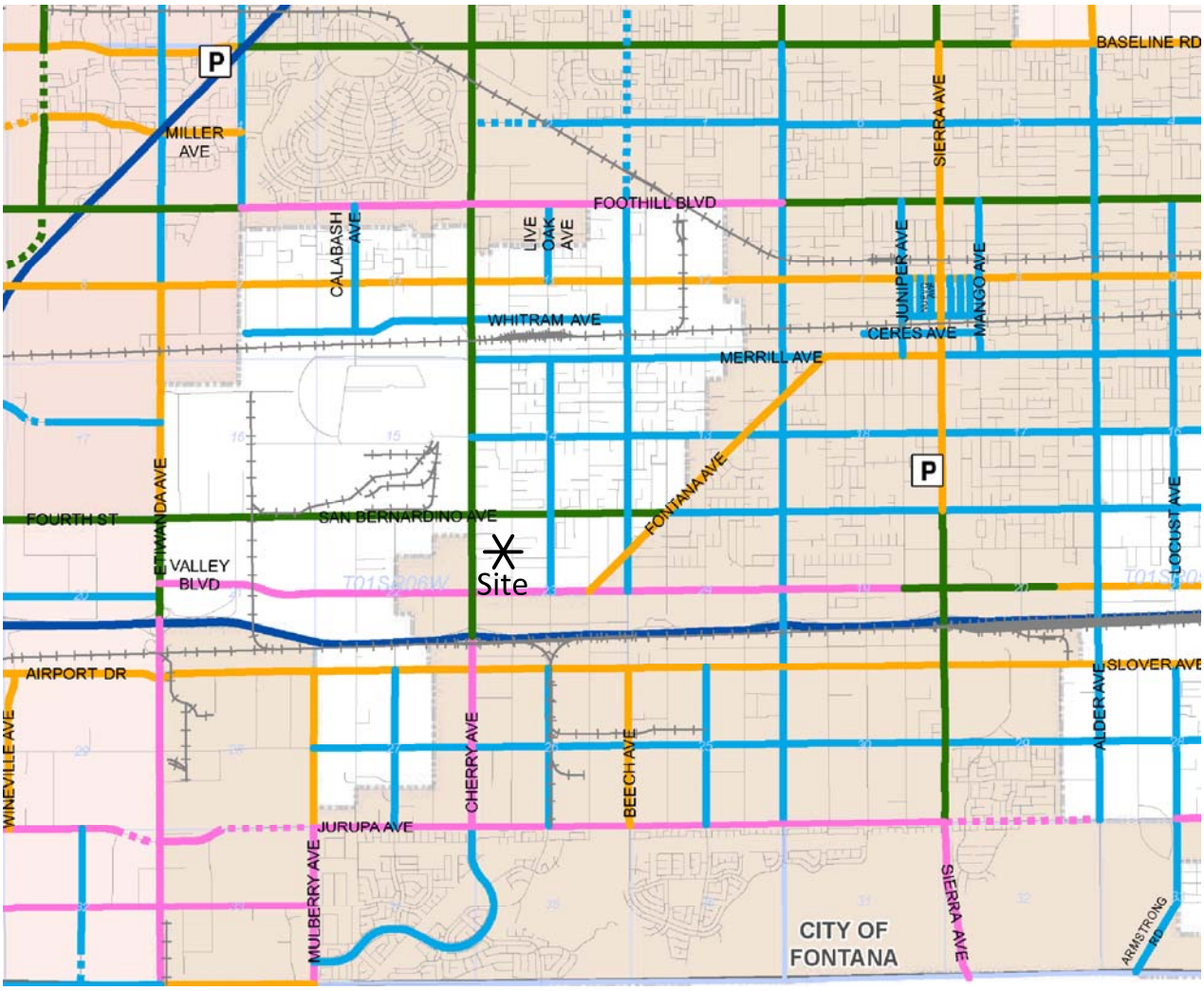
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 7
County of San Bernardino General Plan Circulation Element



Legend

Existing	Proposed	
		Freeway
		Major Divided Highway
		Major Arterial Highway
		Major Highway
		Secondary Highway
		Controlled/Limited Access Collector
		Mountain Major Highway
		Mountain Secondary Highway
		State Highway (Special Standards or Conditions)

P Park & Ride — Railroad — Airport / Airfield

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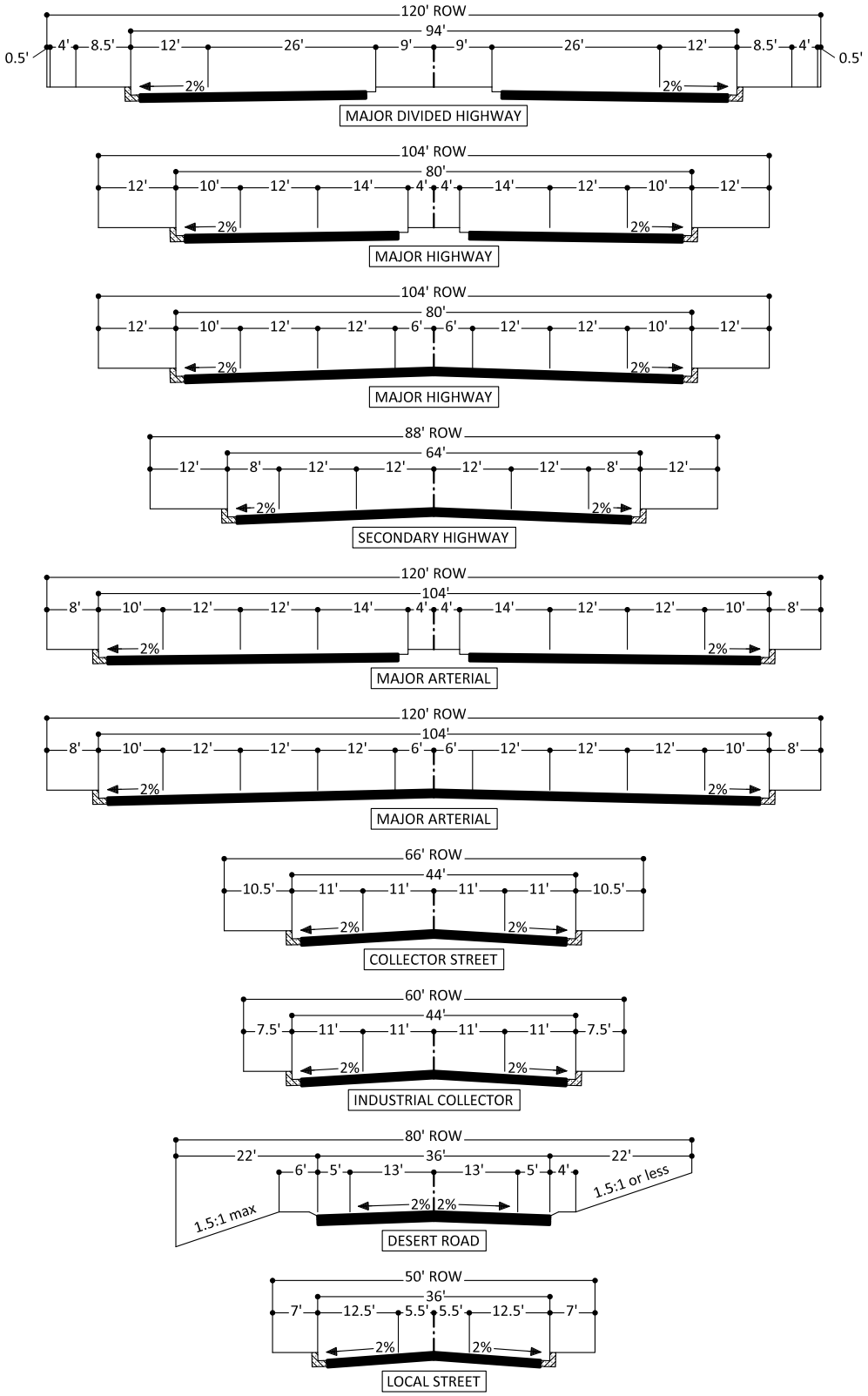
Source: County of San Bernardino

Figure 8
County of San Bernardino General Plan Roadway Cross-Sections



Source: County of San Bernardino

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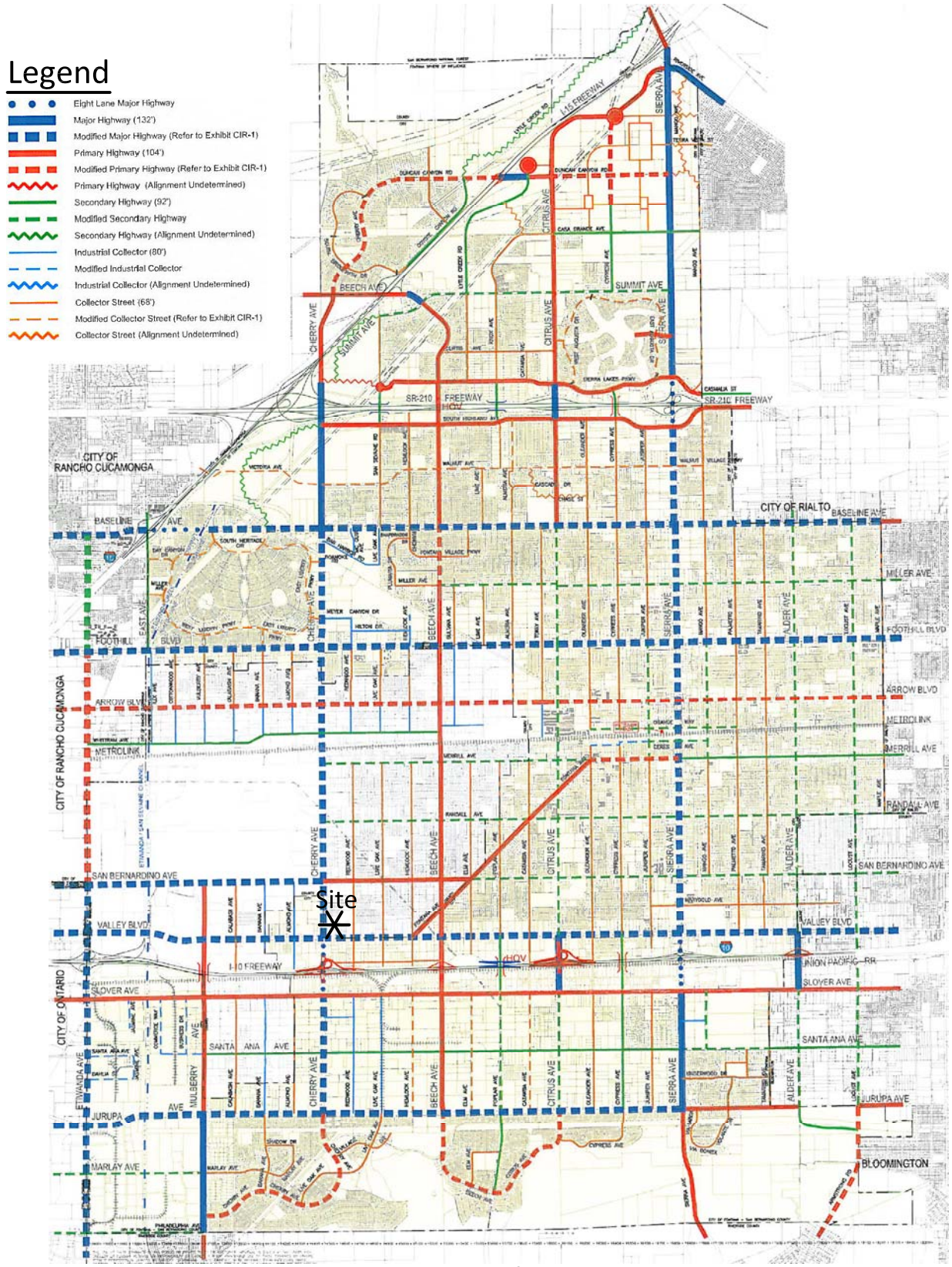
Figure 9
City of Fontana General Plan Circulation Element

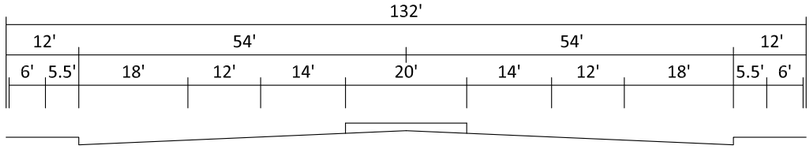


Source: City of Fontana

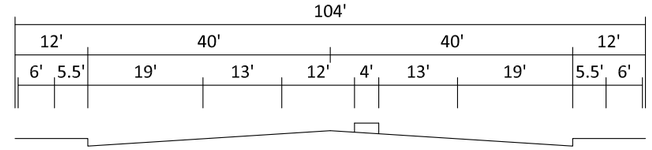
5972/9

Figure 10
City of Fontana General Plan Roadway Cross-Sections

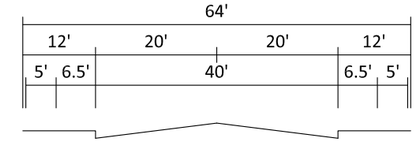
Major Highway - Midblock (Revised 12/18/90: Res No. 90-281)



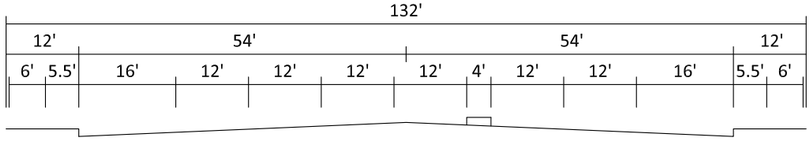
Primary Highway - Intersection (Revised 12/18/90: Res No. 90-281)



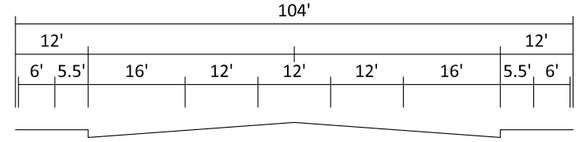
Local Street (Revised 12/18/90 Res No. 90-281)



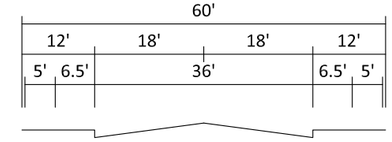
Major Highway - Intersection (Revised 12/18/90: Res No. 90-281)



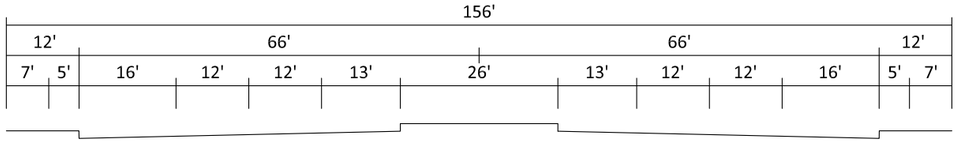
Secondary Highway (Revised 12/18/90: Res No. 90-281)



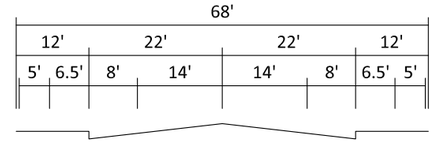
Local Street - Short (Added 12/18/90: Res No. 90-281)
600 feet or less in length



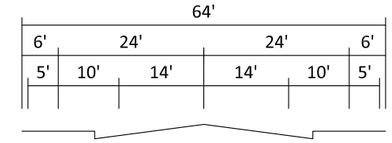
Eight-Lane Major Highway - Midblock (Added 10/15/96: Res No. 96-60)



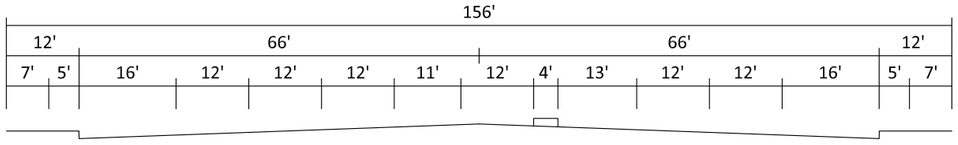
Collector Street - Midblock (Revised 12/18/90: Res No. 90-281)



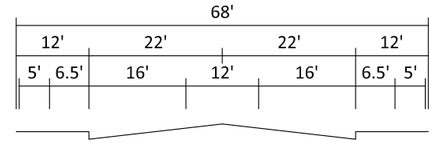
Local Street - Industrial (Added 12/18/90: Res No. 90-281)



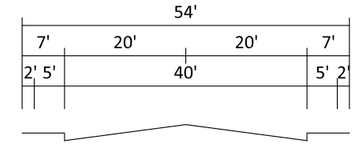
Eight-Lane Major Highway - Intersection (Added 10/15/96: Res No. 96-60)



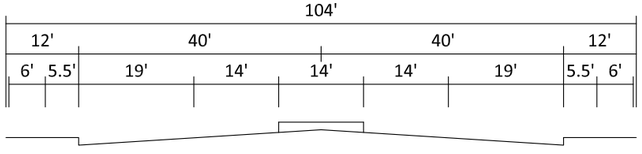
Collector Street - Intersection (Revised 12/18/90: Res No. 90-281)



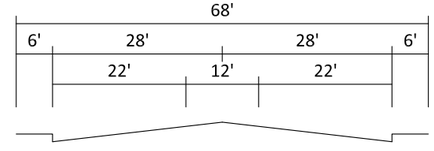
Local Street (Added 11/1/94: Res No. 94-125)
Community/Specific Plans in North Fontana



Primary Highway - Midblock (Revised 12/18/90: Res No. 90-281)



Collector Street - Industrial (Revised 12/18/90: Res No. 90-281)



Local Street - Short (Added 11/1/94: Res No. 94-125)
Community/Specific Plans in North Fontana

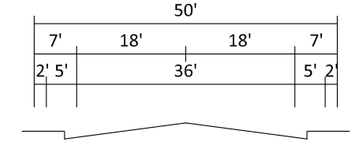


Figure 10
City of Fontana General Plan Roadway Cross-Sections

Source: City of Fontana

5972/10

III. Project Trips

A. Project Description

The project site is proposed to be developed with 215,000 square feet of high-cube warehouse distribution center. The project will have access to Redwood Avenue.

B. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily trips, morning peak hour inbound and outbound trips, and evening peak hour inbound and outbound trips for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, and the City of Fontana, Truck Trip Generation Study, August 2003.

As shown in Table 2, the proposed development is projected to generate approximately 474 daily vehicle trips in Passenger Car Equivalent's, 32 of which will occur during the morning peak hour in Passenger Car Equivalent's and 34 of which will occur during the evening peak hour in Passenger Car Equivalent's.

C. Trip Distribution

Figures 11 to 13 contain the directional distribution of the project trips for the proposed land use. To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site and other additional information on future development and traffic impacts in the area were reviewed.

D. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 14. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 15 and 16, respectively.

E. Trip Contribution Test

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year [project Opening Year) and

project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways. Figure 17 graphically depicts the project trip contribution test volumes on all of the roadway segments adjacent to the potential intersection analysis locations until the project volume contribution has clearly dropped below the 50 trip threshold and 100 trip threshold.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana.

Table 2

Project Trip Generation[1]

Descriptor	Quantity	Units[2]	Type of Vehicle: Passenger Car	2 Axle Truck	3 Axle Truck	4+ Axle Truck	Total Trucks	Total
Land Use: High Cube	215.000	TSF	79.57%	3.46%	4.64%	12.33%	20.43%	100%
Traffic Generation Rates in trips per TSF								
Daily			1.337	0.058	0.078	0.207	0.343	1.68
Morning Peak Hour			0.088	0.004	0.005	0.014	0.023	0.11
Evening Peak Hour			0.096	0.004	0.006	0.015	0.025	0.12
Traffic Generation in Vehicles								
Daily			287	12	17	45	74	361
Morning Peak Hour								
Inbound			14	1	1	2	4	18
Outbound			5	-	-	1	1	6
Total			19	1	1	3	5	24
Evening Peak Hour								
Inbound			7	-	-	1	1	8
Outbound			14	1	1	2	4	18
Total			21	1	1	3	5	26
Passenger Car Equivalent's (PCE'S) Factor[3]			1.00	1.50	2.00	3.00		
Traffic Generation in PCE's								
Daily			287	18	34	135	187	474
Morning Peak Hour								
Inbound			14	2	2	6	10	24
Outbound			5	-	-	3	3	8
Total			19	2	2	9	13	32
Evening Peak Hour								
Inbound			7	-	-	3	3	10
Outbound			14	2	2	6	10	24
Total			21	2	2	9	13	34

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 152 and City of Fontana, Truck Trip Generation Study, August 2003.

[2] TSF = Thousand Square Feet

[3] Passenger Car Equivalent factors are recommended by San Bernardino Associated Governments (SANBAG).

