

Submitted by:



SIMI VALLEY TRAFFIC IMPACT FEE
Nexus Study

Submitted to:
City of Simi Valley

Adopted December 2014

17J13-1763

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EXECUTIVE SUMMARY

This Traffic Impact Fee Nexus Study describes the methodology and summarizes the results of a study conducted by Iteris, Inc. (Iteris) to update the current Traffic Impact Fee Program for the City of Simi Valley. The purpose of the Traffic Impact Fee is to collect funds for transportation infrastructure improvements aimed at relieving projected mobility deficiencies and unacceptable traffic operating conditions expected to exist as a result of the new developments within Simi Valley per buildout of the City's General Plan. This report identifies the purpose of the fee and demonstrates a reasonable relationship (nexus) between the fee and the purpose for which it is to be collected, thus satisfying the requirements of the California Mitigation Fee Act.

The net final total cost to improve the City's transportation system at full buildout of the General Plan, was estimated at \$19,431,100. The Traffic Impact Fee was calculated by dividing the total costs of the transportation improvements by the 240,846 net daily trips which are projected to be generated by new development within the City by the buildout of the General Plan land uses. The maximum nexus fee as a result of the projected new daily trips is \$80.68 per generated daily trip. This Nexus Fee Study only recommends this maximum fee per trip that by state law nexus is connected to and can be assessed to new development. The staff report, which will be drafted for consideration by the City Council based on the results of this study, will recommend the parameters of the actual updated traffic impact fee program.

1.0 INTRODUCTION

The purpose of this traffic impact fee nexus study is to describe the methodology used and summarize the results of a study conducted by Iteris, Inc. (Iteris) to update the traffic impact fee in the City of Simi Valley. The Traffic Impact Fee is intended to be used to collect funds for transportation infrastructure improvements aimed at relieving projected transportation deficiencies and unacceptable traffic operating conditions which are forecast to be caused by new development within Simi Valley, per build out of the City's General Plan. This report identifies the purpose of the fee and demonstrates a reasonable relationship (nexus) between the fee and the purpose for which it is to be collected.



1.1 BACKGROUND

As part of Resolution 91-93, the City Council initially adopted a traffic impact fee of \$22.38 per daily vehicle trip end for residential development and \$10.50 per daily vehicle trip end for nonresidential

development. This fee was later updated to \$33.00 per daily vehicle trip end for residential development and \$15.50 per daily vehicle trip end for nonresidential development.

The City must comply with California Government Code Section 66000 and as part of the code, the City is required to make certain findings via a nexus study in order to establish a valid traffic impact fee. Without the required findings, the traffic impact fee, as it is currently constructed, may be invalidated by a court of law. **Appendix A** includes a complete version of Resolution 91-93.

1.2 CALIFORNIA MITIGATION FEE ACT

New development lays the groundwork for population increases and job opportunities within the City. However, as population and employment increase, the need for planning and implementing circulation system improvements also increases.

California Government Code Section 66000 et seq. enables local agencies to charge a mitigation fee. A mitigation fee, also known as a development impact fee, is a monetary exaction imposed by a government agency upon an applicant seeking approval for a development project. The fee is applied towards the cost of traffic-related public infrastructure improvements within the jurisdiction, and is not a tax or special assessment. The fee is to be used to finance only those circulation system improvements which are related to the type of development that will generate an increase in traffic.

The Mitigation Fee Act requirements in California Government Code Section 66001 require specific nexus requirements to be satisfied for fees related to traffic mitigation improvements. These requirements include:

66001. (a) In any action establishing, increasing, or imposing a fee as a condition of approval of a development project by a local agency, the local agency shall do all of the following:

- (1) Identify the purpose of the fee.
- (2) Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specified in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged.
- (3) Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed.
- (4) Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed.

Appendix A includes a complete version of California Government Code Section 66000-66008.

2.0 TRAVEL DEMAND FORECASTING AND ANALYSIS

This section describes the methodology used to forecast the future peak hour traffic volumes that are expected to be generated by the buildout of the City's 2012 General Plan land uses using the City's travel demand model (Simi Valley Traffic Analysis Model, or SVTAM). The section also discusses the resulting intersection levels of service (LOS) analysis conducted for the projected future peak hour intersection traffic volumes.

2.1 TRAVEL DEMAND FORECASTING

The Simi Valley Traffic Analysis Model (SVTAM) was used to analyze the traffic impacts of projected development within the City at buildout of the City's General Plan land uses. The model was developed by Iteris in 2007 as a part of the 2012 General Plan Update Circulation and Mobility Element process.



The SVTAM was created as a focused travel demand model for the City from the Southern California Association of Governments (SCAG) regional model. At the time of the development, this model had a 2006 base year and 2030 as a regional horizon year for the future. The SCAG regional model attributed only 25 traffic analysis zones (TAZs) to the City of Simi Valley. As part of the work effort done for the Circulation and Mobility Element Update, these 25 zones were disaggregated to 342 smaller zones covering the City. Land use quantities were estimated for the buildout conditions of the study area for each of the TAZs. These model input data include key input variables such as the number of single and multiple dwelling units, population, retail, and total employment among others for each TAZ. The SVTAM highway network was also obtained from SCAG and refined by adding secondary and minor arterials, collector streets, and refined zonal connectors within the City to represent a more detailed network consistent with the developed finer zone system.

