



Hillsdale Neighborhood Traffic Projects

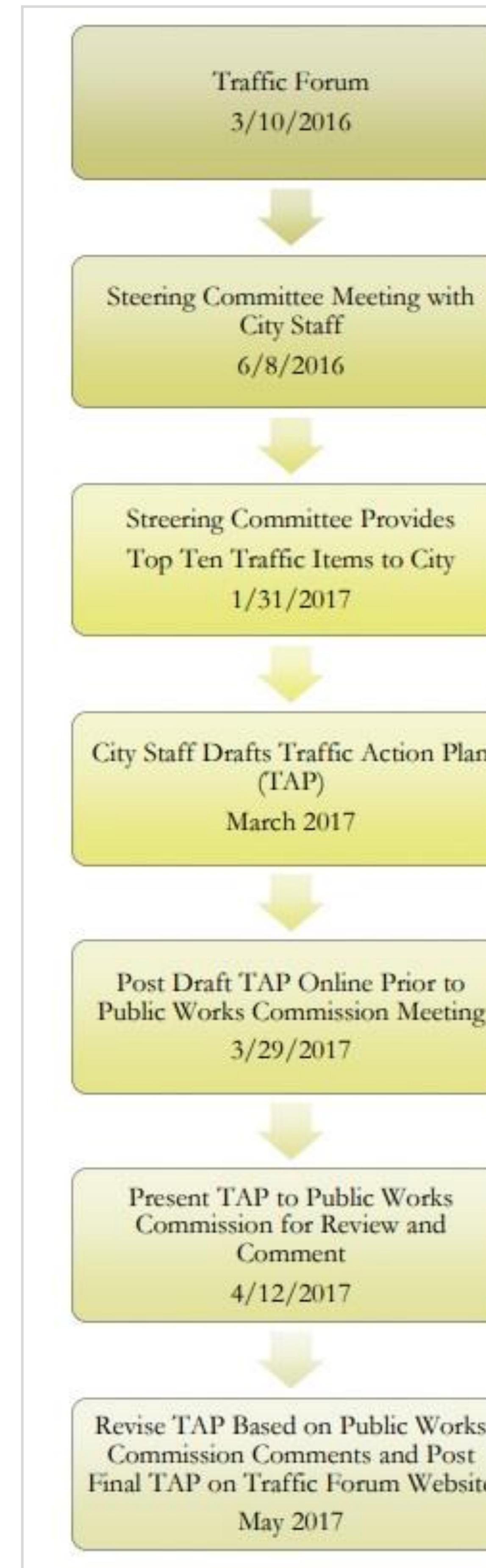