Figure 11
Project Trip Distribution - Cars

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KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 12
Project Outbound Trip Distribution - Trucks

5972/12

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 13
Project Inbound Trip Distribution - Trucks

5972/13

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 14
Project Average Daily Traffic Volumes

5972/14

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 15
Project Morning Peak Hour Intersection Turning Movement Volumes

5972/15

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 16
Project Evening Peak Hour Intersection Turning Movement Volumes

5972/16

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 17
Project Contribution Test Volumes

5972/17

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

IV. Future Conditions

A. Future Volumes

As described within Section I.C., the Buildout Year (2035) average daily traffic volume forecasts with the project are developed using a growth increment process based on volumes predicted by the SBTAM Traffic Model Year 2008 and Year 2035 traffic models. The growth increment for Buildout Year (2035) on each roadway segment is the increase in SBTAM Traffic Model volumes from existing Year 2015 to Year 2035. The final Buildout Year (2035) roadway segment volume used for analysis purposes is then determined by adding the Buildout Year (2035) growth increment volume to the existing counted volume.

Being that the SBTAM traffic model only has traffic volumes for Valley Boulevard and does not have Redwood Avenue, Rosemary Drive, Iris Drive, or Hunter Street within its network, a growth rate was formulated for Opening Year (2017) traffic conditions. The Existing and Opening Year (2017) average daily traffic volumes for Valley Boulevard were used to determine the growth rate. The formula used is: (((2017 ADT - Existing ADT) / Existing ADT) / 2 years). Using the ADT data as shown In Appendix C, the annual growth rate is 2.14% (((19,500 - 18,700) / 18700) / 2).

Opening Year (2017) traffic volumes consist of Existing traffic volumes with an annual ambient growth rate of 2.14% applied over a two year period (1.0214^2 = 1.0428).

The County of San Bernardino staff stated that there are no cumulative developments within the study area to be included in this analysis. The City of Fontana provided a list of cumulative development in the study area. Cumulative development in the study area that are within the unincorporated County of San Bernardino and City of Fontana are shown in Figure 18. Cumulative development has been added to Opening Year (2017) traffic conditions. Table 3 shows the cumulative development daily and peak hour trip generation. Figure 19 shows the cumulative development average daily traffic volumes. Cumulative development morning and evening peak hour intersection turning movement volumes are shown on Figures 20 and 21, respectively.

1. Existing Plus Project

   The average daily traffic volumes for Existing Plus Project traffic conditions have been determined. Existing Plus Project average daily traffic volumes are shown on Figure 22.

2. Opening Year (2017) With Ambient

   The average daily traffic volumes for Opening Year (2017) With Ambient traffic conditions have been determined as described above using the growth interpolation process (see Section I.C.). Opening Year (2017) With Ambient average daily traffic volumes are shown on Figure 23.

3. Opening Year (2017) With Ambient and Project

The average daily traffic volumes for Opening Year (2017) With Ambient and Project traffic conditions have been determined as described above using the volume addition process (see Section I.C.). Opening Year (2017) With Ambient and Project average daily traffic volumes are shown on Figure 24.

4. Opening Year (2017) With Ambient and Cumulative and Project

The average daily traffic volumes for Opening Year (2017) With Ambient and Cumulative and Project traffic conditions have been determined as described above using the volume addition process (see Section I.C.). Opening Year (2017) With Ambient and Cumulative and Project average daily traffic volumes are shown on Figure 25.

B. Future Level of Service

1. Existing Plus Project

The Existing Plus Project delay and Level of Service for the study area roadway network are shown in Table 4. Table 4 shows delay values based on the geometrics at the study area intersections without and with improvements. Existing Plus Project delay calculation worksheets are provided in Appendix D. Existing Plus Project morning and evening peak hour intersection turning movement volumes are shown on Figures 26 and 27, respectively.

For Existing Plus Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

2. Opening Year (2017) With Ambient

The Opening Year (2017) With Ambient delay and Level of Service for the study area roadway network are shown in Table 5. Table 5 shows delay values based on the existing geometrics at the study area intersections. Opening Year (2017) With Ambient delay calculation worksheets are provided in Appendix D. Opening Year (2017) With Ambient morning and evening peak hour intersection turning movement volumes are shown on Figures 28 and 29, respectively.

For Opening Year (2017) With Ambient traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours.

3. Opening Year (2017) With Ambient and Project

The Opening Year (2017) With Ambient and Project delay and Level of Service for the study area roadway network are shown in Table 6. Table 6 shows delay values based on the geometrics at the study area intersections without and with improvements. Opening Year (2017) With Ambient and Project delay calculation worksheets are

provided in Appendix D. Opening Year (2017) With Ambient and Project morning and evening peak hour intersection turning movement volumes are shown on Figures 30 and 31, respectively.

For Opening Year (2017) With Ambient and Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

4. Opening Year (2017) With Ambient and Cumulative and Project

The Opening Year (2017) With Ambient and Cumulative and Project delay and Level of Service for the study area roadway network are shown in Table 7. Table 7 shows delay values based on the geometrics at the study area intersections without and with improvements. Opening Year (2017) With Ambient and Cumulative and Project delay calculation worksheets are provided in Appendix D. Opening Year (2017) With Ambient and Cumulative and Project morning and evening peak hour intersection turning movement volumes are shown on Figures 32 and 33, respectively.

For Opening Year (2017) With Ambient and Cumulative and Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

Table 3

Other Development Trip Generation[1]

Traffic Analysis Zone	Name	Land Use	Quantity	Units[2]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
1	ASP '13-43	Medical Office	5.306	TSF	10	3	13	5	14	19	192
2	DRP '14-11	Light Industrial - Cars	145.750	TSF	93	13	106	14	97	111	798
		Light Industrial - Trucks	145.750	TSF	57	10	67	10	61	71	493
	DRP '14-12	Light Industrial - Cars	322.750	TSF	205	28	233	30	216	246	1,768
		Light Industrial - Trucks	322.750	TSF	127	16	143	21	133	154	1,088
	ASP '13-24	Auto Repair Center	6.945	TSF	11	5	16	11	11	22	139
	ASP '13-47	Donation Center	47.902	TSF	35	16	51	120	120	240	2,742
Total					538	91	629	211	652	863	7,220

[1] Source: City of Fontana Development List

[2] TSF = Thousand Square Feet

[3] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 110, 720, 815, and 942.
City of Fontana, Truck Trip Generation Study, August 2003.
San Diego Association of Governments, Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

Table 4

Existing Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Redwood Avenue (NS) at:																
Project North Access (EW) - #1	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	9.0-A	9.2-A
Rosemary Drive (EW) - #2	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	9.9-A	9.9-A
Iris Drive (EW) - #3	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.2-B	10.0-A
Project South Access (EW) - #4	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	0	0	**1**	0	0	0	8.9-A	8.9-A
Hunter Street (EW) - #5	County of SB	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	10.5-B	10.6-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	TS	0.5	0.5	d	0.5	0.5	d	1	2	d	1	2	d	18.3-B	18.3-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Table 5

Opening Year (2017) With Ambient Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Redwood Avenue (NS) at:																
Rosemary Drive (EW) - #2	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	9.9-A	9.9-A
Iris Drive (EW) - #3	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.1-B	10.0-A
Hunter Street (EW) - #5	County of SB	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	10.3-B	10.5-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	TS	0.5	0.5	d	0.5	0.5	d	1	2	d	1	2	d	18.2-B	18.2-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Table 6

Opening Year (2017) With Ambient and Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Redwood Avenue (NS) at:																
Project North Access (EW) - #1	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	9.1-A	9.2-A
Rosemary Drive (EW) - #2	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.0-A	9.9-A
Iris Drive (EW) - #3	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.3-B	10.1-B
Project South Access (EW) - #4	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	0	0	**1**	0	0	0	8.9-A	8.9-A
Hunter Street (EW) - #5	County of SB	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	10.6-B	10.7-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	TS	0.5	0.5	d	0.5	0.5	d	1	2	d	1	2	d	18.4-B	18.5-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Table 7

Opening Year (2017) With Ambient and Cumulative and Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Redwood Avenue (NS) at:																
Project North Access (EW) - #1	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	9.1-A	9.2-A
Rosemary Drive (EW) - #2	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.0-A	9.9-A
Iris Drive (EW) - #3	County of SB	CSS	0	0.5	0.5	0.5	0.5	0	0	0	0	0.5	0	0.5	10.3-B	10.1-B
Project South Access (EW) - #4	County of SB	**CSS**	**0.5**	0.5	0	0	0.5	0.5	0	0	**1**	0	0	0	8.9-A	8.9-A
Hunter Street (EW) - #5	County of SB	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	10.6-B	10.7-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	TS	0.5	0.5	d	0.5	0.5	d	1	2	d	1	2	d	18.5-B	18.6-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross Street Stop; TS = Traffic Signal

Figure 18
Cumulative Development Traffic Analysis Zone Map

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KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 19
Cumulative Development Average Daily Traffic Volumes

5972/19

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 20
Cumulative Development
Morning Peak Hour Intersection Turning Movement Volumes

5972/20

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 21
Cumulative Development
Evening Peak Hour Intersection Turning Movement Volumes

5972/21

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 22
Existing Plus Project Average Daily Traffic Volumes

5972/22

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 23
Opening Year (2017) With Ambient Average Daily Traffic Volumes

5972/23

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 24
Opening Year (2017) With Ambient and Project Average Daily Traffic Volumes

5972/24

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 25
Opening Year (2017) With Ambient and Cumulative and Project Average Daily Traffic Volumes

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KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 26
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes

5972/26

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 27
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes

5972/27

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 28
Opening Year (2017) With Ambient
Morning Peak Hour Intersection Turning Movement Volumes

5972/28

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 29
Opening Year (2017) With Ambient
Evening Peak Hour Intersection Turning Movement Volumes

5972/29

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 30
Opening Year (2017) With Ambient and Project
Morning Peak Hour Intersection Turning Movement Volumes

5972/30

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 31
Opening Year (2017) With Ambient and Project
Evening Peak Hour Intersection Turning Movement Volumes

5972/31

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 32
Opening Year (2017) With Ambient and Cumulative and Project Morning Peak Hour Intersection Turning Movement Volumes

5972/32

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 33
Opening Year (2017) With Ambient and Cumulative and Project Evening Peak Hour Intersection Turning Movement Volumes

5972/33

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

V. Conclusions and Recommendations

A. Summary

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act.

The County of San Bernardino is the lead agency responsible for preparation of the traffic impact analysis, in accordance with the California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development in Year 2017, at which time it will be generating trips at its full potential.

A series of scoping discussions were conducted with the County of San Bernardino to define the desired analysis locations for each future analysis year. In addition, staff from the County of San Bernardino has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips in the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Fontana.

The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model (SBTAM) traffic model Year 2008 and Year 2035 average daily traffic volume forecasts (see Appendix C). This difference defines the growth in traffic over the 35 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between Year 2015 and Year 2035. For this purpose, linear growth between the Year 2008 base condition and the forecast Year 2035 condition was assumed. Since the increment between Year 2015 and Year 2035 is 20 years of the 35 year time frame, a factor of 0.57 (i.e., 20/35) was used.

The Buildout Year (2035) daily roadway segment volume forecasts have been determined using the growth increment approach on the SBTAM traffic model Year 2008 and Year 2035 volumes. The growth increment calculation worksheet is shown in Appendix C. Being that the SBTAM model only has traffic volumes for Valley Boulevard and does not have Redwood

Avenue, Rosemary Drive, Iris Drive, or Hunter Street within its network, a growth rate was formulated for Opening Year (2017) traffic conditions. The Existing and Opening Year (2017) average daily traffic volumes for Valley Boulevard were used to determine the growth rate. The formula used is: (((2017 ADT - Existing ADT) / Existing ADT) / 2 years). Using the ADT data as shown In Appendix C, the annual growth rate is 2.14% (((19,500 - 18,700) / 18700) / 2).

Opening Year (2017) traffic volumes consist of Existing traffic volumes with an annual ambient growth rate of 2.14% applied over a two year period (1.0214^2 = 1.0428).

The County of San Bernardino staff stated that there are no cumulative developments within the study area to be included in this analysis. The City of Fontana provided a list of cumulative development in the study area. Cumulative development has been added to Opening Year (2017) traffic conditions.

Project traffic volumes were then added to the SBTAM traffic model traffic volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes for Buildout Year (2035) traffic volumes. The Opening Year (2017) traffic volumes have been interpolated from the Buildout Year (2035) traffic volumes based upon a portion of the future growth increment. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

B. Existing Conditions

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Rosemary Drive, Iris Drive, Hunter Street, and Valley Boulevard. The north-south roadway expected to provide local access is Redwood Avenue.

For Existing traffic conditions, the study area intersections currently operate within acceptable Levels of Service during the peak hours.

C. Project Trips

Trip generation rates were determined for daily trips, morning peak hour inbound and outbound trips, and evening peak hour inbound and outbound trips for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation, 9th Edition, and the City of Fontana, Truck Trip Generation Study, August 2003.

The proposed development is projected to generate approximately 474 daily vehicle trips in Passenger Car Equivalent's, 32 of which will occur during the morning peak hour in Passenger Car Equivalent's and 34 of which will occur during the evening peak hour in Passenger Car Equivalent's.

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site and other additional information on future development and traffic impacts in the area were reviewed.

D. Future Conditions

An Existing Plus Project and Opening Year (2017) analysis are included in this report. The traffic operations analyses are summarized in Table 8.

1. Existing Plus Project

   For Existing Plus Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

2. Opening Year (2017) With Ambient

   For Opening Year (2017) With Ambient traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours.

3. Opening Year (2017) With Ambient and Project

   For Opening Year (2017) With Ambient and Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

4. Opening Year (2017) With Ambient and Cumulative and Project

   For Opening Year (2017) With Ambient and Cumulative and Project traffic conditions, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

E. Recommendations

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements.

1. On-Site Improvements

   On-site improvements and improvements adjacent to the site will be required in conjunction with the proposed development to ensure adequate circulation within the project itself (see Figure 34).

   Construct Redwood Avenue from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Sight distance at project accesses should be reviewed with respect to California Department of Transportation/County of San Bernardino standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the County and approved as consistent with this measure prior to issue of grading permits.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

The site should provide sufficient parking spaces to meet County of San Bernardino parking code requirements in order to service on-site parking demand.

2. Off-Site Improvements

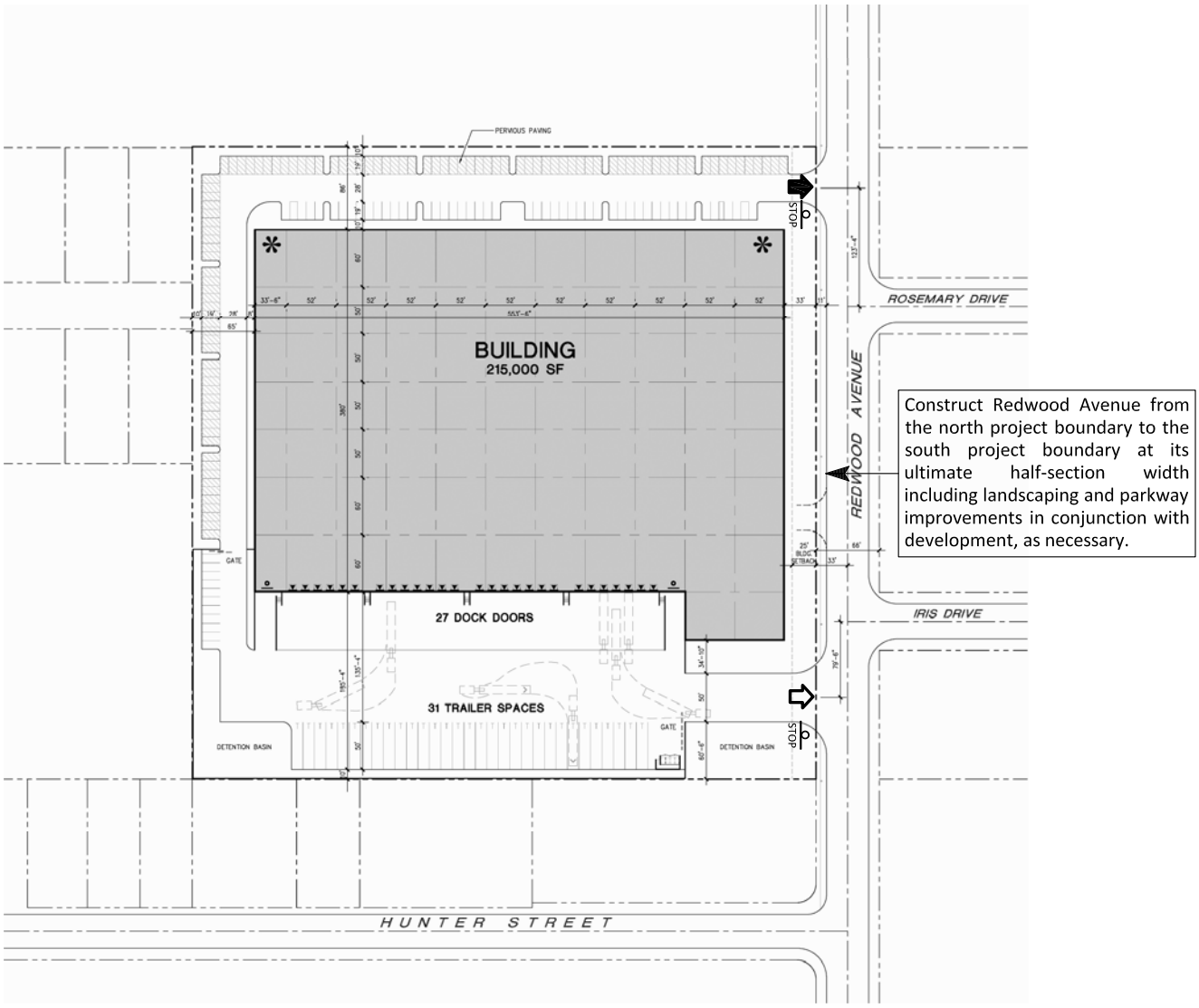
As is the case for any roadway design, the County of San Bernardino should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Table 8

Intersection Delay and Level of Service Summary

Intersection	Jurisdiction	Peak Hour Delay-LOS									
						Opening Year (2017)					
		Existing		Existing Plus Project		With Ambient		With Ambient and Project		With Ambient and Cumulative and Project	
		Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening
Redwood Avenue (NS) at:											
Project North Access (EW) - #1	County of SB	--	--	9.0-A	9.2-A	--	--	9.1-A	9.2-A	9.1-A	9.2-A
Rosemary Drive (EW) - #2	County of SB	9.8-A	9.8-A	9.9-A	9.9-A	9.9-A	9.9-A	10.0-A	9.9-A	10.0-A	9.9-A
Iris Drive (EW) - #3	County of SB	10.0-B	9.9-A	10.2-B	10.0-A	10.1-B	10.0-A	10.3-B	10.1-B	10.3-B	10.1-B
Project South Access (EW) - #4	County of SB	--	--	8.9-A	8.9-A	--	--	8.9-A	8.9-A	8.9-A	8.9-A
Hunter Street (EW) - #5	County of SB	10.2-B	10.3-B	10.5-B	10.6-B	10.3-B	10.5-B	10.6-B	10.7-B	10.6-B	10.7-B
Valley Boulevard (EW) - #6	County of SB/City of Fontana	18.1-B	18.0-B	18.3-B	18.3-B	18.2-B	18.2-B	18.4-B	18.5-B	18.5-B	18.6-B

Figure 34
Circulation Recommendations



Sight distance at project accesses should be reviewed with respect to California Department of Transportation/County of San Bernardino standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the County and approved as consistent with this measure prior to issue of grading permits.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.

The site should provide sufficient parking spaces to meet County of San Bernardino parking code requirements in order to service on-site parking demand.