As part of this fee update study, an updated base year 2013 model was created to supplant the original 2006 model, using updated land use data provided by the City. The data included development that had already been completed between 2006 and 2013. The updated base year model was created in order to more accurately estimate the growth in vehicle trips between current conditions (at the time of the fee update study) and projected buildout conditions. In total, the SVTAM consists of 35 unique land-use categories in the 2006 and updated 2013 base condition. In 2030, the same 35 unique land use categories are included as well as three new categories of Mixed-use Residential, Mixed-use Office, and Mixed-use Retail, as proposed by the General Plan Update process.

For the 2030 Buildout year, the General Plan Update Environmental Impact Report (EIR) assumed and analyzed a more intensive land use mix than what was ultimately approved (adopted) by the City Council in 2012. Therefore, as part of this nexus study, a new set of forecast model runs and related

traffic analyses were conducted to correspond to the “Adopted” land use scenario to determine the needed circulation improvements at buildout conditions. The “Adopted” General Plan scenario consists of the following total generalized land use quantities for the entire City of Simi Valley:

- Residential – 53, 669 units
- Retail – 7,980,000 square feet
- Office – 6,412,000 square feet
- Business Park – 5,940,000 square feet
- Industrial – 12,577,000 square feet



It should be noted that there is no specific timeframe (projected year) associated with the build-out of the General Plan, and these development estimates are intended to provide overall estimates of the potential for population and employment growth in the City of Simi Valley generally over the next 20 years. The model was run using these new buildout land uses and the generated trips in the City plus the estimated other 2030 trips generated from all other zones in the model representing the Southern California region.

Table 1 summarizes the inbound, outbound, and total daily trips generated by Simi Valley TAZs for the initial base 2006 scenario, the updated 2013 scenario, and the “Adopted” General Plan Buildout 2030 scenario.

TABLE 1: TOTAL GENERATED TRIPS

Year	Daily Inbound Trips	Daily Outbound Trips	Total Daily Trips
Base Year 2006	442,563	447,795	890,358
Updated Base Year 2013	455,448	460,772	916,220
“Adopted” GP Year 2030	575,292	581,774	1,157,066
Increase in trips between 2013 and 2030	119,844	121,002	240,846

As shown in **Table 1**, the projected total increase in daily trips as a result of new development in the City of Simi Valley between 2013 and 2030 is estimated at 240,846 daily trips. This number represents the total trip difference between City TAZs in the two model year scenarios, and includes contributions from all land uses. The City does not exempt any land uses in the calculation of total daily trips attributed to new development. However, public schools are exempt from local planning regulations and may not pay their share of the traffic impact fees. Their share of the fee would likely be borne by the City’s General Fund.

2.2 INTERSECTION LOS ANALYSIS

Intersections are typically considered to represent the most critical locations for traffic flow bottlenecks and congestion on roadways with interrupted traffic flow, since at intersections the right-of-way must be shared by opposing traffic streams, creating conflicting traffic movements. For purposes of this study, intersection level of service (LOS) is measured to determine the peak hour operating conditions at the study intersections.

Table 2 outlines the LOS concept for signalized intersections using the Intersection Capacity Utilization (ICU) methodology, as the standard recognized and used per the City of Simi Valley General Plan, as adopted by the City Council.



TABLE 2: SIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Signalized Intersection Volume-to-Capacity Ratio (V/C)
A	Free flowing, virtually no delay. Minimal Traffic.	≤ 0.600
B	Free flow and choice of lanes. Delays are minimal. All cars clear intersection easily.	>0.600 to 0.699
C	Good operation. Delays starting to become a factor but still within acceptable limits.	>0.700 to 0.799
D	Approaching unstable flow. Queues at intersection are quite long but most cars clear intersection on their green signal. Occasionally, several vehicles must wait for a second green signal. Congestion is moderate.	>0.800 to 0.899
E	Severe Congestion and delay. Most of the available capacity is used. Many cars must wait through a complete signal cycle to clear the intersection.	>0.900 to 0.999
F	Excessive delay and congestion. Most cars must wait through more than one on one signal cycle. Queues are very long and drivers are obviously irritated.	> 1.000

Table 3 outlines the LOS concept for unsignalized intersections using the Highway Capacity Manual (HCM) methodology.