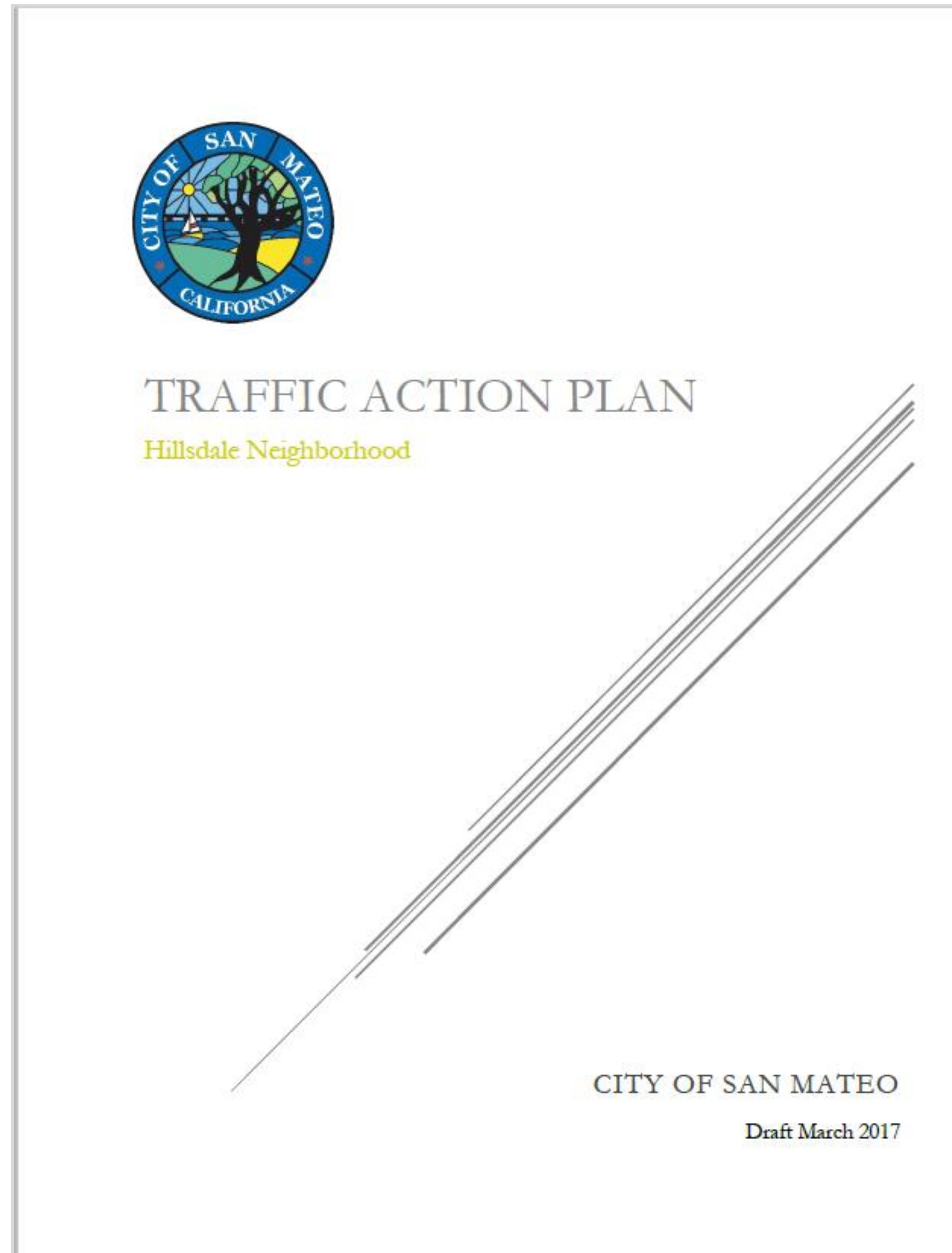
February 28, 2019