As is the case for any roadway design, the County of San Bernardino should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Legend

STOP = Stop Sign
= Full Access Driveway
= Right Turns In/Out Only and Left Turns In Only Access Driveway

5972/34

Appendices

Appendix A – Glossary of Transportation Terms

Appendix B – Traffic Count Worksheets

Appendix C – Future Growth Increment Calculation Worksheets

Appendix D – Explanation and Calculation of Intersection Delay

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Traffic Count Worksheets

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Tue, Jan 13, 15	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	1
	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB 0	SB 0	EB X	WB X	TTL
AM	7:00 AM	0	16	4	1	32	0	0	0	0	4	0	0	57	0	0	0	0	0
	7:15 AM	0	14	1	0	18	0	0	0	0	5	0	0	38	0	0	0	0	0
	7:30 AM	0	15	2	0	10	0	0	0	0	0	0	1	28	0	0	0	0	0
	7:45 AM	0	12	7	1	15	0	0	0	0	2	0	1	38	2	0	0	0	2
	8:00 AM	0	8	1	1	18	0	0	0	0	0	0	3	31	0	0	0	0	0
	8:15 AM	0	13	2	0	22	0	0	0	0	0	0	1	38	0	1	0	0	1
	8:30 AM	0	8	1	1	15	0	0	0	0	3	0	0	28	0	0	0	0	0
	8:45 AM	0	14	1	0	20	0	0	0	0	1	0	2	38	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	100	19	4	150	0	0	0	0	15	0	8	296	2	1	0	0	3
	APPROACH %	0%	84%	16%	3%	97%	0%	0%	0%	0%	65%	0%	35%						
	APP/DEPART	119	/	108	154	/	165	0	/	23	23	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	57	14	2	75	0	0	0	0	11	0	2	161					
	APPROACH %	0%	80%	20%	3%	97%	0%	0%	0%	0%	85%	0%	15%						
	PEAK HR FACTOR		0.888			0.583			0.000			0.650		0.706					
	APP/DEPART	71	/	59	77	/	86	0	/	16	13	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	10	5	2	24	0	0	0	0	2	0	1	44	0	0	0	0	0
	4:15 PM	0	18	8	1	14	0	0	0	0	0	0	1	42	0	0	0	0	0
	4:30 PM	0	31	5	1	29	0	0	0	0	1	0	0	67	1	0	0	0	1
	4:45 PM	0	24	3	2	18	0	0	0	0	1	0	0	48	0	0	0	0	0
	5:00 PM	0	28	8	2	21	0	0	0	0	7	0	3	69	0	0	0	0	0
	5:15 PM	0	30	7	1	19	0	0	0	0	0	0	2	59	0	0	0	0	0
	5:30 PM	0	25	7	1	20	0	0	0	0	3	0	2	58	0	0	0	0	0
	5:45 PM	0	24	5	1	12	0	0	0	0	2	0	2	46	0	0	0	0	0
	VOLUMES	0	190	48	11	157	0	0	0	0	16	0	11	433	1	0	0	0	1
	APPROACH %	0%	80%	20%	7%	93%	0%	0%	0%	0%	59%	0%	41%						
	APP/DEPART	238	/	201	168	/	173	0	/	59	27	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	113	23	6	87	0	0	0	0	9	0	5	243					
	APPROACH %	0%	83%	17%	6%	94%	0%	0%	0%	0%	64%	0%	36%						
	PEAK HR FACTOR		0.919			0.775			0.000			0.350		0.880					
	APP/DEPART	136	/	118	93	/	96	0	/	29	14	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE EAST SIDE **Rosemary**

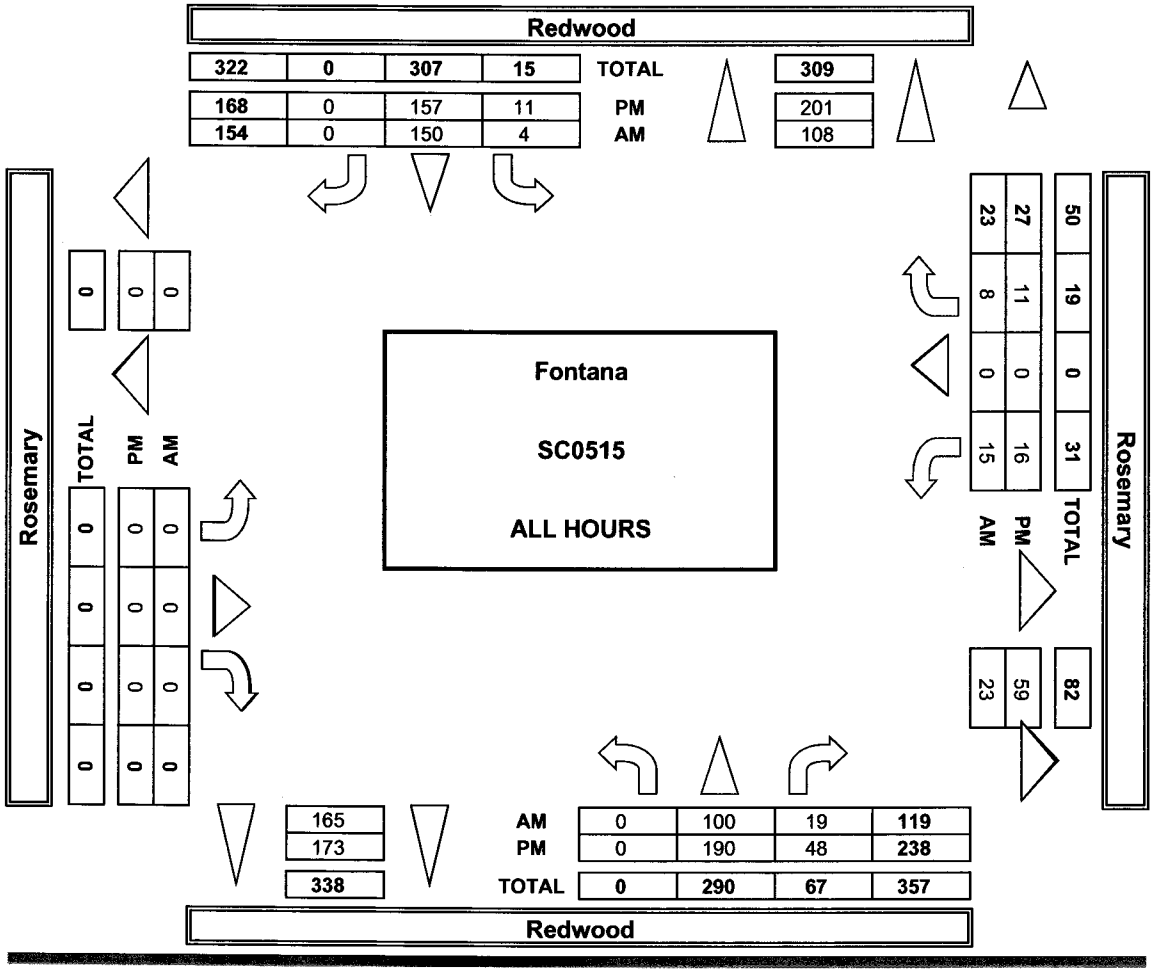
SOUTH SIDE

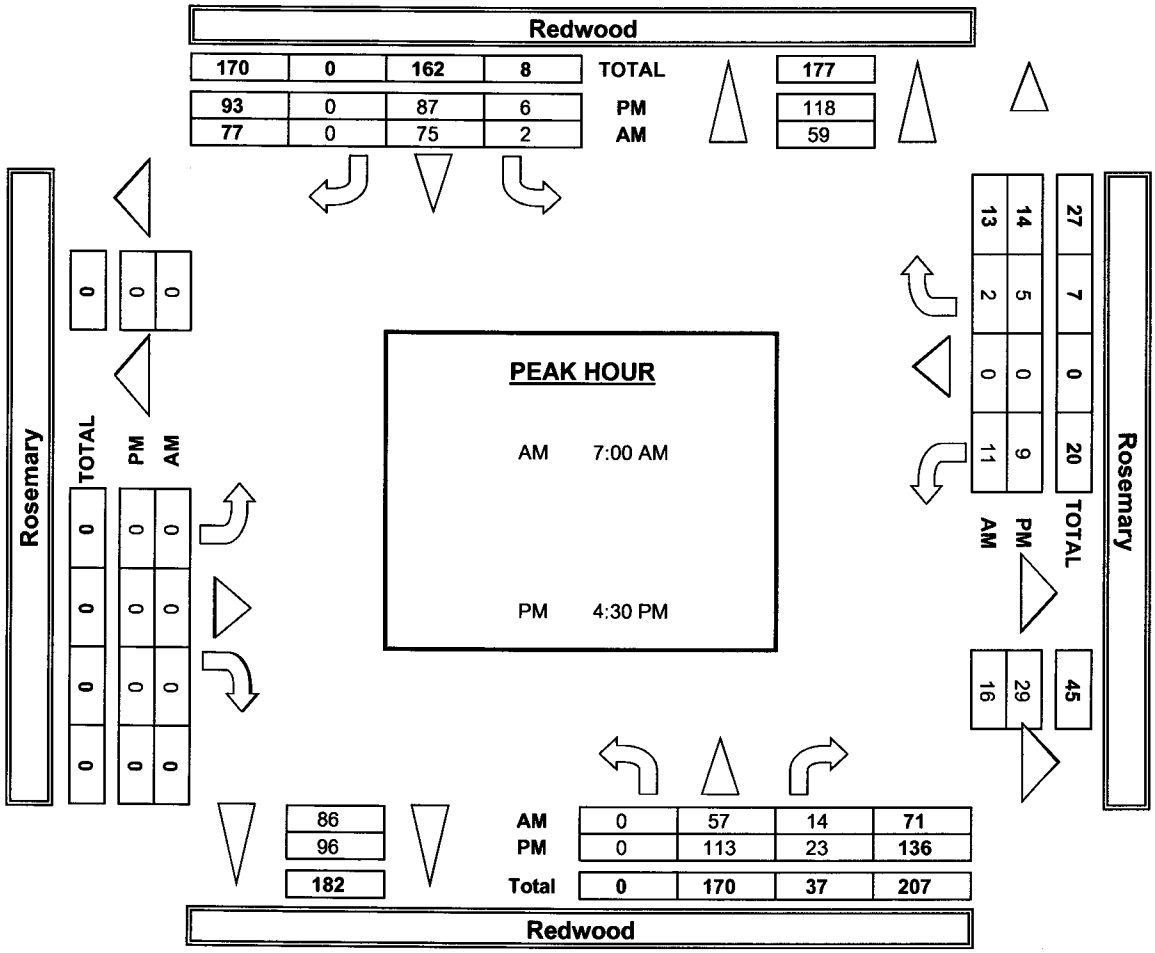
Redwood

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 1: PASSENGER VEHICLES

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	16	3	1	27	0	0	0	0	4	0	0	51					0
	7:15 AM	0	11	1	0	16	0	0	0	0	5	0	0	33					0
	7:30 AM	0	14	2	0	10	0	0	0	0	0	0	1	27					0
	7:45 AM	0	11	7	0	12	0	0	0	0	1	0	1	32					0
	8:00 AM	0	8	0	1	17	0	0	0	0	0	0	3	29					0
	8:15 AM	0	10	1	0	21	0	0	0	0	0	0	1	33					0
	8:30 AM	0	7	0	1	13	0	0	0	0	3	0	0	24					0
	8:45 AM	0	10	0	0	16	0	0	0	0	1	0	2	29					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	87	14	3	132	0	0	0	0	14	0	8	258	0	0	0	0	0
	APPROACH %	0%	86%	14%	2%	98%	0%	0%	0%	0%	64%	0%	36%						
	APP/DEPART	101	/	95	135	/	146	0	/	17	22	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	52	13	1	65	0	0	0	0	10	0	2	143					
	APPROACH %	0%	80%	20%	2%	98%	0%	0%	0%	0%	83%	0%	17%						
	PEAK HR FACTOR		0.855			0.589			0.000			0.600		0.701					
	APP/DEPART	65	/	54	66	/	75	0	/	14	12	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	10	5	2	21	0	0	0	0	2	0	1	41					0
	4:15 PM	0	14	8	1	11	0	0	0	0	0	0	1	35					0
	4:30 PM	0	30	4	1	24	0	0	0	0	0	0	0	59					0
	4:45 PM	0	21	3	2	16	0	0	0	0	1	0	0	43					0
	5:00 PM	0	24	8	1	20	0	0	0	0	7	0	3	63					0
	5:15 PM	0	28	7	1	18	0	0	0	0	0	0	2	56					0
	5:30 PM	0	22	7	1	18	0	0	0	0	3	0	2	53					0
	5:45 PM	0	22	5	1	12	0	0	0	0	2	0	2	44					0
	VOLUMES	0	171	47	10	140	0	0	0	0	15	0	11	394	0	0	0	0	0
	APPROACH %	0%	78%	22%	7%	93%	0%	0%	0%	0%	58%	0%	42%						
	APP/DEPART	218	/	182	150	/	155	0	/	57	26	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	103	22	5	78	0	0	0	0	8	0	5	221					
	APPROACH %	0%	82%	18%	6%	94%	0%	0%	0%	0%	62%	0%	38%						
	PEAK HR FACTOR		0.893			0.830			0.000			0.325		0.877					
	APP/DEPART	125	/	108	83	/	86	0	/	27	13	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	2					0
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	8:45 AM	0	4	0	0	3	0	0	0	0	0	0	0	7					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	7	1	0	5	0	0	0	0	0	0	0	13	0	0	0	0	0
	APPROACH %	0%	88%	13%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	8	/	7	5	/	5	0	/	1	0	/	0	0					
	BEGIN PEAK HR		8:30 AM																
	VOLUMES	0	5	0	0	3	0	0	0	0	0	0	0	8					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.313			0.250			0.000			0.000		0.286					
	APP/DEPART	5	/	5	3	/	3	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	4:15 PM	0	4	0	0	3	0	0	0	0	0	0	0	7					0
	4:30 PM	0	1	1	0	5	0	0	0	0	1	0	0	8					0
	4:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	4					0
	5:00 PM	0	4	0	1	1	0	0	0	0	0	0	0	6					0
	5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3					0
	5:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2					0
	VOLUMES	0	16	1	1	13	0	0	0	0	1	0	0	32	0	0	0	0	0
	APPROACH %	0%	94%	6%	7%	93%	0%	0%	0%	0%	100%	0%	0%						
	APP/DEPART	17	/	16	14	/	14	0	/	2	1	/	0	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	11	1	1	11	0	0	0	0	1	0	0	25					
	APPROACH %	0%	92%	8%	8%	92%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.750			0.600			0.000			0.250		0.781					
	APP/DEPART	12	/	11	12	/	12	0	/	2	1	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 3: 3-AXLE TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1					0
	8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	2	/	1	0	/	1	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	1	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500					
	APP/DEPART	0	/	0	2	/	1	0	/	1	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	7:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	1	0	0	2	0	0	0	0	0	0	0	3					0
	8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1					0
	8:15 AM	0	2	1	0	1	0	0	0	0	0	0	0	4					0
	8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	2					0
	8:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	2					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	5	4	0	7	0	0	0	0	0	0	0	16	0	0	0	0	0
	APPROACH %	0%	56%	44%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	9	/	5	7	/	7	0	/	4	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	3	3	0	4	0	0	0	0	0	0	0	10					
	APPROACH %	0%	50%	50%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.500			0.000			0.000		0.625					
	APP/DEPART	6	/	3	4	/	4	0	/	3	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2					0
	5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	3	/	3	2	/	2	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	3	0	0	2	0	0	0	0	0	0	0	5					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.375			0.250			0.000			0.000		0.625					
	APP/DEPART	3	/	3	2	/	2	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 5: RV

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		5:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	1
TUESDAY	EAST & WEST:	Rosemary	CONTROL:	Stop 1way W

CLASS 6: BUSES

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Rosemary			WESTBOUND Rosemary				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	1	0	0	0	0	1	0	0	2					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	1	0	0	2	0	0	0	0	1	0	0	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	APP/DEPART	1	/	1	2	/	3	0	/	0	1	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	1	0	0	2	0	0	0	0	1	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%						
	PEAK HR FACTOR		0.250			0.500			0.000			0.250		0.500					
	APP/DEPART	1	/	1	2	/	3	0	/	0	1	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Rosemary WEST SIDE

EAST SIDE **Rosemary**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Tue, Jan 13, 15	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	2
	EAST & WEST:	Iris	CONTROL:	Stop 1way W

NOTES:

▲ N
◄ W E ►
S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	0	20	2	0	38	0	0	0	0	4	0	0	64	0	0	0	0	0
	7:15 AM	0	15	0	0	22	0	0	0	0	4	0	0	41	0	0	0	0	0
	7:30 AM	0	17	1	0	10	0	0	0	0	5	0	1	34	0	0	0	0	0
	7:45 AM	0	22	2	0	17	0	0	0	0	3	0	0	44	0	0	0	0	0
	8:00 AM	0	10	3	0	19	0	0	0	0	0	0	0	32	0	0	0	0	0
	8:15 AM	0	15	3	0	22	0	0	0	0	4	0	0	44	0	0	0	0	0
	8:30 AM	0	9	2	0	17	0	0	0	0	2	0	0	30	0	0	0	0	0
	8:45 AM	0	16	3	2	20	0	0	0	0	1	0	0	42	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	124	16	2	165	0	0	0	0	23	0	1	331	0	0	0	0	0
	APPROACH %	0%	89%	11%	1%	99%	0%	0%	0%	0%	96%	0%	4%						
	APP/DEPART	140	/	125	167	/	188	0	/	18	24	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	74	5	0	87	0	0	0	0	16	0	1	183					
	APPROACH %	0%	94%	6%	0%	100%	0%	0%	0%	0%	94%	0%	6%						
	PEAK HR FACTOR		0.823			0.572			0.000			0.708		0.715					
	APP/DEPART	79	/	75	87	/	103	0	/	5	17	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	15	5	2	24	0	0	0	0	0	0	0	46	0	0	0	0	0
	4:15 PM	0	28	5	0	14	0	0	0	0	1	0	0	48	0	0	0	0	0
	4:30 PM	0	36	4	2	29	0	0	0	0	1	0	2	74	0	0	0	0	0
	4:45 PM	0	27	7	0	19	0	0	0	0	1	0	0	54	0	0	0	0	0
	5:00 PM	0	36	3	0	28	0	0	0	0	4	0	2	73	0	0	0	0	0
	5:15 PM	0	36	6	0	19	0	0	0	0	2	0	1	64	0	0	0	0	0
	5:30 PM	0	30	4	1	21	0	0	0	0	1	0	2	59	0	0	0	0	0
	5:45 PM	0	25	1	0	16	0	0	0	0	0	0	2	44	0	0	0	0	0
	VOLUMES	0	233	35	5	170	0	0	0	0	10	0	9	462	0	0	0	0	0
	APPROACH %	0%	87%	13%	3%	97%	0%	0%	0%	0%	53%	0%	47%						
	APP/DEPART	268	/	242	175	/	180	0	/	40	19	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	135	20	2	95	0	0	0	0	8	0	5	265					
	APPROACH %	0%	87%	13%	2%	98%	0%	0%	0%	0%	62%	0%	38%						
	PEAK HR FACTOR		0.923			0.782			0.000			0.542		0.895					
	APP/DEPART	155	/	140	97	/	103	0	/	22	13	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE EAST SIDE **Iris**