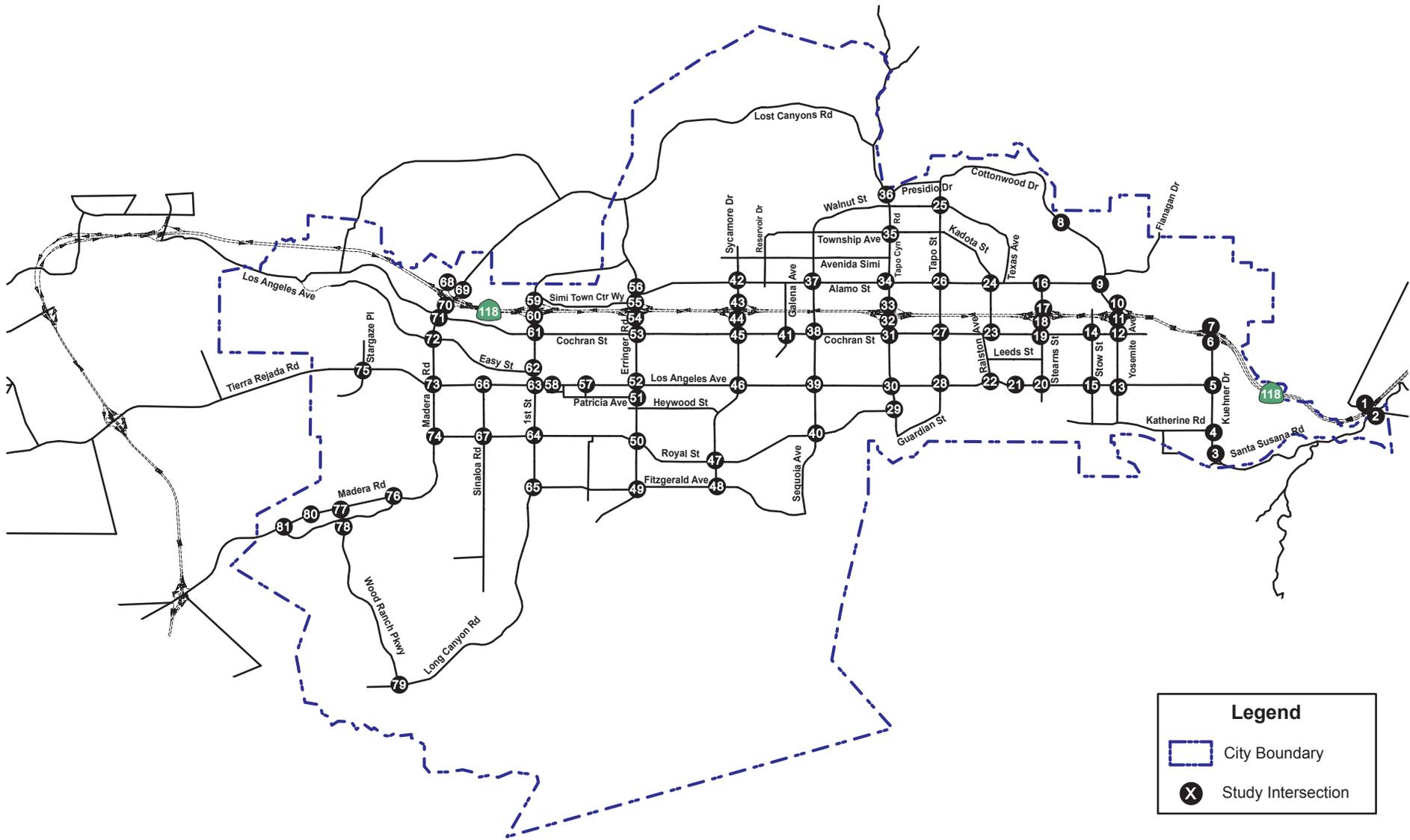
TABLE 3: UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Unsignalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>10 and ≤ 15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>15 and ≤ 25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>25 and ≤ 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>35 and ≤ 50
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 50

Source: *Highway Capacity Manual*, Special Report 209, Transportation Research Board, Washington, DC, 2000.

The City of Simi Valley’s adopted policy for minimum vehicular operating condition standards for intersections aims to achieve level of service (LOS) C or better during peak hour periods.

Consistent with the analyses performed under the General Plan and EIR process, level of service conditions were analyzed for 81 key intersections in the City during morning (a.m.) and afternoon (p.m.) peak hours. **Figure 1** shows the locations of the 81 study intersections. As a first step in determining future capacity needs, **Table 4** summarizes the LOS at the 81 study intersections given the land uses in the buildout of the “Adopted” General Plan but assuming only the existing configurations and lane geometry at all study intersections. This scenario was used to determine the possible expected extent of future intersection deficiencies if the City were not to make any improvements to the roadway network and intersections through the buildout year 2030. Detailed intersection LOS calculation sheets are provided in **Appendix B**.