Bethany Lopez
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City of San Mateo
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Overview

- How we got here
- Where we're going and how you can help

You might remember this ...



Neighborhood Traffic Issues

The Hillsdale Traffic Forum Steering Committee identified their top ten traffic concerns on January 31, 2017 based on information provided to them at the City meeting.

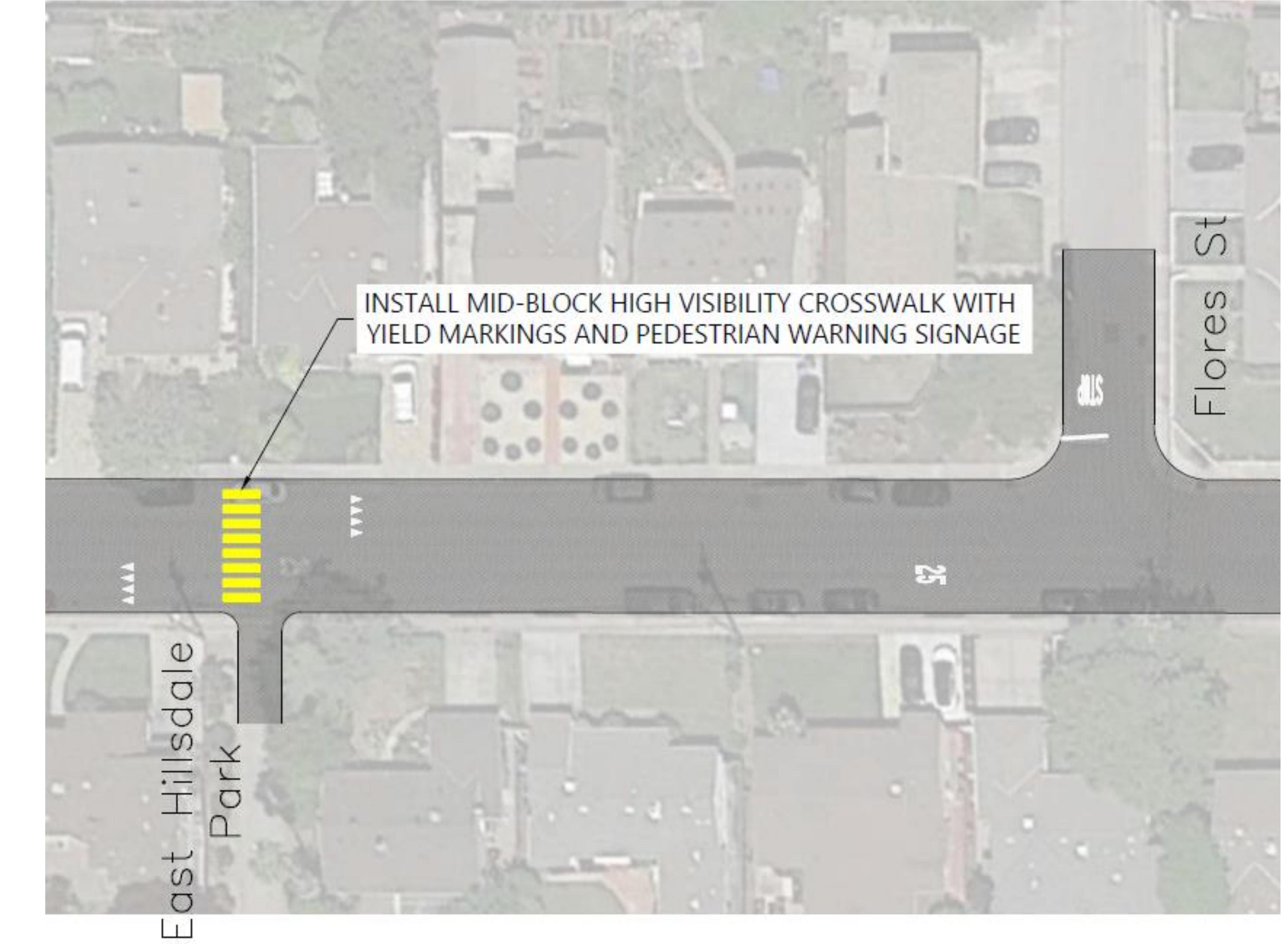
The following section presents the issues, listed by location, first in a table format, as well as presented on a map for illustration.

Table 1 – Hillsdale Top Ten Traffic Concerns

Neighborhood Priority	Location	Interests and Reasons
1	Alameda de las Pulgas/ W. Hillsdale Boulevard	Congestion (TFSC requests the installation of a traffic signal due to traffic congestion)
2	31 st Avenue/ Alameda de las Pulgas	Unique Neighborhood Concern (TFSC requests flashing crosswalk lighting to enhance pedestrian safety)
3	36 th Avenue/ Alameda de las Pulgas	Unique Neighborhood Concern (TFSC requests flashing crosswalk lighting to enhance pedestrian safety)
4	Hillsdale Neighborhood Schools	Unique Neighborhood Concern (TFSC requests to install or increase school signage at school crossings to enhance pedestrian safety)
5	31 st Avenue at Hillsdale parks, and 39 th Avenue at Indian Springs Park	Unique Neighborhood Concern (TFSC requests to install crosswalk entrances at parks to enhance pedestrian safety)
6	31 st Avenue between Alameda de las Pulgas and Edison Street	Speeding (TFSC requests that speed cushions be installed due to speeding concerns)
7	Hillsdale Boulevard between El Camino Real and Hillsdale High School	Unique Neighborhood Concern (TFSC requests for bike lanes to be installed)
8	Edison Street between W. Hillsdale Boulevard and 36 th Avenue	Unique Neighborhood Concern (TFSC requests to remove parking on one side of the street due to concerns regarding vehicles parked on the sidewalk as well as the narrow roadway width around the curve)
9	28 th Avenue, 31 st Avenue, and 39 th Avenue	Unique Neighborhood Concern (TFSC requests to implement weight restrictions on the roadways to keep large trucks out of the neighborhood)
10	39 th Avenue between El Camino Real and Alameda de las Pulgas	Speeding (TFSC requests to implement speed reduction measures due to concerns regarding speeding)