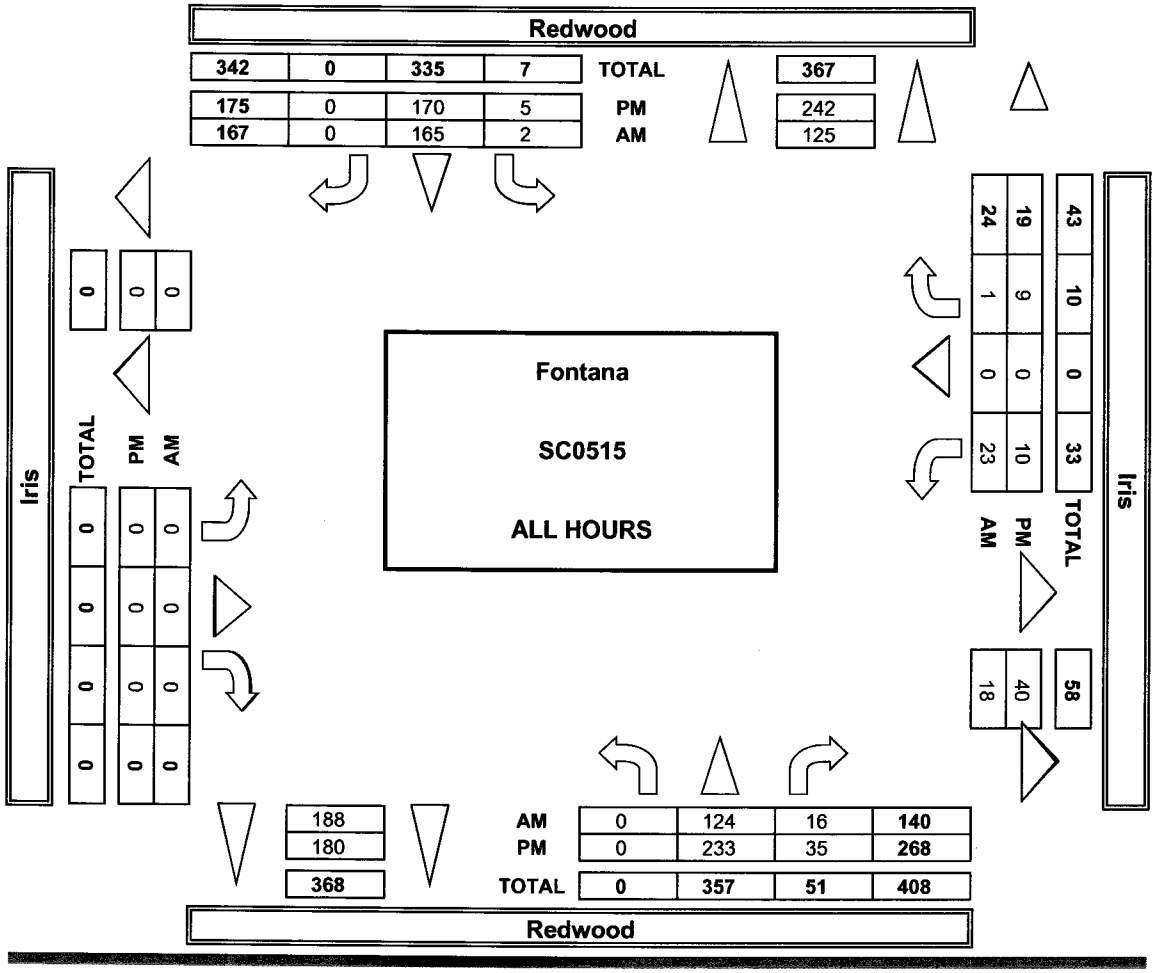
SOUTH SIDE

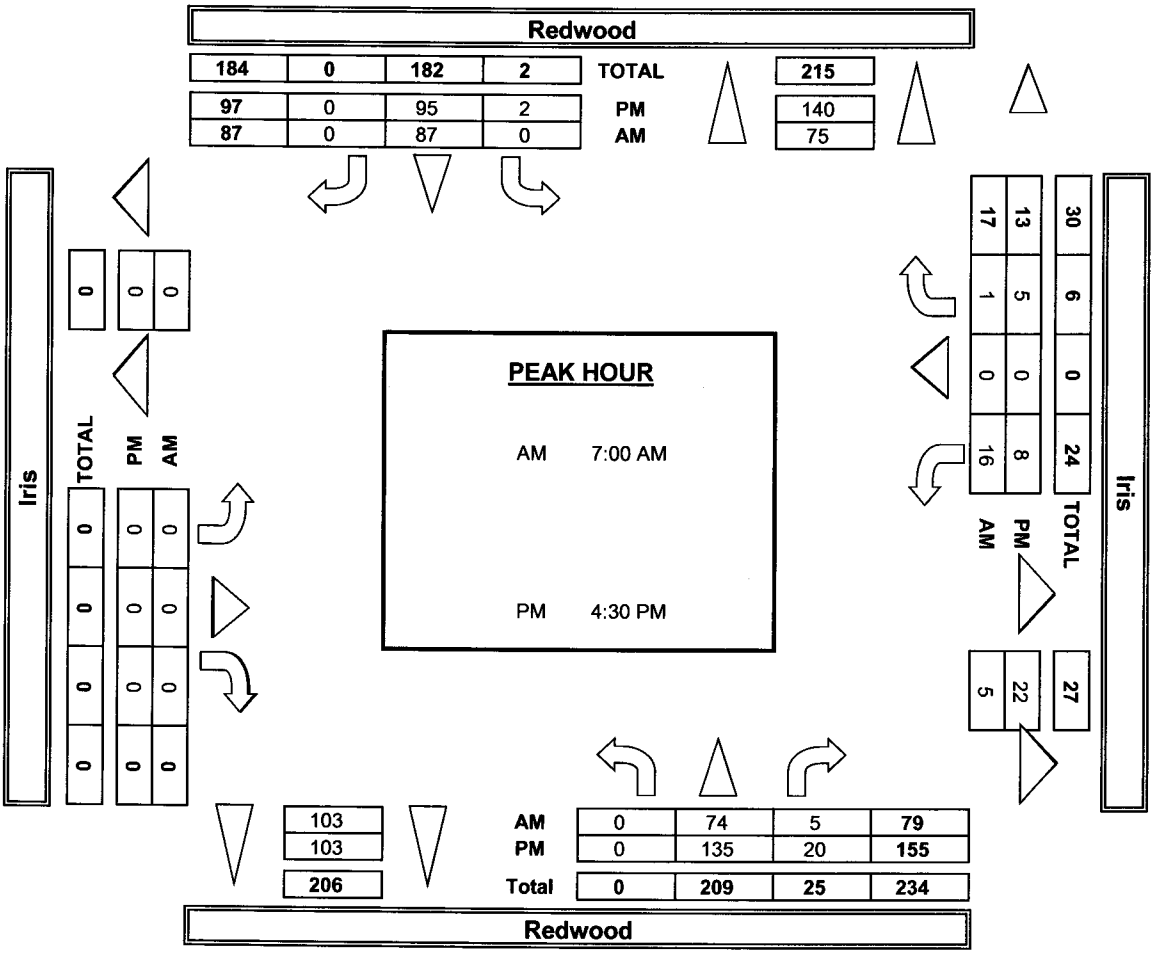
Redwood

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	2
TUESDAY	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 1: PASSENGER VEHICLES

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	19	2	0	33	0	0	0	0	4	0	0	58					0
	7:15 AM	0	12	0	0	20	0	0	0	0	4	0	0	36					0
	7:30 AM	0	16	1	0	10	0	0	0	0	5	0	1	33					0
	7:45 AM	0	21	2	0	13	0	0	0	0	3	0	0	39					0
	8:00 AM	0	9	3	0	18	0	0	0	0	0	0	0	30					0
	8:15 AM	0	11	3	0	21	0	0	0	0	4	0	0	39					0
	8:30 AM	0	7	2	0	15	0	0	0	0	2	0	0	26					0
	8:45 AM	0	14	3	2	16	0	0	0	0	1	0	0	36					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	109	16	2	146	0	0	0	0	23	0	1	297	0	0	0	0	0
	APPROACH %	0%	87%	13%	1%	99%	0%	0%	0%	0%	96%	0%	4%						
	APP/DEPART	125	/	110	148	/	169	0	/	18	24	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	68	5	0	76	0	0	0	0	16	0	1	166					
	APPROACH %	0%	93%	7%	0%	100%	0%	0%	0%	0%	94%	0%	6%						
	PEAK HR FACTOR		0.793			0.576			0.000			0.708		0.716					
	APP/DEPART	73	/	69	76	/	92	0	/	5	17	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	15	5	1	22	0	0	0	0	0	0	0	43					0
	4:15 PM	0	27	5	0	13	0	0	0	0	1	0	0	46					0
	4:30 PM	0	34	4	1	27	0	0	0	0	1	0	2	69					0
	4:45 PM	0	25	7	0	17	0	0	0	0	1	0	0	50					0
	5:00 PM	0	33	3	0	27	0	0	0	0	4	0	2	69					0
	5:15 PM	0	33	6	0	18	0	0	0	0	2	0	1	60					0
	5:30 PM	0	27	4	1	20	0	0	0	0	1	0	2	55					0
	5:45 PM	0	24	1	0	15	0	0	0	0	0	0	2	42					0
	VOLUMES	0	218	35	3	159	0	0	0	0	10	0	9	434	0	0	0	0	0
	APPROACH %	0%	86%	14%	2%	98%	0%	0%	0%	0%	53%	0%	47%						
	APP/DEPART	253	/	227	162	/	169	0	/	38	19	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	125	20	1	89	0	0	0	0	8	0	5	248					
	APPROACH %	0%	86%	14%	1%	99%	0%	0%	0%	0%	62%	0%	38%						
	PEAK HR FACTOR		0.929			0.804			0.000			0.542		0.899					
	APP/DEPART	145	/	130	90	/	97	0	/	21	13	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 1/13/15 TUESDAY	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	2
	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	1	0	0	2	0	0	0	0	0	0	0	3					0
	7:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	2					0
	8:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	4					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	8	0	0	6	0	0	0	0	0	0	0	14	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	8	/	8	6	/	6	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:15 AM																
	VOLUMES	0	5	0	0	2	0	0	0	0	0	0	0	7					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.625			0.250			0.000			0.000		0.438					
	APP/DEPART	5	/	5	2	/	2	0	/	0	0	/	0	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	2					0
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	4:30 PM	0	2	0	1	2	0	0	0	0	0	0	0	5					0
	4:45 PM	0	1	0	0	2	0	0	0	0	0	0	0	3					0
	5:00 PM	0	3	0	0	1	0	0	0	0	0	0	0	4					0
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3					0
	5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	VOLUMES	0	12	0	2	8	0	0	0	0	0	0	0	22	0	0	0	0	0
	APPROACH %	0%	100%	0%	20%	80%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	12	/	12	10	/	8	0	/	2	0	/	0	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	7	0	1	6	0	0	0	0	0	0	0	14					
	APPROACH %	0%	100%	0%	14%	86%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.583			0.583			0.000			0.000		0.700					
	APP/DEPART	7	/	7	7	/	6	0	/	1	0	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:				
1/13/15	LOCATION:	Fontana	PROJECT #:	SC0515
TUESDAY	NORTH & SOUTH:	Redwood	LOCATION #:	2
	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 3: 3-AXLE TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		5:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	2
TUESDAY	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	8:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3					0
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	6	0	0	6	0	0	0	0	0	0	0	12	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	6	/	6	6	/	6	0	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	3	0	0	4	0	0	0	0	0	0	0	7					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.375			0.500			0.000			0.000		0.583					
	APP/DEPART	3	/	3	4	/	4	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2					0
	5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	VOLUMES	0	3	0	0	2	0	0	0	0	0	0	0	5	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	3	/	3	2	/	2	0	/	0	0	/	0	0					
	BEGIN PEAK HR		5:15 PM																
	VOLUMES	0	2	0	0	2	0	0	0	0	0	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.500			0.000			0.000		0.500					
	APP/DEPART	2	/	2	2	/	2	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	2
TUESDAY	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 5: RV

NOTES:

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		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL
	LANES:	X	1	0	0	1	X	X	X	X	0.5	X	0.5						
AM	7:00 AM	0	0	0	0	3	0	0	0	0	0	0	0	3					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	3	0	0	0	0	0	0	0	3					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	3	/	3	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		5:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	2
TUESDAY	EAST & WEST:	Iris	CONTROL:	Stop 1way W

CLASS 6:	NOTES:
BUSES	

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		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Iris			WESTBOUND Iris				U-TURNS				
	LANES:	NL X	NT 1	NR 0	SL 0	ST 1	SR X	EL X	ET X	ER X	WL 0.5	WT X	WR 0.5	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	1	0	0	3	0	0	0	0	0	0	0	4					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.250			0.375			0.000			0.000		0.500					
	APP/DEPART	1	/	1	3	/	3	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Iris WEST SIDE

EAST SIDE **Iris**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Tue, Jan 13, 15	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	3
	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

NOTES:

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		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB 0	SB X	EB X	WB X	TTL
AM	7:00 AM	0	16	0	0	39	5	11	0	10	0	0	0	81	0	0	0	0	0
	7:15 AM	1	10	0	0	21	3	3	0	3	0	0	0	41	0	0	0	0	0
	7:30 AM	1	10	0	0	16	0	10	0	3	0	0	0	40	0	0	0	0	0
	7:45 AM	3	8	0	0	15	5	15	0	7	0	0	0	53	0	0	0	0	0
	8:00 AM	1	6	0	0	14	3	10	0	6	0	0	0	40	0	0	0	0	0
	8:15 AM	1	8	0	0	24	4	10	0	8	0	0	0	55	1	0	0	0	1
	8:30 AM	1	6	0	0	19	2	6	0	8	0	0	0	42	0	0	0	0	0
	8:45 AM	6	15	0	0	20	3	5	0	5	0	0	0	54	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	14	79	0	0	168	25	70	0	50	0	0	0	406	1	0	0	0	1
	APPROACH %	15%	85%	0%	0%	87%	13%	58%	0%	42%	0%	0%	0%						
	APP/DEPART	93	/	149	193	/	218	120	/	0	0	/	39	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	5	44	0	0	91	13	39	0	23	0	0	0	215					
	APPROACH %	10%	90%	0%	0%	88%	13%	63%	0%	37%	0%	0%	0%						
	PEAK HR FACTOR		0.766			0.591			0.705			0.000		0.664					
	APP/DEPART	49	/	83	104	/	114	62	/	0	0	/	18	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	4	13	0	0	22	3	5	0	20	0	0	0	67	0	0	0	0	0
	4:15 PM	1	22	0	0	14	4	14	0	10	0	0	0	65	0	0	0	0	0
	4:30 PM	4	26	0	0	34	3	10	0	17	0	0	0	94	0	0	0	0	0
	4:45 PM	0	22	0	0	19	4	12	0	15	0	0	0	72	0	0	0	0	0
	5:00 PM	6	31	0	0	32	2	13	0	15	0	0	0	99	1	0	0	0	1
	5:15 PM	1	26	0	0	20	1	10	0	9	0	0	0	67	0	0	0	0	0
	5:30 PM	1	21	0	0	20	3	11	0	10	0	0	0	66	0	0	0	0	0
	5:45 PM	0	23	0	0	13	1	7	0	9	0	0	0	53	0	0	0	0	0
	VOLUMES	17	184	0	0	174	21	82	0	105	0	0	0	583	1	0	0	0	1
	APPROACH %	8%	92%	0%	0%	89%	11%	44%	0%	56%	0%	0%	0%						
	APP/DEPART	201	/	266	195	/	279	187	/	0	0	/	38	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	11	105	0	0	105	10	45	0	56	0	0	0	332					
	APPROACH %	9%	91%	0%	0%	91%	9%	45%	0%	55%	0%	0%	0%						
	PEAK HR FACTOR		0.784			0.777			0.902			0.000		0.838					
	APP/DEPART	116	/	150	115	/	161	101	/	0	0	/	21	0					

Redwood

NORTH SIDE

Hunter WEST SIDE EAST SIDE **Hunter**

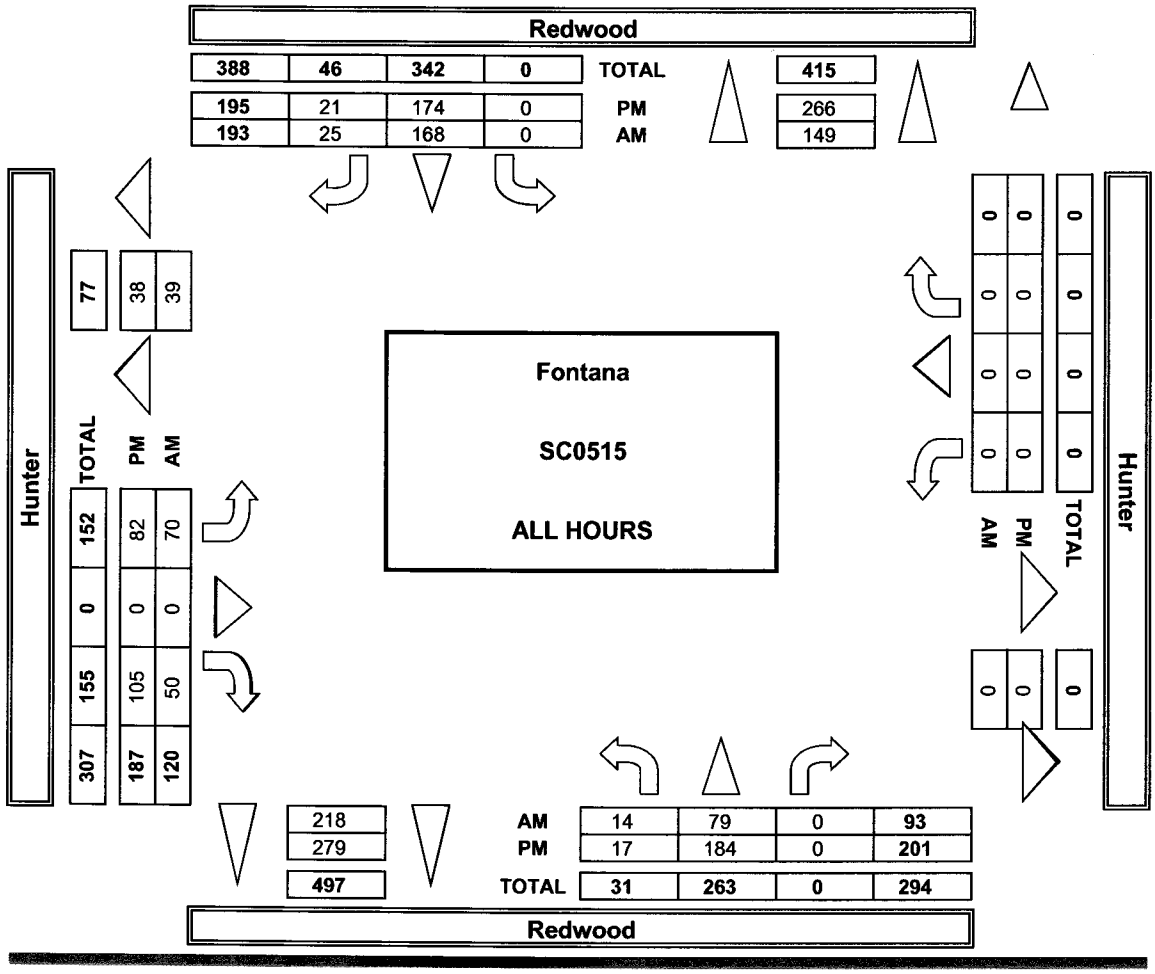
SOUTH SIDE

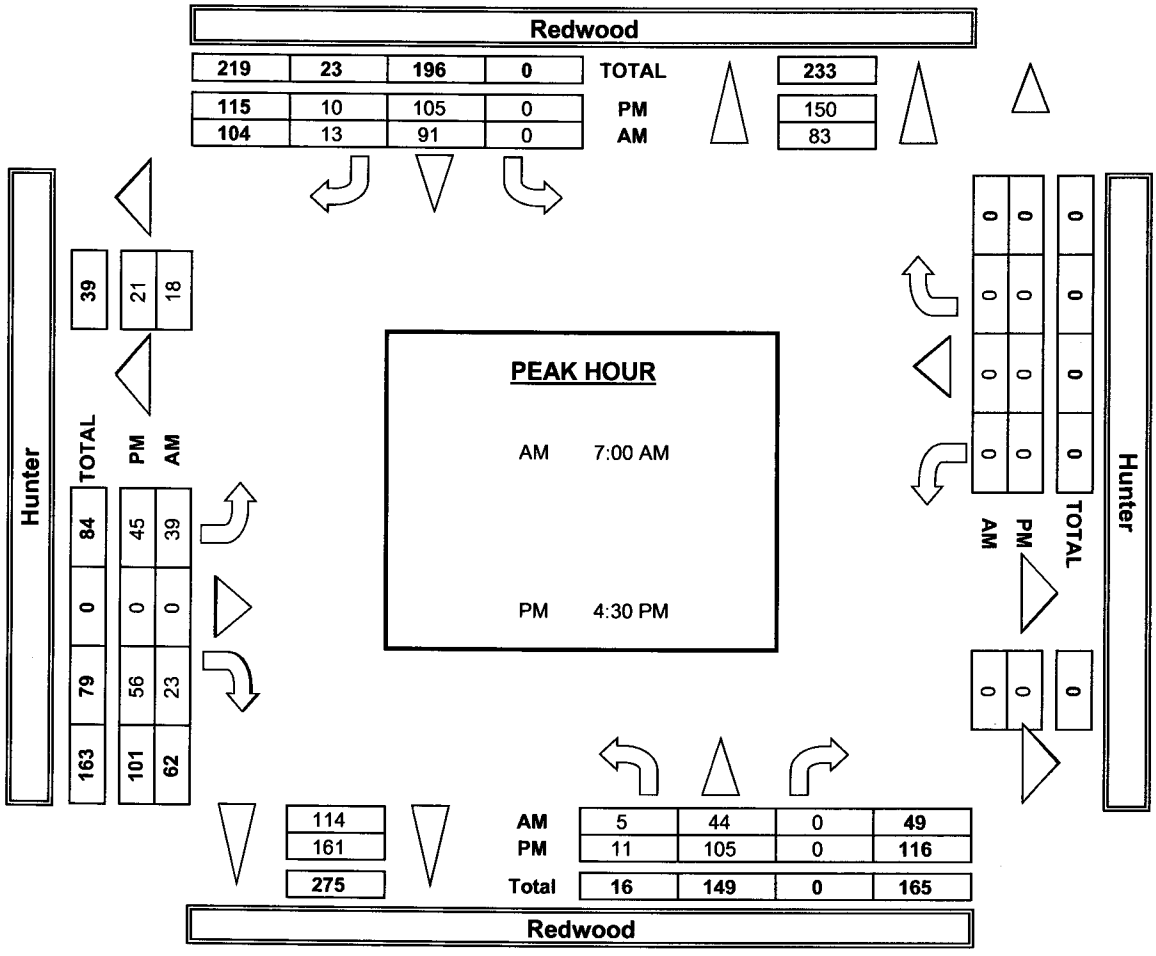
Redwood

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:				
1/13/15	LOCATION:	Fontana	PROJECT #:	SC0515
TUESDAY	NORTH & SOUTH:	Redwood	LOCATION #:	3
	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 1: PASSENGER VEHICLES

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	15	0	0	37	5	10	0	8	0	0	0	75					0
	7:15 AM	1	8	0	0	19	3	3	0	3	0	0	0	37					0
	7:30 AM	1	10	0	0	15	0	9	0	3	0	0	0	38					0
	7:45 AM	3	8	0	0	13	4	14	0	7	0	0	0	49					0
	8:00 AM	0	4	0	0	12	3	9	0	6	0	0	0	34					0
	8:15 AM	1	7	0	0	22	4	8	0	8	0	0	0	50					0
	8:30 AM	1	6	0	0	17	2	4	0	7	0	0	0	37					0
	8:45 AM	4	10	0	0	15	3	4	0	5	0	0	0	41					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	11	68	0	0	150	24	61	0	47	0	0	0	361	0	0	0	0	0
	APPROACH %	14%	86%	0%	0%	86%	14%	56%	0%	44%	0%	0%	0%						
	APP/DEPART	79	/	129	174	/	197	108	/	0	0	/	35	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	5	41	0	0	84	12	36	0	21	0	0	0	199					
	APPROACH %	11%	89%	0%	0%	88%	13%	63%	0%	37%	0%	0%	0%						
	PEAK HR FACTOR		0.767			0.571			0.679			0.000		0.663					
	APP/DEPART	46	/	77	96	/	105	57	/	0	0	/	17	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	2	13	0	0	20	3	5	0	19	0	0	0	62					0
	4:15 PM	1	20	0	0	13	3	13	0	9	0	0	0	59					0
	4:30 PM	3	23	0	0	30	3	9	0	17	0	0	0	85					0
	4:45 PM	0	19	0	0	18	4	12	0	15	0	0	0	68					0
	5:00 PM	6	29	0	0	31	2	12	0	13	0	0	0	93					0
	5:15 PM	1	23	0	0	19	1	10	0	8	0	0	0	62					0
	5:30 PM	1	18	0	0	18	3	11	0	10	0	0	0	61					0
	5:45 PM	0	23	0	0	12	1	6	0	8	0	0	0	50					0
	VOLUMES	14	168	0	0	161	20	78	0	99	0	0	0	540	0	0	0	0	0
	APPROACH %	8%	92%	0%	0%	89%	11%	44%	0%	56%	0%	0%	0%						
	APP/DEPART	182	/	246	181	/	260	177	/	0	0	/	34	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	10	94	0	0	98	10	43	0	53	0	0	0	308					
	APPROACH %	10%	90%	0%	0%	91%	9%	45%	0%	55%	0%	0%	0%						
	PEAK HR FACTOR		0.743			0.818			0.889			0.000		0.828					
	APP/DEPART	104	/	137	108	/	151	96	/	0	0	/	20	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	3
TUESDAY	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MID / OVERN / TOTAL