Legend

- City Boundary
- X Study Intersection

**TABLE 4: “ADOPTED” GENERAL PLAN BUILDOUT
WITH EXISTING LANE GEOMETRY - INTERSECTION LOS**

Intersection	Traffic Control	AM Peak Hour			PM Peak Hour			
		V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	
1	Rocky Peak Fire Rd & SR-118 WB	Unsignalized	-	17.0	C	-	929.0	F
2	Rocky Peak Fire Rd & SR-118 EB	Unsignalized	-	15.4	C	-	153.6	F
3	Kuehner Dr & Smith Rd	Signal	0.40	-	A	0.44	-	A
4	Kuehner Dr & Katherine Rd	Signal	0.57	-	A	0.34	-	A
5	Kuehner Dr & Los Angeles Ave	Unsignalized	0.71	20.6	C	1.25	100.6	F
6	Kuehner Dr & SR-118 EB On-Off	Unsignalized	-	10.7	B	-	17.9	C
7	Kuehner Dr & SR-118 WB On-Off	Unsignalized	-	126.5	F	-	553.9	F
8	Yosemite Ave & Evening Sky Dr	Unsignalized	0.43	10.1	B	0.21	8.4	A
9	Yosemite Ave & Alamo St	Unsignalized	0.94	37.5	E	0.60	16.8	C
10	Yosemite Ave & SR-118 WB On-Of	Signal	0.58	-	A	0.42	-	A
11	Yosemite Ave & SR-118 EB On-Of	Signal	0.45	-	A	0.39	-	A
12	Yosemite Ave & Cochran St	Signal	0.55	-	A	0.40	-	A
13	Yosemite Ave & Los Angeles Ave	Signal	0.76	-	C	0.89	-	D
14	Stow St & Cochran St	Signal	0.36	-	A	0.18	-	A
15	Stow St & Los Angeles Ave	Signal	0.58	-	A	0.73	-	C
16	Stearns St & Alamo St	Signal	0.44	-	A	0.39	-	A
17	Stearns St & SR-118 WB On-Off	Signal	0.51	-	A	0.42	-	A
18	Stearns St & SR-118 EB On-Off	Signal	0.42	-	A	0.38	-	A
19	Stearns St & Cochran St	Signal	0.79	-	C	0.67	-	B
20	Stearns St & Los Angeles Ave	Signal	0.80	-	C	0.86	-	D
21	Los Angeles Ave & Hidden Ranch	Signal	0.51	-	A	0.88	-	D
22	Los Angeles Ave & Ralston Ave	Unsignalized	-	99.8	F	-	292.1	F
23	Kadota St & Cochran St	Unsignalized	-	17.6	C	-	14.3	B
24	Kadota St & Alamo St	Unsignalized	-	48.5	E	-	33.9	D
25	Tapo St & Walnut St	Unsignalized	0.48	11.4	B	0.25	9.4	A
26	Tapo St & Alamo St	Signal	0.55	-	A	0.46	-	A
27	Tapo St & Cochran St	Signal	0.55	-	A	0.55	-	A
28	Tapo St & Los Angeles Ave	Signal	0.65	-	B	0.90	-	D
29	Tapo Canyon Rd & Royal Ave	Unsignalized	0.73	20.3	C	0.85	26.3	D
30	Tapo Canyon Rd & Los Angeles Ave	Signal	0.89	-	D	1.02	-	F
31	Tapo Canyon Rd & Cochran St	Signal	0.80	-	D	0.81	-	D
32	Tapo Canyon Rd & SR-118 EB On-	Signal	0.62	-	B	0.59	-	A
33	Tapo Canyon Rd & SR-118 WB On-	Signal	0.50	-	A	0.62	-	B
34	Tapo Canyon Rd & Alamo St	Signal	0.45	-	A	0.47	-	A
35	Tapo Canyon Rd & Township Ave	Signal	0.40	-	A	0.26	-	A
36	Tapo Canyon Rd & Lost Canyons	Unsignalized	-	17.1	C	-	11.7	B
37	Sequoia Ave & Alamo St	Signal	0.52	-	A	0.63	-	B
38	Sequoia Ave & Cochran St	Signal	0.54	-	A	0.60	-	A
39	Sequoia Ave & Los Angeles Ave	Signal	0.73	-	C	0.83	-	D
40	Sequoia Ave & Royal Ave	Signal	0.35	-	A	0.53	-	A
41	Cochran St & Galena Ave	Signal	0.39	-	A	0.53	-	A
42	Sycamore Dr & Alamo St	Signal	0.68	-	B	0.73	-	C
43	Sycamore Dr & SR-118 WB On-Off	Signal	0.46	-	A	0.50	-	A
44	Sycamore Dr & SR-118 EB On-Off	Signal	0.65	-	B	0.64	-	B
45	Sycamore Dr & Cochran St	Signal	0.61	-	B	0.64	-	B
46	Sycamore Dr & Los Angeles Ave	Signal	0.82	-	D	0.89	-	D
47	Sycamore Dr & Royal Ave	Signal	0.62	-	B	0.52	-	A
48	Sycamore Dr & Fitzgerald Rd	Unsignalized	0.57	13.6	B	0.51	13.4	B