31st Avenue Traffic Calming

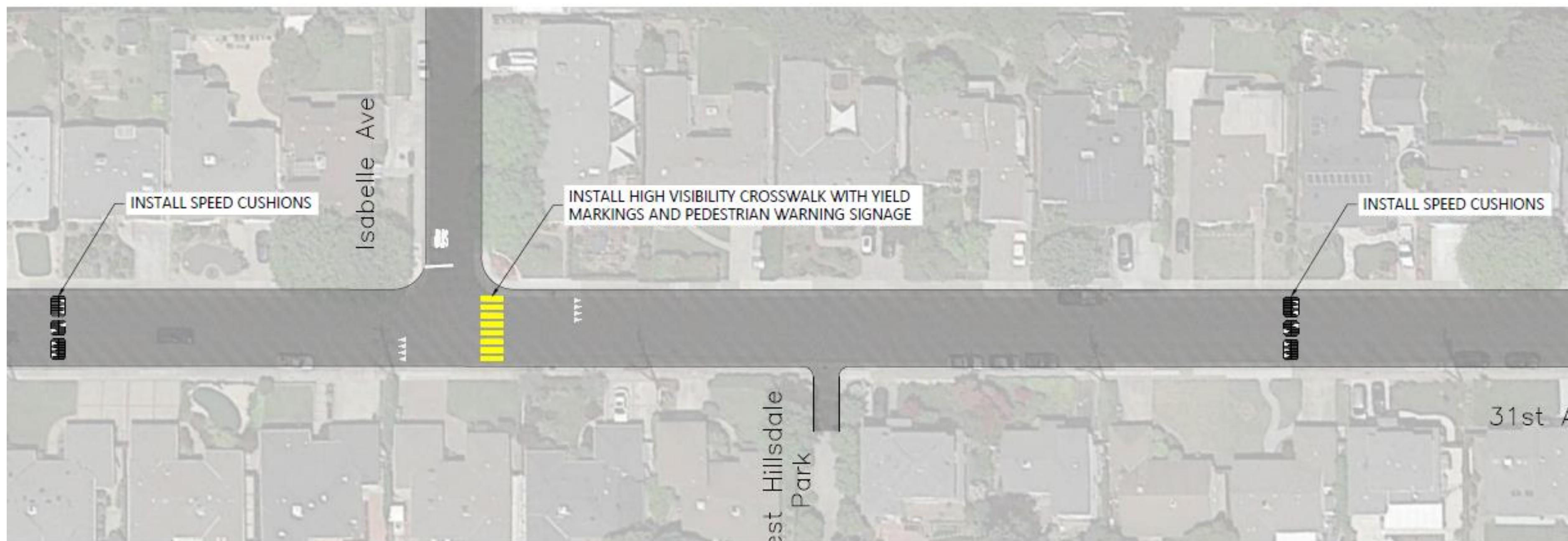
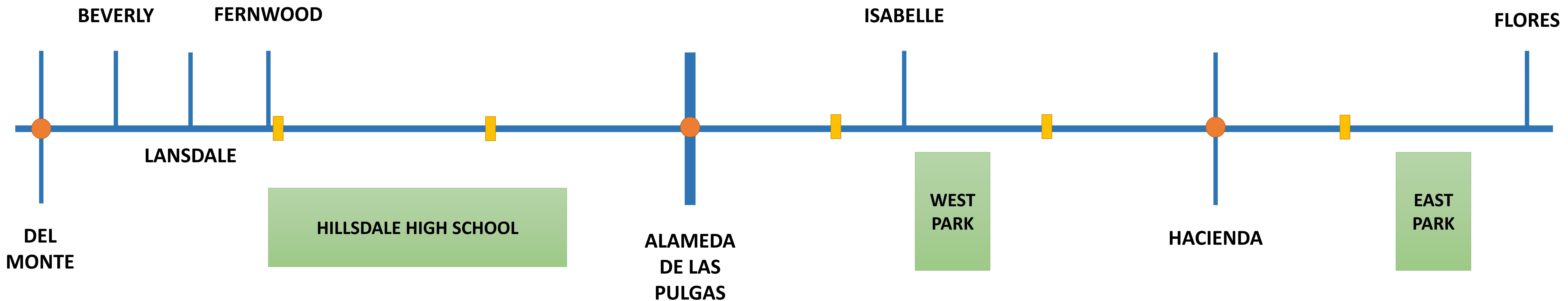
TAP No. 5 – Install crosswalks at park entrances