N ▲ / ◄ W / E ► / S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	1	0	1	0	1	0	0	0	3					0
	7:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	3					0
	7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1					0
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:00 AM	1	1	0	0	2	0	0	0	0	0	0	0	4					0
	8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1					0
	8:45 AM	2	5	0	0	3	0	0	0	0	0	0	0	10					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	3	8	0	0	9	0	3	0	1	0	0	0	24	0	0	0	0	0
	APPROACH %	27%	73%	0%	0%	100%	0%	75%	0%	25%	0%	0%	0%						
	APP/DEPART	11	/	11	9	/	10	4	/	0	0	/	3	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	3	6	0	0	6	0	1	0	0	0	0	0	16					
	APPROACH %	33%	67%	0%	0%	100%	0%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.321			0.500			0.250			0.000		0.400					
	APP/DEPART	9	/	7	6	/	6	1	/	0	0	/	3	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	2	0	0	0	1	0	0	0	0	0	0	0	3					0
	4:15 PM	0	2	0	0	1	1	1	0	1	0	0	0	6					0
	4:30 PM	1	2	0	0	4	0	1	0	0	0	0	0	8					0
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	2					0
	5:00 PM	0	2	0	0	1	0	1	0	1	0	0	0	5					0
	5:15 PM	0	1	0	0	0	0	0	0	1	0	0	0	2					0
	5:30 PM	0	3	0	0	0	0	0	0	0	0	0	0	3					0
	5:45 PM	0	0	0	0	1	0	1	0	1	0	0	0	3					0
	VOLUMES	3	11	0	0	9	1	4	0	4	0	0	0	32	0	0	0	0	0
	APPROACH %	21%	79%	0%	0%	90%	10%	50%	0%	50%	0%	0%	0%						
	APP/DEPART	14	/	15	10	/	13	8	/	0	0	/	4	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	1	7	0	0	7	1	3	0	2	0	0	0	21					
	APPROACH %	13%	88%	0%	0%	88%	13%	60%	0%	40%	0%	0%	0%						
	PEAK HR FACTOR		0.667			0.500			0.625			0.000		0.656					
	APP/DEPART	8	/	10	8	/	9	5	/	0	0	/	2	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	3
TUESDAY	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	1	1	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250					
	APP/DEPART	0	/	0	0	/	1	1	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	1	1	/	0	0	/	0	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	0	0	0	0	0	0	0	0	1	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250					
	APP/DEPART	0	/	0	0	/	1	1	/	0	0	/	0	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE: 1/13/15 TUESDAY	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	3
	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

▲ N ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	1	0	1	0	0	0	0	0	2					0
	8:00 AM	0	1	0	0	0	0	1	0	0	0	0	0	2					0
	8:15 AM	0	1	0	0	1	0	1	0	0	0	0	0	3					0
	8:30 AM	0	0	0	0	1	0	1	0	1	0	0	0	3					0
	8:45 AM	0	0	0	0	2	0	1	0	0	0	0	0	3					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	3	0	0	6	0	5	0	1	0	0	0	15	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	83%	0%	17%	0%	0%	0%						
	APP/DEPART	3	/	8	6	/	7	6	/	0	0	/	0	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	2	0	0	4	0	4	0	1	0	0	0	11					
	APPROACH %	0%	100%	0%	0%	100%	0%	80%	0%	20%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.500			0.625			0.000		0.917					
	APP/DEPART	2	/	6	4	/	5	5	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1					0
	4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	2					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	2	0	0	1	0	0	0	0	0	0	0	3					0
	5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	5	0	0	3	0	0	0	0	0	0	0	8	0	0	0	0	0
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	5	/	5	3	/	3	0	/	0	0	/	0	0					
	BEGIN PEAK HR		4:45 PM																
	VOLUMES	0	4	0	0	3	0	0	0	0	0	0	0	7					
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.500			0.375			0.000			0.000		0.583					
	APP/DEPART	4	/	4	3	/	3	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	3
TUESDAY	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 5: RV

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	0	0	0	0	1	0	0	0	0	0	0	0	1					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.000			0.000		0.250					
	APP/DEPART	0	/	0	1	/	1	0	/	0	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					
	BEGIN PEAK HR		5:45 PM																
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.000			0.000			0.000		0.000					
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/13/15	NORTH & SOUTH:	Redwood	LOCATION #:	3
TUESDAY	EAST & WEST:	Hunter	CONTROL:	Stop 1way E

CLASS 6:	NOTES:
BUSES	

A.M. / P.M. / MD. / OTHER / OTHER

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Hunter			WESTBOUND Hunter				U-TURNS				
	LANES:	NL 0	NT 1	NR X	SL X	ST 1	SR 0	EL 0.5	ET X	ER 0.5	WL X	WT X	WR X	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1					0
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	2	1	1	0	0	0	0	0	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	67%	33%	100%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	1	3	/	2	1	/	0	0	/	1	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	0	0	0	0	1	1	1	0	0	0	0	0	3					
	APPROACH %	0%	0%	0%	0%	50%	50%	100%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.500			0.250			0.000		0.750					
	APP/DEPART	0	/	1	2	/	1	1	/	0	0	/	1	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	0	1	0	0	0	1	0	0	0	2					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	APP/DEPART	0	/	0	1	/	2	1	/	0	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	0	1	0	0	0	1	0	0	0	2					
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.250			0.000		0.250					
	APP/DEPART	0	/	0	1	/	2	1	/	0	0	/	0	0					

Redwood

NORTH SIDE

Hunter WEST SIDE

EAST SIDE **Hunter**

SOUTH SIDE

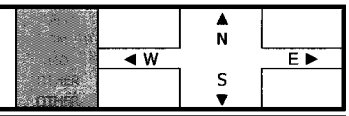
Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC tel: 951 249 3226 pacific@aimtd.com

DATE:				
Thu, Jan 15, 15	LOCATION:	Fontana	PROJECT #:	SC0515
	NORTH & SOUTH:	Redwood	LOCATION #:	4
	EAST & WEST:	Valley	CONTROL:	SIGNAL

NOTES:



		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	4	0	0	14	0	17	7	91	5	2	73	3	216	0	0	0	0	0
AM	7:15 AM	5	1	3	15	0	13	10	87	7	0	112	7	260	0	0	0	0	0
AM	7:30 AM	0	1	1	14	1	19	10	93	5	2	123	4	273	0	0	0	0	0
AM	7:45 AM	4	2	1	14	2	8	6	89	8	1	142	6	283	0	0	0	0	0
AM	8:00 AM	4	1	3	18	1	3	4	116	11	1	93	11	266	0	0	0	0	0
AM	8:15 AM	9	1	2	7	2	8	3	91	8	5	116	7	259	0	0	0	1	1
AM	8:30 AM	4	0	3	16	0	4	3	95	3	0	95	4	227	0	0	0	0	0
AM	8:45 AM	3	0	3	12	3	5	3	82	8	1	105	7	232	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	33	6	16	110	9	77	46	744	55	12	859	49	2,016	0	0	0	1	1
AM	APPROACH %	60%	11%	29%	56%	5%	39%	5%	88%	7%	1%	93%	5%						
AM	APP/DEPART	55	/	101	196	/	76	845	/	870	920	/	969	0					
AM	BEGIN PEAK HR		7:15 AM																
AM	VOLUMES	13	5	8	61	4	43	30	385	31	4	470	28	1,082					
AM	APPROACH %	50%	19%	31%	56%	4%	40%	7%	86%	7%	1%	94%	6%						
AM	PEAK HR FACTOR		0.722			0.794			0.851			0.842		0.956					
AM	APP/DEPART	26	/	63	108	/	39	446	/	454	502	/	526	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	4	3	2	28	2	11	11	228	4	1	119	16	429	0	0	0	0	0
PM	4:15 PM	1	1	6	24	3	5	7	212	4	1	97	14	375	0	0	0	0	0
PM	4:30 PM	5	2	1	19	3	7	9	218	9	0	121	17	411	0	0	0	0	0
PM	4:45 PM	5	2	0	25	1	10	12	182	6	7	107	17	374	0	0	0	0	0
PM	5:00 PM	9	1	2	18	1	6	14	257	3	0	105	15	431	0	0	0	0	0
PM	5:15 PM	7	0	2	18	1	13	12	257	4	0	87	12	413	0	0	0	0	0
PM	5:30 PM	5	0	3	20	0	11	8	252	5	1	100	11	416	0	0	0	0	0
PM	5:45 PM	6	2	0	14	0	11	6	237	6	1	83	13	379	0	0	0	0	0
PM	VOLUMES	42	11	16	166	11	74	79	1,843	41	11	819	115	3,228	0	0	0	0	0
PM	APPROACH %	61%	16%	23%	66%	4%	29%	4%	94%	2%	1%	87%	12%						
PM	APP/DEPART	69	/	205	251	/	63	1,963	/	2,025	945	/	935	0					
PM	BEGIN PEAK HR		5:00 PM																
PM	VOLUMES	27	3	7	70	2	41	40	1,003	18	2	375	51	1,639					
PM	APPROACH %	73%	8%	19%	62%	2%	36%	4%	95%	2%	0%	88%	12%						
PM	PEAK HR FACTOR		0.771			0.883			0.968			0.892		0.951					
PM	APP/DEPART	37	/	94	113	/	22	1,061	/	1,080	428	/	443	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

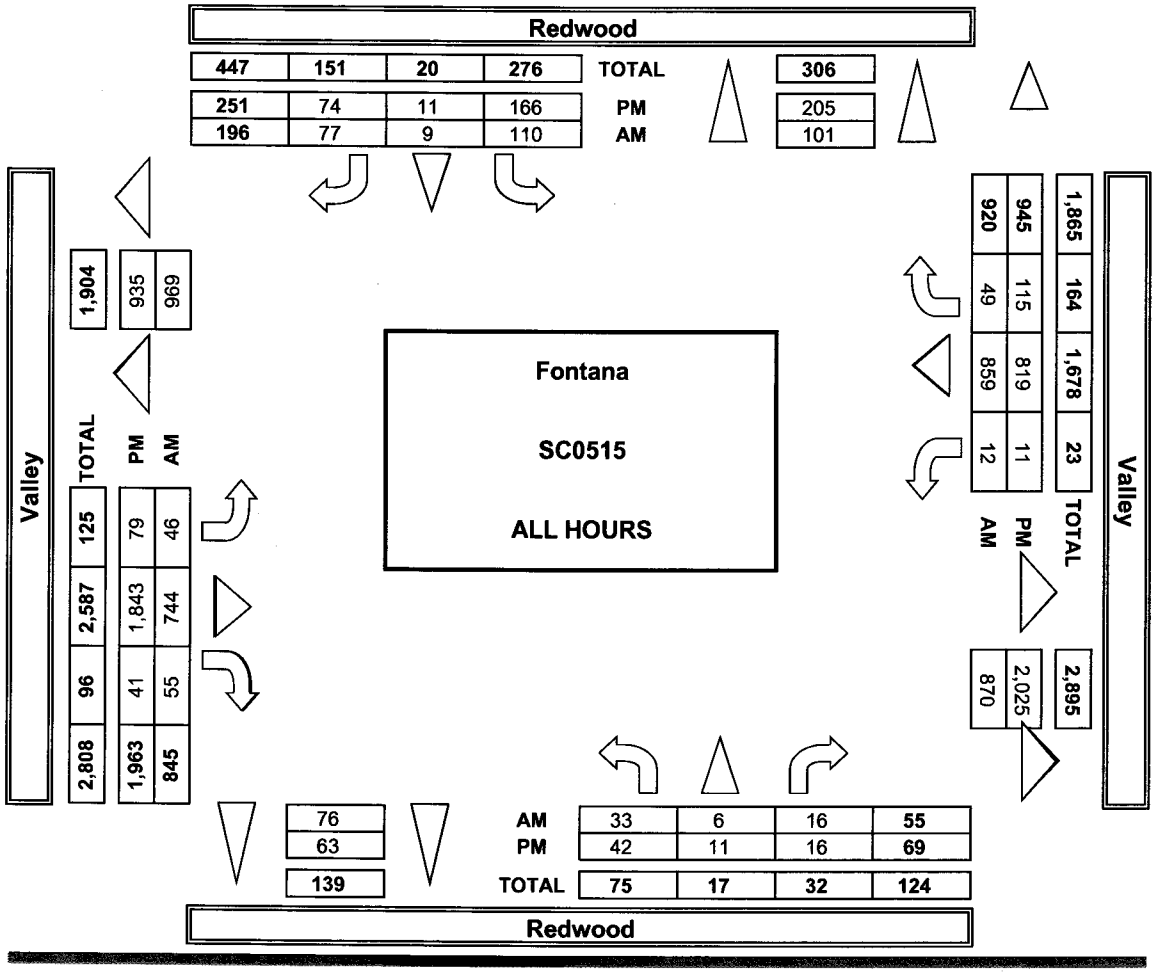
SOUTH SIDE

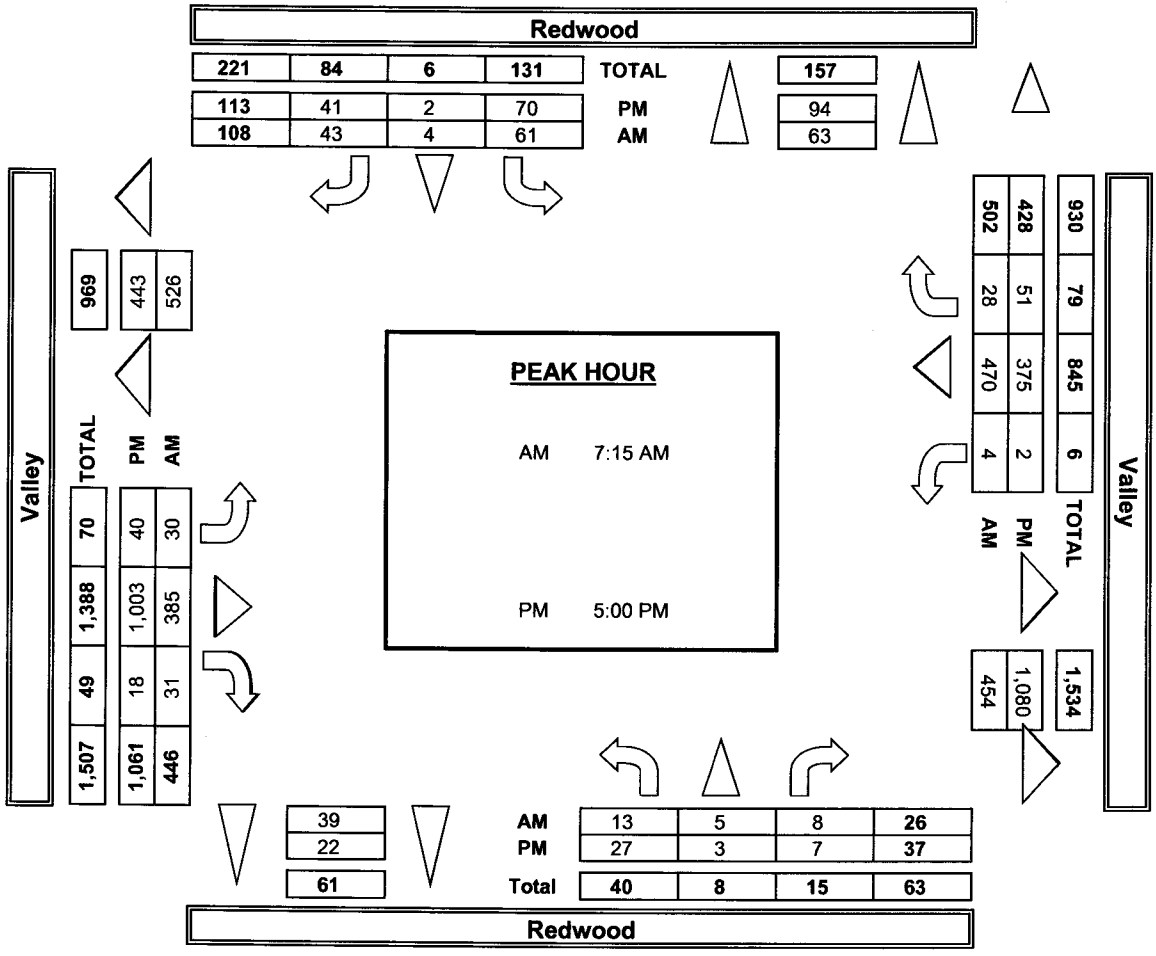
Redwood

		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	4	0	0	12	0	17	6	77	5	2	67	3	193					0
	7:15 AM	4	1	2	13	0	11	7	76	5	0	99	7	225					0
	7:30 AM	0	1	1	14	1	19	10	80	4	2	114	4	250					0
	7:45 AM	2	2	1	14	2	8	6	76	7	1	129	6	254					0
	8:00 AM	3	1	3	17	1	3	3	98	9	1	78	11	228					0
	8:15 AM	6	1	2	6	2	8	3	83	8	5	100	7	231					0
	8:30 AM	3	0	3	14	0	4	3	78	1	0	81	4	191					0
	8:45 AM	2	0	3	9	2	5	2	64	5	1	88	7	188					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	24	6	15	99	8	75	40	632	44	12	756	49	1,760	0	0	0	0	0
	APPROACH %	53%	13%	33%	54%	4%	41%	6%	88%	6%	1%	93%	6%						
	APP/DEPART	45	/	95	182	/	64	716	/	746	817	/	855	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	11	5	7	51	6	38	22	337	28	9	421	28	963					
	APPROACH %	48%	22%	30%	54%	6%	40%	6%	87%	7%	2%	92%	6%						
	PEAK HR FACTOR		0.639			0.699			0.880			0.842		0.948					
	APP/DEPART	23	/	55	95	/	43	387	/	395	458	/	470	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	4	3	2	24	2	9	10	210	4	1	108	16	393					0
	4:15 PM	0	1	6	23	2	5	7	189	4	1	84	12	334					0
	4:30 PM	5	2	1	19	3	6	9	196	7	0	106	16	370					0
	4:45 PM	4	1	0	24	1	10	11	168	6	7	94	17	343					0
	5:00 PM	9	0	1	18	1	5	11	240	2	0	99	14	400					0
	5:15 PM	7	0	2	15	1	13	12	241	3	0	75	12	381					0
	5:30 PM	5	0	3	20	0	10	7	239	5	1	90	11	391					0
	5:45 PM	6	2	0	14	0	11	6	223	5	1	68	13	349					0
	VOLUMES	40	9	15	157	10	69	73	1,706	36	11	724	111	2,961	0	0	0	0	0
	APPROACH %	63%	14%	23%	67%	4%	29%	4%	94%	2%	1%	86%	13%						
	APP/DEPART	64	/	193	236	/	57	1,815	/	1,878	846	/	833	0					
	BEGIN PEAK HR		5:00 PM																
	VOLUMES	27	2	6	67	2	39	36	943	15	2	332	50	1,521					
	APPROACH %	77%	6%	17%	62%	2%	36%	4%	95%	2%	1%	86%	13%						
	PEAK HR FACTOR		0.875			0.900			0.971			0.850		0.951					
	APP/DEPART	35	/	88	108	/	19	994	/	1,016	384	/	398	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	2	0	0	0	5	0	0	4	0	11					0
	7:15 AM	0	0	0	2	0	1	1	6	1	0	6	0	17					0
	7:30 AM	0	0	0	0	0	0	0	6	0	0	3	0	9					0
	7:45 AM	1	0	0	0	0	0	0	3	1	0	4	0	9					0
	8:00 AM	0	0	0	1	0	0	1	10	1	0	8	0	21					0
	8:15 AM	3	0	0	0	0	0	0	6	0	0	9	0	18					0
	8:30 AM	1	0	0	1	0	0	0	6	2	0	6	0	16					0
	8:45 AM	0	0	0	2	1	0	0	12	2	0	7	0	24					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	5	0	0	8	1	1	2	54	7	0	47	0	125	0	0	0	0	0
	APPROACH %	100%	0%	0%	80%	10%	10%	3%	86%	11%	0%	100%	0%						
	APP/DEPART	5	/	2	10	/	8	63	/	62	47	/	53	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	4	0	0	4	1	0	1	34	5	0	30	0	79					
	APPROACH %	100%	0%	0%	80%	20%	0%	3%	85%	13%	0%	100%	0%						
	PEAK HR FACTOR		0.333			0.417			0.714			0.833		0.823					
	APP/DEPART	4	/	1	5	/	6	40	/	38	30	/	34	0					
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	1	0	2	0	10	0	0	5	0	18					0
	4:15 PM	0	0	0	0	0	0	0	11	0	0	9	1	21					0
	4:30 PM	0	0	0	0	0	1	0	15	0	0	9	1	26					0
	4:45 PM	0	1	0	1	0	0	1	8	0	0	8	0	19					0
	5:00 PM	0	1	1	0	0	1	2	10	0	0	4	1	20					0
	5:15 PM	0	0	0	1	0	0	0	12	0	0	5	0	18					0
	5:30 PM	0	0	0	0	0	1	1	7	0	0	6	0	15					0
	5:45 PM	0	0	0	0	0	0	0	7	1	0	7	0	15					0
	VOLUMES	0	2	1	3	0	5	4	80	1	0	53	3	152	0	0	0	0	0
	APPROACH %	0%	67%	33%	38%	0%	63%	5%	94%	1%	0%	95%	5%						
	APP/DEPART	3	/	9	8	/	1	85	/	84	56	/	58	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	0	2	1	1	0	2	3	44	0	0	30	3	86					
	APPROACH %	0%	67%	33%	33%	0%	67%	6%	94%	0%	0%	91%	9%						
	PEAK HR FACTOR		0.375			0.750			0.783			0.825		0.827					
	APP/DEPART	3	/	8	3	/	0	47	/	46	33	/	32	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