49	Erringer Rd & Fitzgerald Rd	Unsignalized	0.64	18.3	C	0.41	12.7	B
50	Erringer Rd & Royal Ave	Signal	0.77	-	C	0.81	-	D
51	Erringer Rd & Patricia Ave	Signal	0.49	-	A	0.51	-	A
52	Erringer Rd & Los Angeles Ave	Signal	0.72	-	C	0.81	-	D
53	Erringer Rd & Cochran St	Signal	0.63	-	B	0.69	-	B
54	Erringer Rd & SR-118 EB On-Off	Signal	0.33	-	A	0.49	-	A
55	Erringer Rd & SR-118 WB On-Off	Signal	0.41	-	A	0.53	-	A
56	Erringer Rd & Alamo St	Signal	0.44	-	A	0.76	-	C
57	Los Angeles Ave & Hubbard St	Signal	0.33	-	A	0.49	-	A
58	Los Angeles Ave & Patricia Ave	Signal	0.69	-	B	0.85	-	D
59	First St & SR-118 WB On-Off Ramp	Signal	0.54	-	A	0.64	-	B
60	First St & SR-118 EB On-Off Ramp	Signal	0.53	-	A	0.73	-	C
61	First St & Cochran St	Signal	0.56	-	A	0.70	-	C
62	First St & E Easy St	Signal	0.70	-	C	0.91	-	E
63	First St & Los Angeles Ave	Signal	0.79	-	C	0.89	-	D
64	First St & Royal Ave	Signal	0.92	-	E	0.77	-	C
65	First St & Fitzgerald Rd	Signal	0.59	-	A	0.47	-	A
66	Sinaloa Rd & Los Angeles Ave	Signal	0.58	-	A	0.75	-	C
67	Sinaloa Rd & Royal Ave	Signal	0.71	-	C	0.62	-	B
68	Viewline Dr & SR-118 WB On-Off	Signal	0.46	-	A	0.57	-	A
69	Madera Rd & Viewline Dr	Signal	0.45	-	A	0.53	-	A
70	Madera Rd & SR-118 EB On-Off Ramp	Signal	0.32	-	A	0.36	-	A
71	Madera Rd & Cochran St	Signal	0.53	-	A	0.84	-	D
72	Madera Rd & Easy St	Signal	0.47	-	A	0.66	-	B
73	Madera Rd & Los Angeles Ave/Tierra Rejada	Signal	0.68	-	B	0.81	-	D
74	Madera Rd & Royal Ave	Signal	0.60	-	A	0.73	-	C
75	Tierra Rejada Rd & Stargaze Pl	Signal	0.28	-	A	0.35	-	A
76	Madera Rd & Country Club Dr East	Signal	0.86	-	D	0.67	-	B
77	Wood Ranch Parkway & Madera Rd	Signal	0.87	-	D	0.88	-	D
78	Wood Ranch Parkway & Country Club	Signal	0.53	-	A	0.50	-	A
79	Wood Ranch Parkway & Long Canyon	Unsignalized	0.44	12.1	B	0.32	10.0	B
80	Madera Rd & Presidential Dr	Signal	0.81	-	D	0.73	-	C
81	Madera Rd & Country Club Dr West	Signal	0.90	-	E	0.67	-	B

Notes:

V/C = Volume to Capacity Ratio, LOS = Level of Service, Delay = Average Vehicle Delay (Seconds)

BOLD indicates deficient operation.

As shown in **Table 4**, several intersections are expected to operate at unacceptable levels of service (LOS D or worse) given the buildout of the “Adopted” General Plan land uses and assuming the existing circulation network. By State law, the traffic impact fee is only to address projected future deficiencies and is not intended to be collected to improve any existing intersection LOS deficiencies. The following three intersections are currently operating at LOS D or worse as noted in the General Plan Update Circulation and Mobility Element, and are shown to continue to operate at LOS D or worse with the “Adopted” General Plan Buildout:

- #7 - Kuehner Drive/SR-118 Westbound Ramps;
- #24- Kadota Street/Alamo Street; and
- #29 - Tapo Canyon Road/Royal Avenue.

New development would continue to add trips to the already deficient intersections, worsening the traffic operating conditions. A discussion of how improvement costs are calculated for these currently

deficient intersections, based on the portion future trips only, known as a “fair share” percentage, is provided in Section 4.2.

3.0 TRAFFIC IMPACT FEE PROJECT LIST

This section describes the development of the improvement project list that corresponds to the Traffic Impact Fee update. These are intersection improvements needed to accommodate the future traffic demand resulting from buildout of the “Adopted” General Plan, as described in Section 2, and to maintain the City’s LOS C standard. The intersection improvements range from such items as relatively smaller re-striping of intersection approaches to modify the lane usage and modifications to traffic signals to more significant street widening and new traffic signal construction and installations. Iteris worked closely with City staff in identifying the need, analyzing the results, and verifying the needed improvement. The final list of improvements was reviewed and approved by City staff. **Table 5** summarizes the list of required improvements to achieve minimum LOS C standard at 28 of the 81 study intersections, which were determined to be deficient by 2030. **Figure 2** shows the locations of the 28 intersections which need improvements.

TABLE 5: IMPROVEMENT PROJECT LIST

Intersection		Improvement
1	Rocky Peak Fire Rd/SR-118 WB Ramps	Install traffic signal
2	Rocky Peak Fire Rd/ SR-118 EB Ramps	Install traffic signal
5	Kuehner Dr/Los Angeles Ave	Install traffic signal or roundabout
7	Kuehner Dr/SR-118 WB Ramps	Install traffic signal with protected NB left phasing*
9	Yosemite Ave/Alamo St	Install traffic signal with protected NB left phasing
13	Yosemite Ave/Los Angeles Ave	Add 3rd WB through lane
20	Stearns St/Los Angeles Ave	Add 3rd WB through lane
21	Los Angeles Ave/Hidden Ranch Dr	Modify EB right-turn lane to provide shared through/right lane
22	Los Angeles Ave/Ralston Ave	Install traffic signal with protected EB left-turn phasing
24	Kadota St/Alamo St	Install traffic signal*
28	Tapo St/Los Angeles Ave	Add 3rd WB through
29	Tapo Cyn Rd/Royal Ave	Install traffic signal. Restripe EB and WB approaches as needed.*
30	Tapo Cyn Rd/Los Angeles Ave	Add 3rd EB through lane and 3rd WB through lane. Add a NB overlap right-turn phase.
31	Tapo Cyn Rd/Cochran St	Modify NB right and provide a through/right-turn lane, add a 2nd EB left-turn lane
39	Sequoia Ave/Los Angeles Ave	Modify WB right-turn lane to provide shared through/right-turn lane
46	Sycamore Dr/Los Angeles Ave	Modify the EB right-turn lane to provide a shared through/right-turn lane. Add a 3rd WB through lane and maintain the dedicated WB right-turn lane.