31st Avenue Traffic Calming

TAP No. 6 – Address speeding concerns

- All-Way Stop
- Proposed Speed Cushion



31st Avenue Traffic Calming

How can you help?

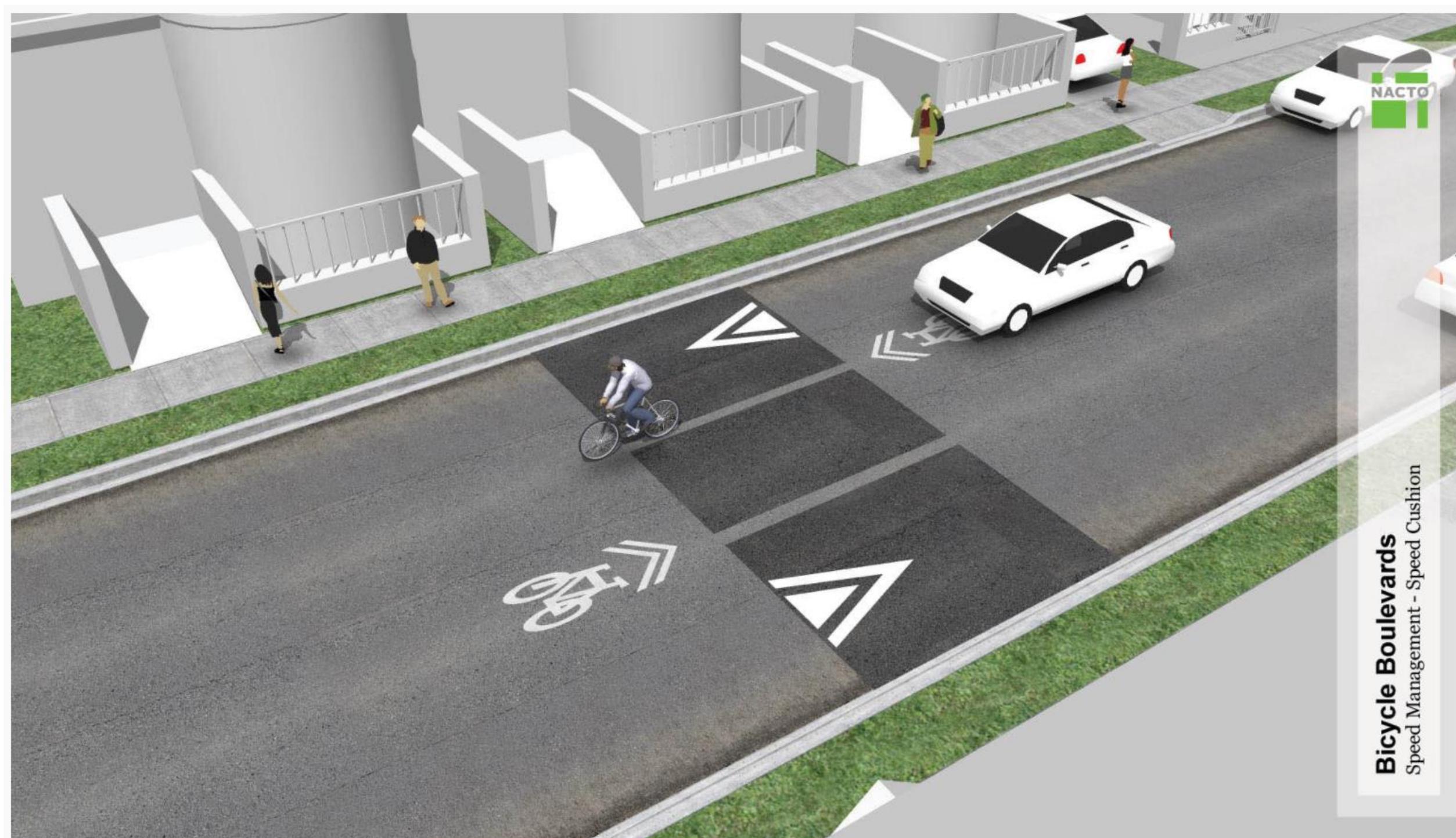
- Let us know your thoughts on
 - 1) Proposed crosswalk locations
 - 2) Proposed speed cushion locations