PM MD OTHER

◄ W ▲ N S ▼ E ►

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2					0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	0	0	0	0	1	0	0	3	0	4	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	0	/	0	1	/	1	3	/	3	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	0	0	0	0	0	0	0	1	0	0	2	0	3					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.250			0.500		0.375					
	APP/DEPART	0	/	0	0	/	0	1	/	1	2	/	2	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1					0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:30 PM	0	0	0	0	0	0	0	3	0	0	1	0	4					0
	4:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2					0
	5:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2					0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	1	0	0	0	8	0	0	3	0	12	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%						
	APP/DEPART	0	/	0	1	/	0	8	/	9	3	/	3	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	0	0	0	0	0	8	0	0	2	0	10					
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%						
	PEAK HR FACTOR		0.000			0.000			0.667			0.500		0.625					
	APP/DEPART	0	/	0	0	/	0	8	/	8	2	/	2	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

▲ N ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	1	9	0	0	1	0	11					0
	7:15 AM	1	0	1	0	0	1	2	5	1	0	6	0	17					0
	7:30 AM	0	0	0	0	0	0	0	6	1	0	5	0	12					0
	7:45 AM	1	0	0	0	0	0	0	9	0	0	9	0	19					0
	8:00 AM	1	0	0	0	0	0	0	8	0	0	6	0	15					0
	8:15 AM	0	0	0	1	0	0	0	2	0	0	7	0	10					0
	8:30 AM	0	0	0	1	0	0	0	10	0	0	8	0	19					0
	8:45 AM	1	0	0	0	0	0	1	6	1	0	10	0	19					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	4	0	1	2	0	1	4	55	3	0	52	0	122	0	0	0	0	0
	APPROACH %	80%	0%	20%	67%	0%	33%	6%	89%	5%	0%	100%	0%						
	APP/DEPART	5	/	4	3	/	3	62	/	58	52	/	57	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	2	0	0	2	0	0	1	26	1	0	31	0	63					
	APPROACH %	100%	0%	0%	100%	0%	0%	4%	93%	4%	0%	100%	0%						
	PEAK HR FACTOR		0.250			0.500			0.700			0.775		0.829					
	APP/DEPART	2	/	1	2	/	1	28	/	28	31	/	33	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	1	0	0	1	8	0	0	6	0	16					0
	4:15 PM	1	0	0	1	0	0	0	12	0	0	4	1	19					0
	4:30 PM	0	0	0	0	0	0	0	4	2	0	5	0	11					0
	4:45 PM	1	0	0	0	0	0	0	4	0	0	5	0	10					0
	5:00 PM	0	0	0	0	0	0	0	5	1	0	2	0	8					0
	5:15 PM	0	0	0	2	0	0	0	3	1	0	6	0	12					0
	5:30 PM	0	0	0	0	0	0	0	6	0	0	3	0	9					0
	5:45 PM	0	0	0	0	0	0	0	7	0	0	7	0	14					0
	VOLUMES	2	0	0	4	0	0	1	49	4	0	38	1	99	0	0	0	0	0
	APPROACH %	100%	0%	0%	100%	0%	0%	2%	91%	7%	0%	97%	3%						
	APP/DEPART	2	/	2	4	/	4	54	/	53	39	/	40	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	2	0	0	2	0	0	1	28	2	0	20	1	56					
	APPROACH %	100%	0%	0%	100%	0%	0%	3%	90%	6%	0%	95%	5%						
	PEAK HR FACTOR		0.500			0.500			0.646			0.875		0.737					
	APP/DEPART	2	/	2	2	/	2	31	/	30	21	/	22	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

N S E W

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

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:	LOCATION:	Fontana	PROJECT #:	SC0515
1/15/15	NORTH & SOUTH:	Redwood	LOCATION #:	4
THURSDAY	EAST & WEST:	Valley	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / PEAK / OTHER / OT

N ▲ ◄ W E ► S ▼

		NORTHBOUND Redwood			SOUTHBOUND Redwood			EASTBOUND Valley			WESTBOUND Valley				U-TURNS				
	LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB	TTL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1					0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1					0
	8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1					0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1					0
	8:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1					0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	1	0	0	0	2	1	0	1	0	5	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	67%	33%	0%	100%	0%						
	APP/DEPART	0	/	0	1	/	1	3	/	3	1	/	1	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	0	1	0	0	0	1	1	0	0	0	3					
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	50%	50%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.250			0.500			0.000		0.750					
	APP/DEPART	0	/	0	1	/	1	2	/	2	0	/	0	0					
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1					0
	4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1					0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	VOLUMES	0	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0
	APPROACH %	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%						
	APP/DEPART	0	/	0	2	/	1	0	/	1	0	/	0	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	0	0	0	1	1	0	0	0	0	0	0	0	2					
	APPROACH %	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%						
	PEAK HR FACTOR		0.000			0.500			0.000			0.000		0.500					
	APP/DEPART	0	/	0	2	/	1	0	/	1	0	/	0	0					

Redwood

NORTH SIDE

Valley WEST SIDE

EAST SIDE **Valley**

SOUTH SIDE

Redwood

APPENDIX C

Future Growth Increment Calculation Worksheets

INTERSECTION	LEG	MODEL **2008** ADT	EXISTING **2015** ADT	MODEL **2035** ADT	FUTURE **2035** ADT[1]	OPENING **2017** ADT
Redwood Avenue (NS) / Valley Boulevard (EW) - #6	North	-	**2,500**	-	2,800	2,500
	South	-	**800**	-	900	800
	East	17,291	**18,700**	28,511	27,000	19,500
	West	17,291	**18,700**	28,511	27,000	19,500

[1] Adjusted for minimum 10% growth over existing ADT volumes.

APPENDIX D

Explanation and Calculation of Intersection Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)
9. Right turns
10. Left turns

11. Pedestrian activity

12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length

2. Amount of red time faced by a lane group

3. Amount of yellow time for that lane group

4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

LEVEL OF SERVICE DESCRIPTION[1]

Level Of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Existing

9988 Redwood Avenue Project
Existing
Morning Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.8]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	64	15	3	92	0	0	0	0	13	0	2
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	64	15	3	92	0	0	0	0	13	0	2
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:	0	64	15	3	92	0	0	0	0	13	0	2
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:	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
PHF Volume:	0	91	21	4	130	0	0	0	0	18	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	91	21	4	130	0	0	0	0	18	0	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	112	xxxx	xxxxx	xxxx	xxxx	xxxxx	240	240	101
Potent Cap.:	xxxx	xxxx	xxxxx	1490	xxxx	xxxxx	xxxx	xxxx	xxxxx	753	665	959
Move Cap.:	xxxx	xxxx	xxxxx	1490	xxxx	xxxxx	xxxx	xxxx	xxxxx	751	663	959
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	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	xxxx	xxxxx	xxxx	773	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.8		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Existing
Evening Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.8]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	123	24	7	92	0	0	0	0	17	0	14
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	123	24	7	92	0	0	0	0	17	0	14
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:	0	123	24	7	92	0	0	0	0	17	0	14
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:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	140	27	8	105	0	0	0	0	19	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	140	27	8	105	0	0	0	0	19	0	16
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	167	xxxx	xxxxx	xxxx	xxxx	xxxxx	274	274	153
Potent Cap.:	xxxx	xxxx	xxxxx	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx	720	637	898
Move Cap.:	xxxx	xxxx	xxxxx	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx	717	633	898
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	789	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				9.8	
ApproachLOS:	*			*			*				A	

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

9988 Redwood Avenue Project
Existing
Morning Peak Hour

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

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.0]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	82	5	1	103	0	0	0	0	16	0	1
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	82	5	1	103	0	0	0	0	16	0	1
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:	0	82	5	1	103	0	0	0	0	16	0	1
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:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	0	115	7	1	144	0	0	0	0	22	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	115	7	1	144	0	0	0	0	22	0	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	122	xxxx	xxxxx	xxxx	xxxx	xxxxx	265	265	118
Potent Cap.:	xxxx	xxxx	xxxxx	1478	xxxx	xxxxx	xxxx	xxxx	xxxxx	728	644	939
Move Cap.:	xxxx	xxxx	xxxxx	1478	xxxx	xxxxx	xxxx	xxxx	xxxxx	728	643	939
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	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	xxxx	xxxxx	xxxx	738	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			B		

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

9988 Redwood Avenue Project
Existing
Evening Peak Hour

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

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	145	20	3	98	0	0	0	0	10	0	5
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	145	20	3	98	0	0	0	0	10	0	5
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:	0	145	20	3	98	0	0	0	0	10	0	5
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	162	22	3	109	0	0	0	0	11	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	162	22	3	109	0	0	0	0	11	0	6
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	184	xxxx	xxxxx	xxxx	xxxx	xxxxx	289	289	173
Potent Cap.:	xxxx	xxxx	xxxxx	1403	xxxx	xxxxx	xxxx	xxxx	xxxxx	705	624	876
Move Cap.:	xxxx	xxxx	xxxxx	1403	xxxx	xxxxx	xxxx	xxxx	xxxxx	704	623	876
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	753	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				9.9	
ApproachLOS:	*			*			*				A	

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

9988 Redwood Avenue Project
Existing
Morning Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: B[10.2]

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				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	5	47		0		0	99		15		42		0		25	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:	5	47		0		0	99		15		42		0		25	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:	5	47		0		0	99		15		42		0		25	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:	0.66	0.66		0.66		0.66	0.66		0.66		0.66		0.66		0.66	0.66		0.66		0.66
PHF Volume:	8	71		0		0	149		23		63		0		38	0		0		0
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	8	71		0		0	149		23		63		0		38	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:	172	xxxx	xxxxx	xxxx	xxxx	xxxxx					246		246		160	xxxx	xxxx	xxxxx		
Potent Cap.:	1418	xxxx	xxxxx	xxxx	xxxx	xxxxx					747		660		890	xxxx	xxxx	xxxxx		
Move Cap.:	1418	xxxx	xxxxx	xxxx	xxxx	xxxxx					744		656		890	xxxx	xxxx	xxxxx		
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.09		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:	7.6	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		792		xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		0.4		xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		10.2		xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	A	*	*	*	*	*					*		B		*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx							10.2					xxxxxx				
ApproachLOS:	*			*							B					*				

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

9988 Redwood Avenue Project
Existing
Evening Peak Hour

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

****

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

****

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[10.3]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	12	118	0	0	110	10	46	0	58	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:	12	118	0	0	110	10	46	0	58	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:	12	118	0	0	110	10	46	0	58	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:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	14	141	0	0	131	12	55	0	69	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	141	0	0	131	12	55	0	69	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:	143	xxxx	xxxxx	xxxx	xxxx	xxxxx	307	307	137	xxxx	xxxx	xxxxx
Potent Cap.:	1452	xxxx	xxxxx	xxxx	xxxx	xxxxx	690	610	917	xxxx	xxxx	xxxxx
Move Cap.:	1452	xxxx	xxxxx	xxxx	xxxx	xxxxx	684	604	917	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.08	0.00	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	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	797	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.3			xxxxxx		
ApproachLOS:	*			*			B			*		

****

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

****

9988 Redwood Avenue Project
Existing
Morning Peak Hour

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

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

Cycle (sec): 90 Critical Vol./Cap.(X): 0.233
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.1
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	32	32			32		32	32			32		10	20			20		10	20			20	
Lanes:	0	1	0	0	1		0	1	0	0	1		1	0	2	0	1		1	0	2	0	1	
Volume Module:																								
Base Vol:	20	5			10		63	4			46		35	460			36		4	534			28	
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:	20	5			10		63	4			46		35	460			36		4	534			28	
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:	20	5			10		63	4			46		35	460			36		4	534			28	
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:	0.96	0.96			0.96		0.96	0.96			0.96		0.96	0.96			0.96		0.96	0.96			0.96	
PHF Volume:	21	5			10		66	4			48		37	481			38		4	559			29	
Reduct Vol:	0	0			0		0	0			0		0	0			0		0	0			0	
Reduced Vol:	21	5			10		66	4			48		37	481			38		4	559			29	
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:	21	5			10		66	4			48		37	481			38		4	559			29	
Saturation Flow Module:																								
Sat/Lane:	1800	1800			1800		1800	1800			1800		1800	1800			1800		1800	1800			1800	
Adjustment:	0.94	1.00			1.00		0.94	1.00			1.00		0.94	1.00			1.00		0.94	1.00			1.00	
Lanes:	0.81	0.19			1.00		0.94	0.06			1.00		1.00	2.00			1.00		1.00	2.00			1.00	
Final Sat.:	1375	344			1800		1604	102			1800		1700	3600			1800		1700	3600			1800	
Capacity Analysis Module:																								
Vol/Sat:	0.02	0.02			0.01		0.04	0.04			0.03		0.02	0.13			0.02		0.00	0.16			0.02	
Crit Moves:								****					****							****				
Green/Cycle:	0.36	0.36			0.36		0.36	0.36			0.36		0.11	0.39			0.39		0.19	0.47			0.47	
Volume/Cap:	0.04	0.04			0.02		0.12	0.12			0.08		0.19	0.35			0.05		0.01	0.33			0.03	
Delay/Veh:	19.0	19.0			18.8		19.6	19.6			19.3		36.8	19.8			17.4		29.4	15.3			13.0	
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:	19.0	19.0			18.8		19.6	19.6			19.3		36.8	19.8			17.4		29.4	15.3			13.0	
LOS by Move:	B	B			B		B	B			B		D	B			B		C	B			B	
HCM2kAvgQ:	0	0			0		1	1			1		1	5			1		0	5			0	

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

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9988 Redwood Avenue Project
Existing
Evening Peak Hour

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

****

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

****

Cycle (sec): 130 Critical Vol./Cap.(X): 0.378
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.0
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	27	4	8	75	2	42	44	1066	23	2	423	52
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:	27	4	8	75	2	42	44	1066	23	2	423	52
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:	27	4	8	75	2	42	44	1066	23	2	423	52
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	4	8	79	2	44	46	1121	24	2	445	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	4	8	79	2	44	46	1121	24	2	445	55
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:	28	4	8	79	2	44	46	1121	24	2	445	55
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.88	0.12	1.00	0.98	0.02	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1491	221	1800	1658	44	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.00	0.05	0.05	0.02	0.03	0.31	0.01	0.00	0.12	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.63	0.63	0.08	0.47	0.47
Volume/Cap:	0.08	0.08	0.02	0.19	0.19	0.10	0.12	0.49	0.02	0.02	0.26	0.06
Delay/Veh:	37.7	37.7	37.1	39.0	39.0	38.0	39.1	13.0	9.0	55.5	20.8	18.7
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:	37.7	37.7	37.1	39.0	39.0	38.0	39.1	13.0	9.0	55.5	20.8	18.7
LOS by Move:	D	D	D	D	D	D	D	B	A	E	C	B
HCM2kAvgQ:	1	1	0	3	3	1	2	12	0	0	5	1

****

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

****

Existing Plus Project

9988 Redwood Avenue Project
Existing Plus Project
Morning Peak Hour

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

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.0]

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			
Rights:	Include				Include				Include				Include			
Lanes:	0 1	0 0	0		0 0	0 1	0		0 0	1! 0	0		0 0	0 0	0	
Volume Module:																
Base Vol:	0	66	0		0	95	0		0	0	0		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:	0	66	0		0	95	0		0	0	0		0	0	0	
Added Vol:	10	0	0		0	1	4		2	0	4		0	0	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	10	66	0		0	96	4		2	0	4		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:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	11	69	0		0	101	4		2	0	4		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	11	69	0		0	101	4		2	0	4		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:	105	xxxx	xxxxx	xxxx	xxxx	xxxxx		194	194	103	xxxx	xxxx	xxxxx			
Potent Cap.:	1499	xxxx	xxxxx	xxxx	xxxx	xxxxx		800	705	957	xxxx	xxxx	xxxxx			
Move Cap.:	1499	xxxx	xxxxx	xxxx	xxxx	xxxxx		795	700	957	xxxx	xxxx	xxxxx			
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx		0.00	0.00	0.00	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	896	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.0	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			9.0			xxxxxx						
ApproachLOS:	*			*			A			*						

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

9988 Redwood Avenue Project
Existing Plus Project
Evening Peak Hour

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

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.2]

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			
Rights:	Include				Include				Include				Include			
Lanes:	0 1	0	0	0	0 0	0	1	0	0 0	1!	0	0	0 0	0	0	0
Volume Module:																
Base Vol:	0	128	0	0	99	0	0	0	0	0	0	0	0	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	1.00	1.00	1.00	1.00
Initial Bse:	0	128	0	0	99	0	0	0	0	0	0	0	0	0	0	0
Added Vol:	5	0	0	0	0	2	4	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	128	0	0	99	2	4	0	10	0	0	0	0	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	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	135	0	0	104	2	4	0	11	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	135	0	0	104	2	4	0	11	0	0	0	0	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:	106	xxxx	xxxxx	xxxx	xxxx	xxxxx	251	251	105	xxxx	xxxx	xxxxx				
Potent Cap.:	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx	742	656	955	xxxx	xxxx	xxxxx				
Move Cap.:	1497	xxxx	xxxxx	xxxx	xxxx	xxxxx	740	654	955	xxxx	xxxx	xxxxx				
Volume/Cap:	0.00	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	882	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	9.2	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx						
ApproachLOS:	*			*			A			*						

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

9988 Redwood Avenue Project
Existing Plus Project
Morning Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: A[9.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	64	15	3	92	0	0	0	0	13	0	2
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	64	15	3	92	0	0	0	0	13	0	2
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	74	15	3	96	0	0	0	0	13	0	2
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:	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
PHF Volume:	0	105	21	4	136	0	0	0	0	18	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	105	21	4	136	0	0	0	0	18	0	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	126	xxxx	xxxxx	xxxx	xxxx	xxxxx	260	260	115
Potent Cap.:	xxxx	xxxx	xxxxx	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx	733	648	942
Move Cap.:	xxxx	xxxx	xxxxx	1473	xxxx	xxxxx	xxxx	xxxx	xxxxx	732	646	942
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	754	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Existing Plus Project
Evening Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.9]

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				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1!	0	0
Volume Module:																				
Base Vol:	0	123		24		7	92		0		0		0		0	17		0		14
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	123		24		7	92		0		0		0		0	17		0		14
Added Vol:	0	5		0		0	10		0		0		0		0	0		0		0
PasserByVol:	0	0		0		0	0		0		0		0		0	0		0		0
Initial Fut:	0	128		24		7	102		0		0		0		0	17		0		14
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:	0.88	0.88		0.88		0.88	0.88		0.88		0.88		0.88		0.88	0.88		0.88		0.88
PHF Volume:	0	145		27		8	116		0		0		0		0	19		0		16
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	0	145		27		8	116		0		0		0		0	19		0		16
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx		xxxxx		4.1	xxxx		xxxxx		xxxxx		xxxx		xxxxx	6.4		6.5		6.2
FollowUpTim:	xxxxx	xxxx		xxxxx		2.2	xxxx		xxxxx		xxxxx		xxxx		xxxxx	3.5		4.0		3.3
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx		xxxxx		173	xxxx		xxxxx		xxxx		xxxx		xxxxx	291		291		159
Potent Cap.:	xxxx	xxxx		xxxxx		1416	xxxx		xxxxx		xxxx		xxxx		xxxxx	704		623		891
Move Cap.:	xxxx	xxxx		xxxxx		1416	xxxx		xxxxx		xxxx		xxxx		xxxxx	701		619		891
Volume/Cap:	xxxx	xxxx		xxxx		0.01	xxxx		xxxx		xxxx		xxxx		xxxx	0.03		0.00		0.02
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxx		xxxx		xxxxx	xxxx		xxxx		xxxxx
Control Del:	xxxxx	xxxx		xxxxx		7.6	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		xxxx		xxxxx	xxxx		776		xxxxx
SharedQueue:	xxxxx	xxxx		xxxxx		0.0	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		0.1		xxxxx
Shrd ConDel:	xxxxx	xxxx		xxxxx		7.6	xxxx		xxxxx		xxxxx		xxxx		xxxxx	xxxxx		9.9		xxxxx
Shared LOS:	*	*		*		A	*		*		*		*		*	*		A		*
ApproachDel:	xxxxxx					xxxxxx					xxxxxx							9.9		
ApproachLOS:	*					*					*							A		