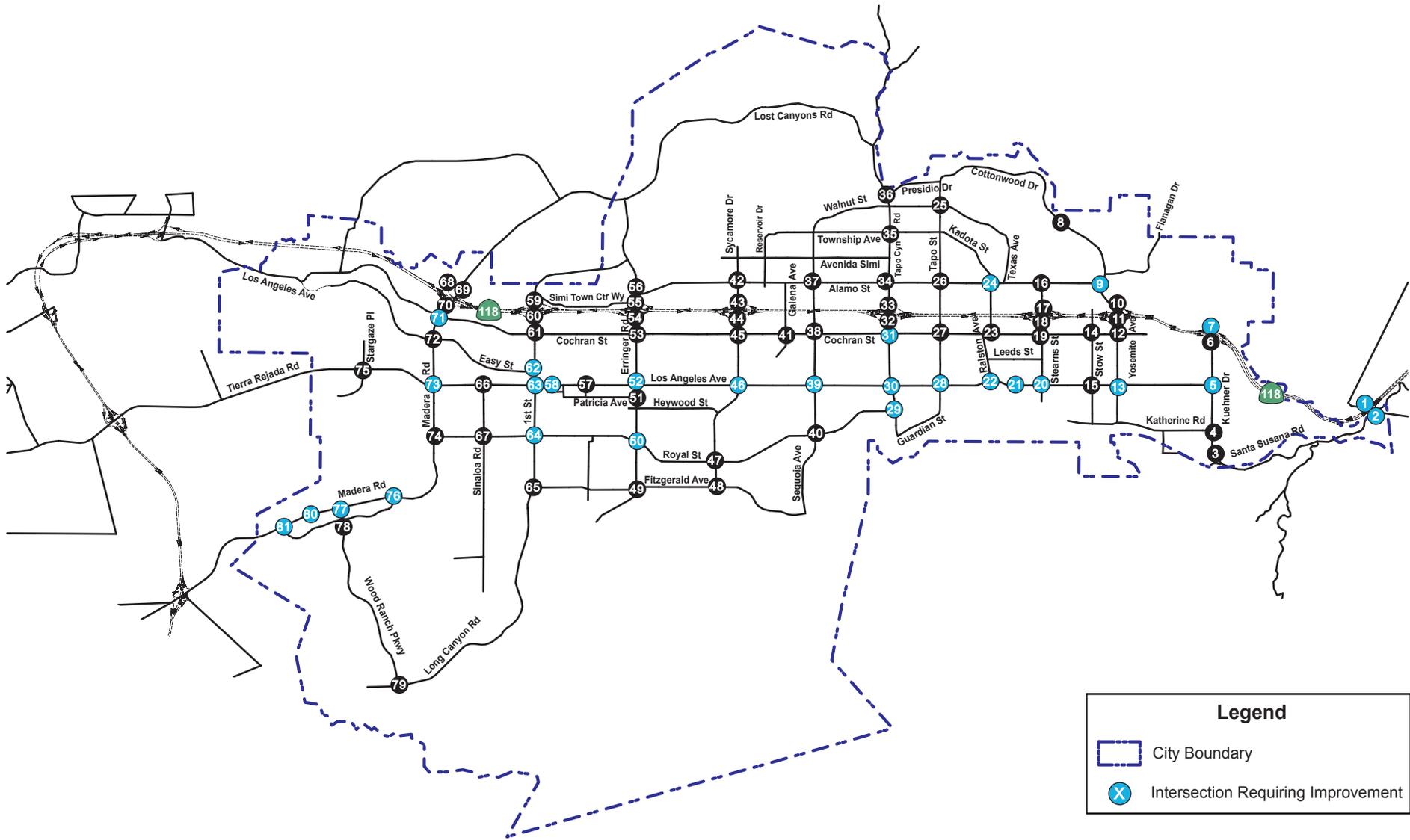
Intersection		Improvement
50	Erringer Rd/Royal Ave	Add a dedicated WB right-turn lane
52	Erringer Rd/Los Angeles Ave	Add a 2nd EB left-turn lane and a 2nd WB left-turn lane
58	Los Angeles Ave/Patricia Ave	Modify signal to provide NB & SB protected/permissive phasing. Restripe NB shared left-turn/through/right-turn lane to provide 1 left-turn lane and 1 through/right-turn lane. Add 1 WB right-turn lane.
62	First St/Easy St	Restripe WB approach from 1 left-turn lane and 1 shared through/right-turn lane to 1 shared left-turn/through lane and 1 right-turn lane. Add a WB right-turn overlap phase. Restripe EB approach from 1 left-turn lane and 1 shared left-turn/through/right-turn lane to 1 left-turn lane, 1 shared left-turn/through lane, and 1 right-turn lane.
63	First St/Los Angeles Ave	Add 1 EB through lane
64	First St/Royal Ave	Add a 2nd NB left-turn lane and add a 2nd SB left-turn lane
71	Madera Rd/Cochran St	Restripe SB approach to provide 2 left-turn lanes, 2 through lanes, 1 through/right-turn lane, and 1 right-turn lane.
73	Madera Rd/ Los Angeles Ave-Tierra Rejada Rd	Restripe the current SB right-turn lane to a 3rd through lane and add a dedicated SB right-turn lane.
76	Madera Rd/Country Club Dr East	Add 3rd WB through lane
77	Wood Ranch Pkwy/Madera Rd	Add 3rd EB through lane and 3rd WB through lane
80	Madera Rd/Presidential Dr	Add 3rd WB through lane
81	Madera Rd/Country Club Dr West	Add 3rd WB through lane

* Intersection identified as having an existing deficiency, thus the cost applied to the fee will reflect a “fair share” percentage of the total improvement cost (discussed in Section 4.2).