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

9988 Redwood Avenue Project
Existing Plus Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[10.2]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	82	5	1	103	0	0	0	0	16	0	1
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	82	5	1	103	0	0	0	0	16	0	1
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	92	5	1	107	0	0	0	0	16	0	1
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:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	0	129	7	1	150	0	0	0	0	22	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	129	7	1	150	0	0	0	0	22	0	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	136	xxxx	xxxxx	xxxx	xxxx	xxxxx	285	285	132
Potent Cap.:	xxxx	xxxx	xxxxx	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	710	628	923
Move Cap.:	xxxx	xxxx	xxxxx	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	709	627	923
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	719	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.2	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.2		
ApproachLOS:	*			*			*			B		

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

9988 Redwood Avenue Project
Existing Plus Project
Evening Peak Hour

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

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[10.0]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	145	20	3	98	0	0	0	0	10	0	5
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	145	20	3	98	0	0	0	0	10	0	5
Added Vol:	0	5	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	150	20	3	108	0	0	0	0	10	0	5
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	168	22	3	121	0	0	0	0	11	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	168	22	3	121	0	0	0	0	11	0	6
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	190	xxxx	xxxxx	xxxx	xxxx	xxxxx	306	306	179
Potent Cap.:	xxxx	xxxx	xxxxx	1396	xxxx	xxxxx	xxxx	xxxx	xxxxx	690	611	869
Move Cap.:	xxxx	xxxx	xxxxx	1396	xxxx	xxxxx	xxxx	xxxx	xxxxx	689	609	869
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	740	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Existing Plus Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	87	0	0	119	0	0	0	0	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:	0	87	0	0	119	0	0	0	0	0	0	0
Added Vol:	10	10	0	0	4	1	0	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	97	0	0	123	1	0	0	3	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	102	0	0	129	1	0	0	3	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	102	0	0	129	1	0	0	3	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	131	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	130	xxxx	xxxx	xxxxx
Potent Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	925	xxxx	xxxx	xxxxx
Move Cap.:	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	925	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

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

9988 Redwood Avenue Project
Existing Plus Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

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Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

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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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	1 0	0	0 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	165	0	0	108	0	0	0	0	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:	0	165	0	0	108	0	0	0	0	0	0	0
Added Vol:	3	5	0	0	10	0	0	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	170	0	0	118	0	0	0	10	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	179	0	0	124	0	0	0	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	179	0	0	124	0	0	0	11	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	124	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	124	xxxx	xxxx	xxxxx
Potent Cap.:	1475	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	932	xxxx	xxxx	xxxxx
Move Cap.:	1475	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	932	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

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

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Existing Plus Project
Morning Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[10.5]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	5	47	0	0	99	15	42	0	25	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:	5	47	0	0	99	15	42	0	25	0	0	0
Added Vol:	0	19	0	0	6	0	1	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	66	0	0	105	15	43	0	25	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:	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
PHF Volume:	8	99	0	0	158	23	65	0	38	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	99	0	0	158	23	65	0	38	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:	181	xxxx	xxxxx	xxxx	xxxx	xxxxx	284	284	169	xxxx	xxxx	xxxxx
Potent Cap.:	1407	xxxx	xxxxx	xxxx	xxxx	xxxxx	711	629	880	xxxx	xxxx	xxxxx
Move Cap.:	1407	xxxx	xxxxx	xxxx	xxxx	xxxxx	708	625	880	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	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:	7.6	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	762	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.5			xxxxxx		
ApproachLOS:	*			*			B			*		

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

9988 Redwood Avenue Project
Existing Plus Project
Evening Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: B[10.6]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	12	118	0	0	110	10	46	0	58	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:	12	118	0	0	110	10	46	0	58	0	0	0
Added Vol:	0	7	0	0	19	1	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	125	0	0	129	11	46	0	58	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:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	14	149	0	0	154	13	55	0	69	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	14	149	0	0	154	13	55	0	69	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:	167	xxxx	xxxxx	xxxx	xxxx	xxxxx	338	338	161	xxxx	xxxx	xxxxx
Potent Cap.:	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx	661	586	890	xxxx	xxxx	xxxxx
Move Cap.:	1423	xxxx	xxxxx	xxxx	xxxx	xxxxx	656	580	890	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.08	0.00	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	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	769	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.6	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.6			xxxxxx		
ApproachLOS:	*			*			B			*		

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

9988 Redwood Avenue Project
Existing Plus Project
Morning Peak Hour

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

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Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

****

Cycle (sec): 85 Critical Vol./Cap.(X): 0.245
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.3
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	20	5	10	63	4	46	35	460	36	4	534	28
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:	20	5	10	63	4	46	35	460	36	4	534	28
Added Vol:	0	0	0	1	0	5	15	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	5	10	64	4	51	50	460	36	4	534	31
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:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	21	5	10	67	4	53	52	481	38	4	559	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	21	5	10	67	4	53	52	481	38	4	559	32
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:	21	5	10	67	4	53	52	481	38	4	559	32
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.81	0.19	1.00	0.94	0.06	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	344	1800	1605	100	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.01	0.04	0.04	0.03	0.03	0.13	0.02	0.00	0.16	0.02
Crit Moves:					****		****				****	
Green/Cycle:	0.38	0.38	0.38	0.38	0.38	0.38	0.12	0.37	0.37	0.18	0.44	0.44
Volume/Cap:	0.04	0.04	0.02	0.11	0.11	0.08	0.26	0.36	0.06	0.01	0.36	0.04
Delay/Veh:	16.8	16.8	16.6	17.3	17.3	17.1	34.8	19.7	17.3	28.4	16.2	13.8
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:	16.8	16.8	16.6	17.3	17.3	17.1	34.8	19.7	17.3	28.4	16.2	13.8
LOS by Move:	B	B	B	B	B	B	C	B	B	C	B	B
HCM2kAvgQ:	0	0	0	1	1	1	2	5	1	0	5	0

****

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

****

9988 Redwood Avenue Project
Existing Plus Project
Evening Peak Hour

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

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

Cycle (sec): 125 Critical Vol./Cap.(X): 0.380
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.3
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	27	4	8	75	2	42	44	1066	23	2	423	52
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:	27	4	8	75	2	42	44	1066	23	2	423	52
Added Vol:	0	0	0	3	0	16	6	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	27	4	8	78	2	58	50	1066	23	2	423	54
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	28	4	8	82	2	61	53	1121	24	2	445	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	4	8	82	2	61	53	1121	24	2	445	57
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:	28	4	8	82	2	61	53	1121	24	2	445	57
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.88	0.12	1.00	0.98	0.02	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1491	221	1800	1660	43	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.00	0.05	0.05	0.03	0.03	0.31	0.01	0.00	0.12	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.26	0.26	0.26	0.26	0.26	0.26	0.23	0.62	0.62	0.08	0.46	0.46
Volume/Cap:	0.07	0.07	0.02	0.19	0.19	0.13	0.13	0.51	0.02	0.02	0.27	0.07
Delay/Veh:	35.3	35.3	34.8	36.6	36.6	35.9	38.2	13.6	9.3	53.0	20.6	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:	35.3	35.3	34.8	36.6	36.6	35.9	38.2	13.6	9.3	53.0	20.6	18.6
LOS by Move:	D	D	C	D	D	D	D	B	A	D	C	B
HCM2kAvgQ:	1	1	0	3	3	2	2	12	0	0	5	1

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

Opening Year (2017) With Ambient

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Morning Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	64	15	3	92	0	0	0	0	13	0	2
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	67	16	3	96	0	0	0	0	14	0	2
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:	0	67	16	3	96	0	0	0	0	14	0	2
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:	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
PHF Volume:	0	95	22	4	136	0	0	0	0	19	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	95	22	4	136	0	0	0	0	19	0	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	117	xxxx	xxxxx	xxxx	xxxx	xxxxx	250	250	106
Potent Cap.:	xxxx	xxxx	xxxxx	1484	xxxx	xxxxx	xxxx	xxxx	xxxxx	742	656	954
Move Cap.:	xxxx	xxxx	xxxxx	1484	xxxx	xxxxx	xxxx	xxxx	xxxxx	741	654	954
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	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	xxxx	xxxxx	xxxx	764	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Evening Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 1.3 Worst Case Level Of Service: A[9.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	123	24	7	92	0	0	0	0	17	0	14
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	128	25	7	96	0	0	0	0	18	0	15
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:	0	128	25	7	96	0	0	0	0	18	0	15
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:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	146	28	8	109	0	0	0	0	20	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	146	28	8	109	0	0	0	0	20	0	17
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	174	xxxx	xxxxx	xxxx	xxxx	xxxxx	286	286	160
Potent Cap.:	xxxx	xxxx	xxxxx	1415	xxxx	xxxxx	xxxx	xxxx	xxxxx	709	627	890
Move Cap.:	xxxx	xxxx	xxxxx	1415	xxxx	xxxxx	xxxx	xxxx	xxxxx	706	623	890
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	779	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				9.9	
ApproachLOS:		*			*			*			A	

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Morning Peak Hour

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

****

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

****

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.1]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	82	5	1	103	0	0	0	0	16	0	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	86	5	1	107	0	0	0	0	17	0	1
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:	0	86	5	1	107	0	0	0	0	17	0	1
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:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	0	120	7	1	150	0	0	0	0	23	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	120	7	1	150	0	0	0	0	23	0	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	127	xxxx	xxxxx	xxxx	xxxx	xxxxx	276	276	123
Potent Cap.:	xxxx	xxxx	xxxxx	1472	xxxx	xxxxx	xxxx	xxxx	xxxxx	718	635	933
Move Cap.:	xxxx	xxxx	xxxxx	1472	xxxx	xxxxx	xxxx	xxxx	xxxxx	717	634	933
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.4	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	xxxx	xxxxx	xxxx	727	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1		
ApproachLOS:	*			*			*			B		

****

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Evening Peak Hour

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

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[10.0]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	145	20	3	98	0	0	0	0	10	0	5
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	151	21	3	102	0	0	0	0	10	0	5
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:	0	151	21	3	102	0	0	0	0	10	0	5
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	169	23	3	114	0	0	0	0	12	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	169	23	3	114	0	0	0	0	12	0	6
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	192	xxxx	xxxxx	xxxx	xxxx	xxxxx	302	302	181
Potent Cap.:	xxxx	xxxx	xxxxx	1393	xxxx	xxxxx	xxxx	xxxx	xxxxx	694	614	867
Move Cap.:	xxxx	xxxx	xxxxx	1393	xxxx	xxxxx	xxxx	xxxx	xxxxx	693	613	867
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	742	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Morning Peak Hour

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

****

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

****

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: B[10.3]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	5	47	0	0	99	15	42	0	25	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	5	49	0	0	103	16	44	0	26	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:	5	49	0	0	103	16	44	0	26	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:	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
PHF Volume:	8	74	0	0	156	24	66	0	39	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	74	0	0	156	24	66	0	39	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:	179	xxxx	xxxxx	xxxx	xxxx	xxxxx	257	257	167	xxxx	xxxx	xxxxx
Potent Cap.:	1409	xxxx	xxxxx	xxxx	xxxx	xxxxx	736	651	882	xxxx	xxxx	xxxxx
Move Cap.:	1409	xxxx	xxxxx	xxxx	xxxx	xxxxx	733	647	882	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	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:	7.6	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	782	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.3			xxxxxx		
ApproachLOS:	*			*			B			*		

****

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

****

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Evening Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[10.5]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	12	118	0	0	110	10	46	0	58	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	13	123	0	0	115	10	48	0	61	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:	13	123	0	0	115	10	48	0	61	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:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	15	147	0	0	137	12	57	0	72	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	147	0	0	137	12	57	0	72	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:	149	xxxx	xxxxx	xxxx	xxxx	xxxxx	320	320	143	xxxx	xxxx	xxxxx
Potent Cap.:	1444	xxxx	xxxxx	xxxx	xxxx	xxxxx	678	600	910	xxxx	xxxx	xxxxx
Move Cap.:	1444	xxxx	xxxxx	xxxx	xxxx	xxxxx	672	594	910	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	0.00	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	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	787	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.5			xxxxxx		
ApproachLOS:	*			*			B			*		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Morning Peak Hour

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

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

Cycle (sec): 90 Critical Vol./Cap.(X): 0.243
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	32		32		32		32		32		32		10		20		20		10		20		20	
Lanes:	0	1	0	0	1		0	1	0	0	1		1	0	2	0	1		1	0	2	0	1	
Volume Module:																								
Base Vol:	20		5		10		63		4		46		35		460		36		4		534		28	
Growth Adj:	1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04	1.04		1.04		1.04	1.04	1.04		1.04		1.04	1.04
Initial Bse:	21		5		10		66		4		48		37		480		38		4		557		29	
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:	21		5		10		66		4		48		37		480		38		4		557		29	
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	1.00		1.00		1.00	1.00
PHF Adj:	0.96	0.96		0.96		0.96	0.96		0.96		0.96	0.96	0.96		0.96		0.96	0.96	0.96		0.96		0.96	0.96
PHF Volume:	22		5		11		69		4		50		38		502		39		4		583		31	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	22		5		11		69		4		50		38		502		39		4		583		31	
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	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	1.00		1.00		1.00	1.00
FinalVolume:	22		5		11		69		4		50		38		502		39		4		583		31	
Saturation Flow Module:																								
Sat/Lane:	1800	1800		1800		1800	1800		1800		1800	1800	1800		1800		1800	1800	1800		1800		1800	1800
Adjustment:	0.94	1.00		1.00		0.94	1.00		1.00		1.00	0.94	1.00		1.00		1.00	0.94	1.00		1.00		1.00	1.00
Lanes:	0.81	0.19		1.00		0.94	0.06		1.00		1.00	1.00	2.00		1.00		1.00	1.00	2.00		1.00		1.00	1.00
Final Sat.:	1375	344		1800		1604	102		1800		1800	1700	3600		1800		1800	1700	3600		1800		1800	1800
Capacity Analysis Module:																								
Vol/Sat:	0.02	0.02		0.01		0.04	0.04		0.03		0.02	0.14	0.02		0.00		0.16	0.02						
Crit Moves:							****				****						****							
Green/Cycle:	0.36	0.36		0.36		0.36	0.36		0.36		0.11	0.39	0.39		0.19		0.47	0.47						
Volume/Cap:	0.04	0.04		0.02		0.12	0.12		0.08		0.20	0.36	0.06		0.01		0.35	0.04						
Delay/Veh:	19.0	19.0		18.8		19.6	19.6		19.3		36.9	19.9	17.4		29.4		15.4	13.0						
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:	19.0	19.0		18.8		19.6	19.6		19.3		36.9	19.9	17.4		29.4		15.4	13.0						
LOS by Move:	B	B		B		B	B		B		D	B	B		C		B	B						
HCM2kAvgQ:	1	1		0		1	1		1		1	5	1		0		5	0						

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient
Evening Peak Hour

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

****

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

****

Cycle (sec): 130 Critical Vol./Cap.(X): 0.394
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Protected					
Rights:	Include						Include						Include						Include					
Min. Green:	32		32		32		32		32		32		10		20		20		10		20		20	
Lanes:	0	1	0	0	1		0	1	0	0	1		1	0	2	0	1		1	0	2	0	1	
Volume Module:																								
Base Vol:	27		4		8		75		2		42		44		1066		23		2		423		52	
Growth Adj:	1.04		1.04		1.04		1.04		1.04		1.04		1.04		1.04		1.04		1.04		1.04		1.04	
Initial Bse:	28		4		8		78		2		44		46		1112		24		2		441		54	
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:	28		4		8		78		2		44		46		1112		24		2		441		54	
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:	0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95		0.95	
PHF Volume:	30		4		9		82		2		46		48		1169		25		2		464		57	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	30		4		9		82		2		46		48		1169		25		2		464		57	
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:	30		4		9		82		2		46		48		1169		25		2		464		57	
Saturation Flow Module:																								
Sat/Lane:	1800		1800		1800		1800		1800		1800		1800		1800		1800		1800		1800		1800	
Adjustment:	0.94		1.00		1.00		0.94		1.00		1.00		0.94		1.00		1.00		0.94		1.00		1.00	
Lanes:	0.88		0.12		1.00		0.98		0.02		1.00		1.00		2.00		1.00		1.00		2.00		1.00	
Final Sat.:	1491		221		1800		1658		44		1800		1700		3600		1800		1700		3600		1800	
Capacity Analysis Module:																								
Vol/Sat:	0.02		0.02		0.00		0.05		0.05		0.03		0.03		0.32		0.01		0.00		0.13		0.03	
Crit Moves:									****						****				****					
Green/Cycle:	0.25		0.25		0.25		0.25		0.25		0.25		0.24		0.63		0.63		0.08		0.47		0.47	
Volume/Cap:	0.08		0.08		0.02		0.20		0.20		0.10		0.12		0.51		0.02		0.02		0.27		0.07	
Delay/Veh:	37.8		37.8		37.1		39.1		39.1		38.0		39.2		13.3		9.0		55.5		20.9		18.8	
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:	37.8		37.8		37.1		39.1		39.1		38.0		39.2		13.3		9.0		55.5		20.9		18.8	
LOS by Move:	D		D		D		D		D		D		D		B		A		E		C		B	
HCM2kAvgQ:	1		1		0		3		3		1		2		13		0		0		5		1	

****

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

****

Opening Year (2017) With Ambient and Project

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Morning Peak Hour

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

****

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.1]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	66	0	0	95	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	69	0	0	99	0	0	0	0	0	0	0
Added Vol:	10	0	0	0	1	4	2	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	69	0	0	100	4	2	0	4	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	72	0	0	105	4	2	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	72	0	0	105	4	2	0	4	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:	110	xxxx	xxxxx	xxxx	xxxx	xxxxx	201	201	107	xxxx	xxxx	xxxxx
Potent Cap.:	1493	xxxx	xxxxx	xxxx	xxxx	xxxxx	792	699	952	xxxx	xxxx	xxxxx
Move Cap.:	1493	xxxx	xxxxx	xxxx	xxxx	xxxxx	788	694	952	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	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	890	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx				9.1		xxxxxx		
ApproachLOS:		*			*			A			*	

****

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Evening Peak Hour

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

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.2]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0	0 0	0 0	0	1 0	0 0	1!	0 0	0 0	0	0 0
Volume Module:												
Base Vol:	0	128	0	0	99	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	134	0	0	103	0	0	0	0	0	0	0
Added Vol:	5	0	0	0	0	2	4	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	134	0	0	103	2	4	0	10	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	141	0	0	109	2	4	0	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	141	0	0	109	2	4	0	11	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:	111	xxxx	xxxxx	xxxx	xxxx	xxxxx	261	261	110	xxxx	xxxx	xxxxx
Potent Cap.:	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx	732	647	949	xxxx	xxxx	xxxxx
Move Cap.:	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx	730	645	949	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	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	874	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	9.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx		
ApproachLOS:	*			*			A			*		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Morning Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[10.0]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	64	15	3	92	0	0	0	0	13	0	2
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	67	16	3	96	0	0	0	0	14	0	2
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	77	16	3	100	0	0	0	0	14	0	2
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:	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
PHF Volume:	0	109	22	4	142	0	0	0	0	19	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	109	22	4	142	0	0	0	0	19	0	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	131	xxxx	xxxxx	xxxx	xxxx	xxxxx	270	270	120
Potent Cap.:	xxxx	xxxx	xxxxx	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	723	640	937
Move Cap.:	xxxx	xxxx	xxxxx	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	722	638	937
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	745	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Evening Peak Hour

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

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Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

****

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.9]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	123	24	7	92	0	0	0	0	17	0	14
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	128	25	7	96	0	0	0	0	18	0	15
Added Vol:	0	5	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	133	25	7	106	0	0	0	0	18	0	15
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:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	151	28	8	120	0	0	0	0	20	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	151	28	8	120	0	0	0	0	20	0	17
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	180	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	303	166
Potent Cap.:	xxxx	xxxx	xxxxx	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx	693	614	884
Move Cap.:	xxxx	xxxx	xxxxx	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx	690	610	884
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	766	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

****

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

****

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Morning Peak Hour

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

****

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

****

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[10.3]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	82	5	1	103	0	0	0	0	16	0	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	86	5	1	107	0	0	0	0	17	0	1
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	96	5	1	111	0	0	0	0	17	0	1
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:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	0	134	7	1	156	0	0	0	0	23	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	134	7	1	156	0	0	0	0	23	0	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	141	xxxx	xxxxx	xxxx	xxxx	xxxxx	296	296	137
Potent Cap.:	xxxx	xxxx	xxxxx	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	699	619	917
Move Cap.:	xxxx	xxxx	xxxxx	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	699	618	917
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	709	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.3		
ApproachLOS:	*			*			*			B		