4.0 PROJECT COST ESTIMATES

This section describes the methodology used to estimate the total cost of the intersection improvement projects described in Section 3. The cost of each improvement project is based on a unit construction cost as well as a unit cost for right-of-way acquisition. The unit costs were reviewed and approved by City staff. It should be noted that the cost estimates are intended to be “planning level” estimates consistent with the intent of estimated long-range improvement costs, including appropriate levels of contingency and soft costs, which are calculated prior to availability of design details or documents related to these improvements.





4.1 UNIT COSTS

For each type of improvement, a unit cost for construction and right-of-way, if required, were developed. The following unit cost assumptions (in 2013 dollars) were used to calculate the project improvements costs:

- Physical Construction cost of \$75/sq ft
- Using the \$75/sq ft cost
 - Left-turn lane would cost \$180,000
 - Thru lane would cost \$1,080,000
 - Right-turn lane would cost \$180,000
- Signal Modification cost of \$40,000 per intersection
- New traffic signal cost of \$217,000
- Lane Re-striping cost of \$32,000 for one lane, plus \$7,000 per additional lane at the same intersection
- Power pole relocation cost of \$20,000 per pole
- Right-of-Way (ROW) costs
 - \$35/sq ft
 - \$16,500 per property touched
- 30% contingency factor added to total physical construction cost
- 15% Engineering fee factor added to total physical construction cost

4.2 INTERSECTION IMPROVEMENT COST ESTIMATES

Based on the unit costs for construction and ROW acquisition (where needed), as presented in Section 4.1, the intersection improvement costs are summarized in **Table 6**. A detailed cost breakdown illustrating the details of the cost elements at each intersection is provided in **Appendix C**.

TABLE 6: IMPROVEMENT PROJECT COSTS

Intersection		Physical Construction Cost	Right-of-Way Cost	Total Intersection Cost
1	Rocky Peak Fire Rd/SR-118 WB Ramps	\$314,650	\$0	\$314,650
2	Rocky Peak Fire Rd/ SR-118 EB Ramps	\$314,650	\$0	\$314,650
5	Kuehner Dr/Los Angeles Ave	\$435,000 ¹	\$0	\$435,000 ¹
7	Kuehner Dr/SR-118 WB Ramps	\$160,470	\$33,000	\$193,470*
9	Yosemite Ave/Alamo St	\$314,650	\$0	\$314,650
13	Yosemite Ave/Los Angeles Ave	\$1,566,000	\$285,000	\$1,851,000
20	Stearns St/Los Angeles Ave	\$1,566,000	\$486,000	\$2,052,000
21	Los Angeles Ave/Hidden Ranch Dr	\$46,400	\$0	\$46,400
22	Los Angeles Ave/Ralston Ave	\$314,650	\$0	\$314,650
24	Kadota St/Alamo St	\$12,590	\$0	\$12,590*
28	Tapo St/Los Angeles Ave	\$1,566,000	\$201,000	\$1,767,000
29	Tapo Cyn Rd/Royal Ave	\$103,940	\$0	\$103,940*
30	Tapo Cyn Rd/Los Angeles Ave	\$3,190,000	\$369,000	\$3,559,000
31	Tapo Cyn Rd/Cochran St	\$336,400	\$100,500	\$436,900
39	Sequoia Ave/Los Angeles Ave	\$46,400	\$0	\$46,400
46	Sycamore Dr/Los Angeles Ave	\$1,612,400	\$504,000	\$2,116,400
50	Erringer Rd/Royal Ave	\$261,000	\$56,000	\$317,000
52	Erringer Rd/Los Angeles Ave	\$522,000	\$201,000	\$723,000
58	Los Angeles Ave/Patricia Ave	\$365,400	\$66,900	\$432,300
62	First St/Easy St	\$114,550	\$0	\$114,550
63	First St/Los Angeles Ave	\$1,566,000	\$537,000	\$2,103,000
64	First St/Royal Ave	\$551,000	\$89,000	\$640,000
71	Madera Rd/Cochran St	\$46,400	\$0	\$46,400
73	Madera Rd/ Los Angeles Ave-Tierra Rejada Rd	\$336,400	\$117,000	\$453,400
76	Madera Rd/Country Club Dr East	\$46,400	\$0	\$46,400
77	Wood Ranch Pkwy/Madera Rd	\$56,550	\$0	\$56,550
80	Madera Rd/Presidential Dr	\$46,400	\$0	\$46,400
81	Madera Rd/Country Club Dr West	\$46,400	\$0	\$46,400
Total		\$15,858,700	\$3,045,400	\$18,904,100

¹= Cost shown represent construction costs for roundabout intersection design.