****

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[10.1]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	145	20	3	98	0	0	0	0	10	0	5
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	151	21	3	102	0	0	0	0	10	0	5
Added Vol:	0	5	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	156	21	3	112	0	0	0	0	10	0	5
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	175	23	3	125	0	0	0	0	12	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	175	23	3	125	0	0	0	0	12	0	6
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	198	xxxx	xxxxx	xxxx	xxxx	xxxxx	319	319	186
Potent Cap.:	xxxx	xxxx	xxxxx	1387	xxxx	xxxxx	xxxx	xxxx	xxxxx	679	601	861
Move Cap.:	xxxx	xxxx	xxxxx	1387	xxxx	xxxxx	xxxx	xxxx	xxxxx	678	600	861
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	729	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1		
ApproachLOS:	*			*			*			B		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

****

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				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Volume Module:																				
Base Vol:	0	87		0		0	119		0		0	0		0		0	0		0	
Growth Adj:	1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04		1.04	1.04		1.04	
Initial Bse:	0	91		0		0	124		0		0	0		0		0	0		0	
Added Vol:	10	10		0		0	4		1		0	0		3		0	0		0	
PasserByVol:	0	0		0		0	0		0		0	0		0		0	0		0	
Initial Fut:	10	101		0		0	128		1		0	0		3		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:	0.95	0.95		0.95		0.95	0.95		0.95		0.95	0.95		0.95		0.95	0.95		0.95	
PHF Volume:	11	106		0		0	135		1		0	0		3		0	0		0	
Reduct Vol:	0	0		0		0	0		0		0	0		0		0	0		0	
FinalVolume:	11	106		0		0	135		1		0	0		3		0	0		0	
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		6.2	xxxxx	xxxx	xxxxx							
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		3.3	xxxxx	xxxx	xxxxx							
Capacity Module:																				
Cnflict Vol:	136	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		135	xxxx	xxxx	xxxxx							
Potent Cap.:	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		919	xxxx	xxxx	xxxxx							
Move Cap.:	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		919	xxxx	xxxx	xxxxx							
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx							
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		0.0	xxxx	xxxx	xxxxx							
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx							
Shared LOS:	A	*	*	*	*	*	*	*	*		*	*	*							
ApproachDel:	xxxxxx			xxxxxx			8.9				xxxxxx									
ApproachLOS:	*			*			A				*									

****

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

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

****

Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 1 0 0			0 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	165	0	0	108	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	172	0	0	113	0	0	0	0	0	0	0
Added Vol:	3	5	0	0	10	0	0	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	177	0	0	123	0	0	0	10	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	186	0	0	129	0	0	0	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	186	0	0	129	0	0	0	11	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	129	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	129	xxxx	xxxx	xxxxx
Potent Cap.:	1469	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	926	xxxx	xxxx	xxxxx
Move Cap.:	1469	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	926	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

****

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

****

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Morning Peak Hour

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

****

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

****

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[10.6]

****

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				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	5	47		0		0	99		15		42		0		25	0		0		0
Growth Adj:	1.04	1.04		1.04		1.04	1.04		1.04		1.04		1.04		1.04	1.04		1.04		1.04
Initial Bse:	5	49		0		0	103		16		44		0		26	0		0		0
Added Vol:	0	19		0		0	6		0		1		0		0	0		0		0
PasserByVol:	0	0		0		0	0		0		0		0		0	0		0		0
Initial Fut:	5	68		0		0	109		16		45		0		26	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:	0.66	0.66		0.66		0.66	0.66		0.66		0.66		0.66		0.66	0.66		0.66		0.66
PHF Volume:	8	102		0		0	165		24		67		0		39	0		0		0
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	8	102		0		0	165		24		67		0		39	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:	188	xxxx	xxxxx	xxxx	xxxx	xxxxx					295		295		176	xxxx	xxxx	xxxxx		
Potent Cap.:	1398	xxxx	xxxxx	xxxx	xxxx	xxxxx					701		620		872	xxxx	xxxx	xxxxx		
Move Cap.:	1398	xxxx	xxxxx	xxxx	xxxx	xxxxx					698		617		872	xxxx	xxxx	xxxxx		
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.10		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:	7.6	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		753		xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		0.5		xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		10.6		xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	A	*	*	*	*	*					*		B		*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx							10.6					xxxxxx				
ApproachLOS:	*			*							B					*				

****

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

****

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Evening Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[10.7]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	12	118	0	0	110	10	46	0	58	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	13	123	0	0	115	10	48	0	61	0	0	0
Added Vol:	0	7	0	0	19	1	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	130	0	0	134	11	48	0	61	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:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	15	155	0	0	160	14	57	0	72	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	155	0	0	160	14	57	0	72	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:	173	xxxx	xxxxx	xxxx	xxxx	xxxxx	352	352	166	xxxx	xxxx	xxxxx
Potent Cap.:	1416	xxxx	xxxxx	xxxx	xxxx	xxxxx	650	576	883	xxxx	xxxx	xxxxx
Move Cap.:	1416	xxxx	xxxxx	xxxx	xxxx	xxxxx	645	570	883	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	0.00	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	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	759	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.7	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.7			xxxxxx		
ApproachLOS:	*			*			B			*		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Morning Peak Hour

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

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Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

****

Cycle (sec): 90 Critical Vol./Cap.(X): 0.254
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.4
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	20	5	10	63	4	46	35	460	36	4	534	28
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	21	5	10	66	4	48	37	480	38	4	557	29
Added Vol:	0	0	0	1	0	5	15	0	0	0	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	5	10	67	4	53	52	480	38	4	557	32
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:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	22	5	11	70	4	55	54	502	39	4	583	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	5	11	70	4	55	54	502	39	4	583	34
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:	22	5	11	70	4	55	54	502	39	4	583	34
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.81	0.19	1.00	0.94	0.06	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	344	1800	1605	100	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.01	0.04	0.04	0.03	0.03	0.14	0.02	0.00	0.16	0.02
Crit Moves:					****		****				****	
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.11	0.39	0.39	0.19	0.47	0.47
Volume/Cap:	0.04	0.04	0.02	0.12	0.12	0.09	0.29	0.36	0.06	0.01	0.35	0.04
Delay/Veh:	19.0	19.0	18.8	19.6	19.6	19.3	37.6	19.9	17.4	29.4	15.4	13.1
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:	19.0	19.0	18.8	19.6	19.6	19.3	37.6	19.9	17.4	29.4	15.4	13.1
LOS by Move:	B	B	B	B	B	B	D	B	B	C	B	B
HCM2kAvgQ:	1	1	0	1	1	1	2	5	1	0	5	0

****

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

****

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project
Evening Peak Hour

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

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

Cycle (sec): 130 Critical Vol./Cap.(X): 0.396
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.5
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	27	4	8	75	2	42	44	1066	23	2	423	52
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	28	4	8	78	2	44	46	1112	24	2	441	54
Added Vol:	0	0	0	3	0	16	6	0	0	0	0	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	28	4	8	81	2	60	52	1112	24	2	441	56
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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	30	4	9	85	2	63	55	1169	25	2	464	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	4	9	85	2	63	55	1169	25	2	464	59
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:	30	4	9	85	2	63	55	1169	25	2	464	59
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.88	0.12	1.00	0.98	0.02	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1491	221	1800	1660	43	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.00	0.05	0.05	0.03	0.03	0.32	0.01	0.00	0.13	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.24	0.63	0.63	0.08	0.47	0.47
Volume/Cap:	0.08	0.08	0.02	0.21	0.21	0.14	0.14	0.51	0.02	0.02	0.27	0.07
Delay/Veh:	37.8	37.8	37.1	39.2	39.2	38.4	39.4	13.3	9.0	55.5	20.9	18.8
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:	37.8	37.8	37.1	39.2	39.2	38.4	39.4	13.3	9.0	55.5	20.9	18.8
LOS by Move:	D	D	D	D	D	D	D	B	A	E	C	B
HCM2kAvgQ:	1	1	0	3	3	2	2	13	0	0	5	1

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

Opening Year (2017) With Ambient and Cumulative and Project

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Morning Peak Hour

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

****

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

****

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.1]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	66	0	0	95	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	69	0	0	99	0	0	0	0	0	0	0
Added Vol:	10	0	0	0	1	4	2	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	69	0	0	100	4	2	0	4	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	72	0	0	105	4	2	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	72	0	0	105	4	2	0	4	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:	110	xxxx	xxxxx	xxxx	xxxx	xxxxx	201	201	107	xxxx	xxxx	xxxxx
Potent Cap.:	1493	xxxx	xxxxx	xxxx	xxxx	xxxxx	792	699	952	xxxx	xxxx	xxxxx
Move Cap.:	1493	xxxx	xxxxx	xxxx	xxxx	xxxxx	788	694	952	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	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	890	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.1	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.1			xxxxxx		
ApproachLOS:	*			*			A			*		

****

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Evening Peak Hour

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

****

Intersection #1 Redwood Avenue (NS) at Project North Access (EW)

****

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.2]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	128	0	0	99	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	134	0	0	103	0	0	0	0	0	0	0
Added Vol:	5	0	0	0	0	2	4	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	134	0	0	103	2	4	0	10	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	141	0	0	109	2	4	0	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	141	0	0	109	2	4	0	11	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:	111	xxxx	xxxxx	xxxx	xxxx	xxxxx	261	261	110	xxxx	xxxx	xxxxx
Potent Cap.:	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx	732	647	949	xxxx	xxxx	xxxxx
Move Cap.:	1492	xxxx	xxxxx	xxxx	xxxx	xxxxx	730	645	949	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	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	874	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	9.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx		
ApproachLOS:	*			*			A			*		

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Morning Peak Hour

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

Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[10.0]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	64	15	3	92	0	0	0	0	13	0	2
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	67	16	3	96	0	0	0	0	14	0	2
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	77	16	3	100	0	0	0	0	14	0	2
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:	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
PHF Volume:	0	109	22	4	142	0	0	0	0	19	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	109	22	4	142	0	0	0	0	19	0	3
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	131	xxxx	xxxxx	xxxx	xxxx	xxxxx	270	270	120
Potent Cap.:	xxxx	xxxx	xxxxx	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	723	640	937
Move Cap.:	xxxx	xxxx	xxxxx	1467	xxxx	xxxxx	xxxx	xxxx	xxxxx	722	638	937
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	745	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.0		
ApproachLOS:	*			*			*			A		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Evening Peak Hour

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

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Intersection #2 Redwood Avenue (NS) at Rosemary Drive (EW)

****

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: A[9.9]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 1 0			0 1 0 0 0			0 0 0 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	0	123	24	7	92	0	0	0	0	17	0	14
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	128	25	7	96	0	0	0	0	18	0	15
Added Vol:	0	5	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	133	25	7	106	0	0	0	0	18	0	15
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:	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	0	151	28	8	120	0	0	0	0	20	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	151	28	8	120	0	0	0	0	20	0	17
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	180	xxxx	xxxxx	xxxx	xxxx	xxxxx	303	303	166
Potent Cap.:	xxxx	xxxx	xxxxx	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx	693	614	884
Move Cap.:	xxxx	xxxx	xxxxx	1408	xxxx	xxxxx	xxxx	xxxx	xxxxx	690	610	884
Volume/Cap:	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	766	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			9.9		
ApproachLOS:	*			*			*			A		

****

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Morning Peak Hour

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

****

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

****

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[10.3]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	82	5	1	103	0	0	0	0	16	0	1
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	86	5	1	107	0	0	0	0	17	0	1
Added Vol:	0	10	0	0	4	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	96	5	1	111	0	0	0	0	17	0	1
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:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	0	134	7	1	156	0	0	0	0	23	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	134	7	1	156	0	0	0	0	23	0	1
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	141	xxxx	xxxxx	xxxx	xxxx	xxxxx	296	296	137
Potent Cap.:	xxxx	xxxx	xxxxx	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	699	619	917
Move Cap.:	xxxx	xxxx	xxxxx	1455	xxxx	xxxxx	xxxx	xxxx	xxxxx	699	618	917
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	0.00	0.00
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.5	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	xxxx	xxxxx	xxxx	709	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.3		
ApproachLOS:	*			*			*			B		

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Evening Peak Hour

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

****

Intersection #3 Redwood Avenue (NS) at Iris Drive (EW)

****

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[10.1]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 1	0	0 1	0 0	0	0 0	0 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	0	145	20	3	98	0	0	0	0	10	0	5
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	151	21	3	102	0	0	0	0	10	0	5
Added Vol:	0	5	0	0	10	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	156	21	3	112	0	0	0	0	10	0	5
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:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	0	175	23	3	125	0	0	0	0	12	0	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	175	23	3	125	0	0	0	0	12	0	6
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	198	xxxx	xxxxx	xxxx	xxxx	xxxxx	319	319	186
Potent Cap.:	xxxx	xxxx	xxxxx	1387	xxxx	xxxxx	xxxx	xxxx	xxxxx	679	601	861
Move Cap.:	xxxx	xxxx	xxxxx	1387	xxxx	xxxxx	xxxx	xxxx	xxxxx	678	600	861
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	0.00	0.01
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.6	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	xxxx	xxxxx	xxxx	729	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1		
ApproachLOS:	*			*			*			B		

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

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

****

Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

****

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 0 0 1			0 0 0 0 0		
Volume Module:												
Base Vol:	0	87	0	0	119	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	91	0	0	124	0	0	0	0	0	0	0
Added Vol:	10	10	0	0	4	1	0	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	101	0	0	128	1	0	0	3	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	106	0	0	135	1	0	0	3	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	106	0	0	135	1	0	0	3	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	136	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	135	xxxx	xxxx	xxxxx
Potent Cap.:	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	919	xxxx	xxxx	xxxxx
Move Cap.:	1461	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	919	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Redwood Avenue (NS) at Project South Access (EW)

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.9]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	1 0	0	0 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	0	165	0	0	108	0	0	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	172	0	0	113	0	0	0	0	0	0	0
Added Vol:	3	5	0	0	10	0	0	0	10	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	177	0	0	123	0	0	0	10	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:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	186	0	0	129	0	0	0	11	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	186	0	0	129	0	0	0	11	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	129	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	129	xxxx	xxxx	xxxxx
Potent Cap.:	1469	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	926	xxxx	xxxx	xxxxx
Move Cap.:	1469	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	926	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.9	xxxxx	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:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.9			xxxxxx		
ApproachLOS:	*			*			A			*		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Morning Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: B[10.6]

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				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	5	47		0		0	99		15		42		0		25	0		0		0
Growth Adj:	1.04	1.04		1.04		1.04	1.04		1.04		1.04		1.04		1.04	1.04		1.04		1.04
Initial Bse:	5	49		0		0	103		16		44		0		26	0		0		0
Added Vol:	0	19		0		0	6		0		1		0		0	0		0		0
PasserByVol:	0	0		0		0	0		0		0		0		0	0		0		0
Initial Fut:	5	68		0		0	109		16		45		0		26	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:	0.66	0.66		0.66		0.66	0.66		0.66		0.66		0.66		0.66	0.66		0.66		0.66
PHF Volume:	8	102		0		0	165		24		67		0		39	0		0		0
Reduct Vol:	0	0		0		0	0		0		0		0		0	0		0		0
FinalVolume:	8	102		0		0	165		24		67		0		39	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:	188	xxxx	xxxxx	xxxx	xxxx	xxxxx					295		295		176	xxxx	xxxx	xxxxx		
Potent Cap.:	1398	xxxx	xxxxx	xxxx	xxxx	xxxxx					701		620		872	xxxx	xxxx	xxxxx		
Move Cap.:	1398	xxxx	xxxxx	xxxx	xxxx	xxxxx					698		617		872	xxxx	xxxx	xxxxx		
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx					0.10		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:	7.6	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		753		xxxxx	xxxx	xxxx	xxxxx		
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		0.5		xxxxx	xxxxx	xxxx	xxxxx		
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx					xxxxx		10.6		xxxxx	xxxxx	xxxx	xxxxx		
Shared LOS:	A	*	*	*	*	*					*		B		*	*	*	*		
ApproachDel:	xxxxxx			xxxxxx							10.6					xxxxxx				
ApproachLOS:	*			*							B					*				

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Evening Peak Hour

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

Intersection #5 Redwood Avenue (NS) at Hunter Street (EW)

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[10.7]

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		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	12	118	0	0	110	10	46	0	58	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	13	123	0	0	115	10	48	0	61	0	0	0
Added Vol:	0	7	0	0	19	1	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	130	0	0	134	11	48	0	61	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:	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF Volume:	15	155	0	0	160	14	57	0	72	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	15	155	0	0	160	14	57	0	72	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:	173	xxxx	xxxxx	xxxx	xxxx	xxxxx	352	352	166	xxxx	xxxx	xxxxx
Potent Cap.:	1416	xxxx	xxxxx	xxxx	xxxx	xxxxx	650	576	883	xxxx	xxxx	xxxxx
Move Cap.:	1416	xxxx	xxxxx	xxxx	xxxx	xxxxx	645	570	883	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	0.00	0.08	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	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	759	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.7	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.7			xxxxxx		
ApproachLOS:	*			*			B			*		

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

9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Morning Peak Hour

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

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Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

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Cycle (sec): 90 Critical Vol./Cap.(X): 0.255
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.5
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	32	32	32	32	32	32	10	20	20	10	20	20
Lanes:	0 1	0 0	1	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	20	5	10	63	4	46	35	460	36	4	534	28
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	21	5	10	66	4	48	37	480	38	4	557	29
Added Vol:	0	0	0	1	0	5	15	18	0	0	4	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	5	10	67	4	53	52	498	38	4	561	32
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:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	22	5	11	70	4	55	54	521	39	4	587	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	5	11	70	4	55	54	521	39	4	587	34
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:	22	5	11	70	4	55	54	521	39	4	587	34
Saturation Flow Module:												
Sat/Lane:	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adjustment:	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00
Lanes:	0.81	0.19	1.00	0.94	0.06	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	344	1800	1605	100	1800	1700	3600	1800	1700	3600	1800
Capacity Analysis Module:												
Vol/Sat:	0.02	0.02	0.01	0.04	0.04	0.03	0.03	0.14	0.02	0.00	0.16	0.02
Crit Moves:					****		****				****	
Green/Cycle:	0.36	0.36	0.36	0.36	0.36	0.36	0.11	0.39	0.39	0.19	0.47	0.47
Volume/Cap:	0.04	0.04	0.02	0.12	0.12	0.09	0.29	0.38	0.06	0.01	0.35	0.04
Delay/Veh:	19.0	19.0	18.8	19.6	19.6	19.3	37.6	20.1	17.4	29.4	15.4	13.1
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:	19.0	19.0	18.8	19.6	19.6	19.3	37.6	20.1	17.4	29.4	15.4	13.1
LOS by Move:	B	B	B	B	B	B	D	C	B	C	B	B
HCM2kAvgQ:	1	1	0	1	1	1	2	5	1	0	5	0

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

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9988 Redwood Avenue Project
Opening Year (2017) With Ambient and Project and Cumulative
Evening Peak Hour

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

Intersection #6 Redwood Avenue (NS) at Valley Boulevard (EW)

Cycle (sec): 130 Critical Vol./Cap.(X): 0.399
Loss Time (sec): 6 (Y+R=3.0 sec) Average Delay (sec/veh): 18.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T		R	L	T		R	L	T		R	L	T		R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	32	32		32	32	32		32	10	20		20	10	20		20
Lanes:	0 1	0	0	1	0 1	0	0	1	1 0	2	0	1	1 0	2	0	1
Volume Module:																
Base Vol:	27	4		8	75	2		42	44	1066		23	2	423		52
Growth Adj:	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04
Initial Bse:	28	4		8	78	2		44	46	1112		24	2	441		54
Added Vol:	0	0		0	3	0		16	6	10		0	0	23		2
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	28	4		8	81	2		60	52	1122		24	2	464		56
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:	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	30	4		9	85	2		63	55	1180		25	2	488		59
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	30	4		9	85	2		63	55	1180		25	2	488		59
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:	30	4		9	85	2		63	55	1180		25	2	488		59
Saturation Flow Module:																
Sat/Lane:	1800	1800		1800	1800	1800		1800	1800	1800		1800	1800	1800		1800
Adjustment:	0.94	1.00		1.00	0.94	1.00		1.00	0.94	1.00		1.00	0.94	1.00		1.00
Lanes:	0.88	0.12		1.00	0.98	0.02		1.00	1.00	2.00		1.00	1.00	2.00		1.00
Final Sat.:	1491	221		1800	1660	43		1800	1700	3600		1800	1700	3600		1800
Capacity Analysis Module:																
Vol/Sat:	0.02	0.02		0.00	0.05	0.05		0.03	0.03	0.33		0.01	0.00	0.14		0.03
Crit Moves:						****				****			****			
Green/Cycle:	0.25	0.25		0.25	0.25	0.25		0.25	0.24	0.63		0.63	0.08	0.47		0.47
Volume/Cap:	0.08	0.08		0.02	0.21	0.21		0.14	0.14	0.52		0.02	0.02	0.29		0.07
Delay/Veh:	37.8	37.8		37.1	39.2	39.2		38.4	39.4	13.4		9.0	55.5	21.1		18.8
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:	37.8	37.8		37.1	39.2	39.2		38.4	39.4	13.4		9.0	55.5	21.1		18.8
LOS by Move:	D	D		D	D	D		D	D	B		A	E	C		B
HCM2kAvgQ:	1	1		0	3	3		2	2	13		0	0	6		1

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

Kunzman Associates, Inc.

OVER 35 YEARS OF EXCELLENT SERVICE

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