* Intersection identified as having an existing deficiency, thus the cost applied to the fee (as shown) reflects a “fair share” percentage of the total improvement cost.

As shown in **Table 6**, the total cost of required physical construction, at the 28 intersections requiring improvements, is estimated as \$15,858,700. This cost includes a 30 percent contingency fee and a 15 percent engineering fee factor, as approved by the City, consistent with the planning level cost



estimates. Adding the ROW acquisition costs which would total \$3,045,400, the total cost of intersection improvements is estimated at \$18,904,100. It should be noted that only intersection improvements intended to relieve vehicular congestion are included in the costs, thus no pedestrian, bicycle, or transit improvement costs are included.

Right of way costs were not included in the City's original traffic impact fee. The City could acquire ROW as a condition of approval for projects adjacent to the intersection. Over the past 20 years though, almost all of the property adjacent to these intersections has been fully developed. It is unlikely that within the next 15 years these properties will experience redevelopment requiring discretionary review that would allow the City to require dedication of the needed ROW. The ROW acquisition cost of \$3,045,400 represents only 16 percent of the total improvement cost, but 46 percent of the intersections that require improvements (13 of the 28) require ROW acquisition. Therefore, omitting ROW from the cost estimate would severely hamper the City in fully mitigating the traffic impacts of new development.

As mentioned in Section 2.2, three intersections have existing LOS deficiencies as identified in the General Plan Update Circulation and Mobility Element. The traffic impact fee is not intended to collect funds to improve existing deficiencies. At these three intersections, only a portion of the overall improvement costs were applied towards the fee calculation, reflecting the portion that would be due to future growth. This portion, also known as a fair share percentage, was calculated by dividing the net new trips expected to be generated by new development by the total future trips at each intersection. The fair share calculations are provided in **Appendix D**. The following fair share of future traffic volumes were attributed to new development and were applied to the improvement costs:

- #7 Kuehner Drive/SR-118 Westbound Ramps – 51 percent of future trips were associated with new development
- #24- Kadota Street/Alamo Street – 4 percent of future volumes were associated with new development
- #29 - Tapo Canyon Road/Royal Avenue – 28 percent of future volumes were associated with new development

In addition to physical construction and ROW costs, additional fees are included to cover internal costs over a 15-year period to the General Plan 2030 horizon. These fees include:

- Traffic Signal Maintenance and Operation Fee – This fee would be used for routine and preventative maintenance repairs of the City's traffic signal equipment and associated lighting, as well as signal timing adjustments where applicable. The annual cost of \$1,200 per traffic signal was applied, consistent with such costs in other jurisdictions. For maintenance of the City's 70 traffic signals, the total cost over the span of 15 years would be \$1,260,000.
- City Administration Fee – This fee covers annual tasks related to City Council action for Engineering News Record (ENR) construction cost increases, improvement project prioritization and budgeting, and public education. A yearly fee of \$3,600 was calculated based on 40 hours of staff time at \$90 per hour. Over the span of 15 years, the Administration Fee would total \$54,000.
- 5-year Update Fee – This fee includes staff and consultant time to validate new construction, update land use data for zoning and General Plan changes, rerun the model, prepare reports,

and prepare Council action if necessary. The 5-year Update would occur three times during the 15-year period. Each update would cost \$10,000, totaling \$30,000 over the life of the General Plan horizon.

This total was then reduced by the current amount of funding available for circulation improvements as of September 2013, provided by City staff. **Table 7** summarizes the final cost calculations.

TABLE 7: TOTAL TRANSPORTATION IMPROVEMENT COSTS

Category	Cost
Intersection Improvements	\$18,904,100
Traffic Signal Maintenance and Operation Fee	\$1,260,000
City Administration Fee	\$54,000
5-year Updates (Administration fee)	\$30,000
Existing Fund Balance	- \$817,000
NET TOTAL	\$19,431,100

5.0 TRAFFIC IMPACT FEE

The Traffic Impact Fee was calculated by dividing the total costs of the intersection improvement, as calculated above (including construction, ROW, contingencies and administration minus available current funds), by the expected net daily trips forecast to be generated from new development within the City by buildout of the General Plan land uses. The final traffic impact fee, assuming the net transportation improvement cost of \$19,431,150 required as a result of the 240,846 new daily trips forecast for the “Adopted” General Plan buildout scenario associated with the land uses, is \$80.68 per daily trip. This calculation assumes that all “trips” are expected to equally contribute to the need for the intersection improvements, regardless of the land use types that generate the trips, per the City’s adopted daily trip generation rates. Similar to Resolution 91-93, the fees to be collected as a result of this updated traffic impact fee nexus study are supplementary to the specific fees and conditions imposed upon individual development projects by the City. All requirements of the Mitigation Fee Act in California Government Code Section 66001 have been met by this nexus study.

5.1 COST INCREASES OVER TIME

The cost estimates used to calculate the traffic impact fee were based on 2013 dollars and unit costs applied recently in other cities. In order for the traffic impact fee to stay current with changing construction and land costs, the City of Simi Valley shall apply an inflation adjustment to the fee.

Construction costs shall be revised periodically to reflect changes in the Construction Cost Index published by the ENR.