28th Avenue Bike Boulevard



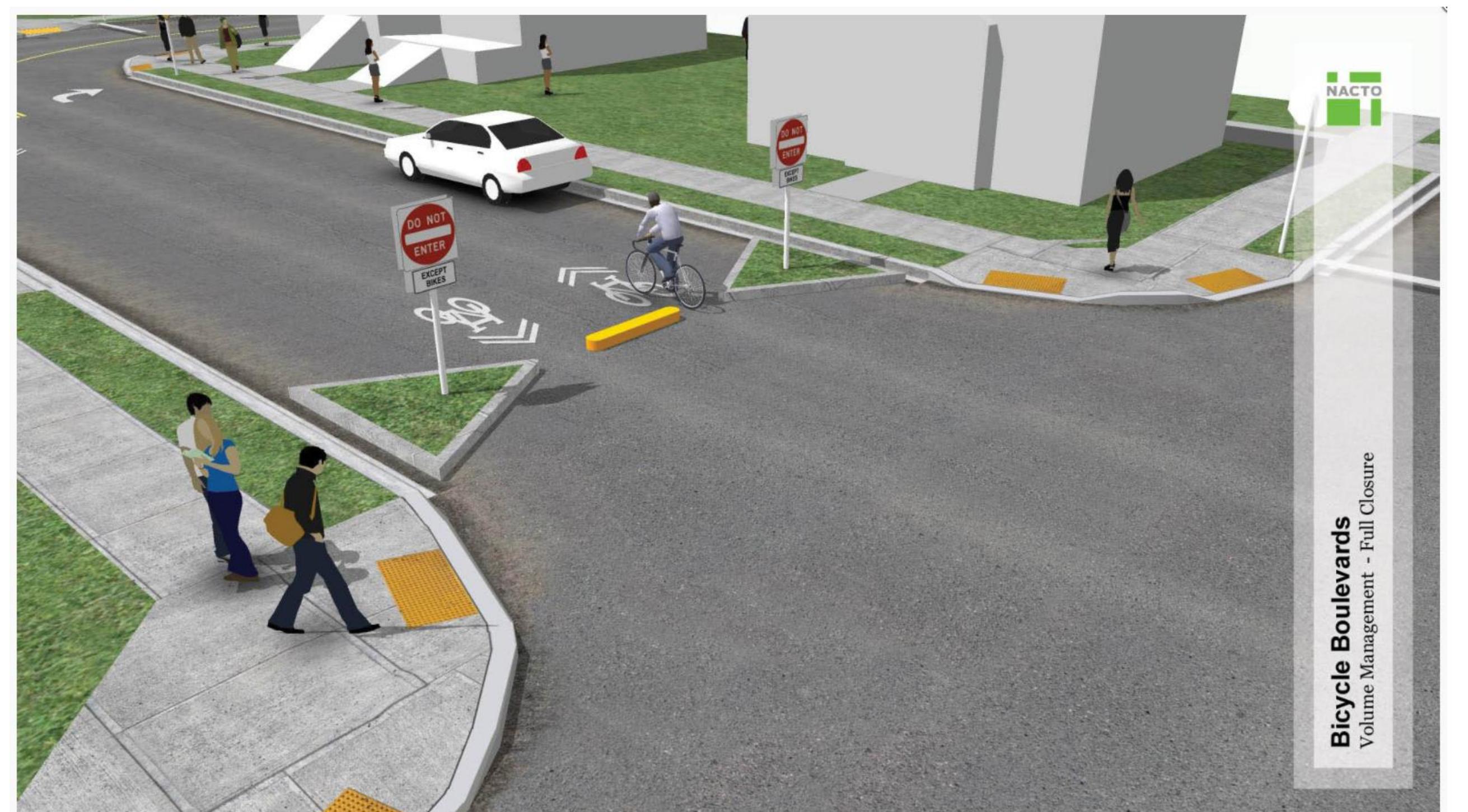
Bike Boulevard on 28th Avenue

- Speed reduction –
 - Goal: Reduce speeds to less than 25 mph, or 20 mph if possible
 - Potential solutions:
 - Speed cushions
 - Curb extensions
 - Mini traffic circles



Bike Boulevard on 28th Avenue

- Volume reduction –
 - Goal: Reduce volumes to less than 3,000 vehicles per day
 - Potential solutions:
 - Traffic diversionary devices



Bike Boulevard on 28th Avenue

- Other improvements –
 - Signing and pavement markings
 - Bike improvements at intersection crossings
 - Bike wayfinding signage
 - Crosswalk enhancements



28th Avenue Bike Boulevard

- How can you help?
 - Let us know your thoughts on 28th Avenue
 - 1) Where would you like to see bike improvements?
 - 2) Are there locations where you would like to see sidewalk/crosswalk improvements?

Hillsdale/Alameda de las Pulgas Traffic Signal

- TAP Item No. 1
- All-way stop
 - Morning peak hour
 - ~ 1800 vehicles
 - Afternoon peak hour
 - ~1800 vehicles
 - Weekdays
 - Between 15,000 and 20,000 vehicles/day



Hillsdale/Alameda de las Pulgas Traffic Signal

- Analysis
 - Meets volume traffic signal warrants
 - Reduces delays at intersection
 - AM Stop: 49 sec/veh
 - AM Traffic Signal: 12 sec/veh
 - PM Stop: 60 sec/veh
 - PM Traffic Signal: 10 sec/veh

California MUTCD 2014 Edition
(FHWA's MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

DIST	CO	RTE	PM	COUNT DATE	CALC DATE	CHK DATE																						
Major St:				Critical Approach Speed	mph																							
Minor St:				Critical Approach Speed	mph																							
Speed limit or critical speed on major street traffic > 40 mph In built up area of isolated community of < 10,000 population				<input type="checkbox"/>	RURAL (R)																							
				<input type="checkbox"/>		URBAN (U)																						
WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/> (Condition A or Condition B or combination of A and B must be satisfied)																												
Condition A - Minimum Vehicle Volume 100% SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/> 80% SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/>																												
<table border="1"> <thead> <tr> <th colspan="4">MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)</th> </tr> <tr> <th>U</th> <th>R</th> <th>U</th> <th>R</th> </tr> </thead> <tbody> <tr> <td>APPROACH LANES</td> <td>1</td> <td>2 or More</td> <td></td> </tr> <tr> <td>Both Approaches Major Street</td> <td>500 (400)</td> <td>350 (280)</td> <td>600 (480)</td> <td>420 (396)</td> </tr> <tr> <td>Highest Approach Minor Street</td> <td>150 (120)</td> <td>105 (84)</td> <td>200 (160)</td> <td>140 (112)</td> </tr> </tbody> </table>							MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				U	R	U	R	APPROACH LANES	1	2 or More		Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (396)	Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)
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Condition B - Interruption of Continuous Traffic 100% SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/> 80% SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/>																												
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Combination of Conditions A & B SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/>																												
<table border="1"> <thead> <tr> <th>REQUIREMENT</th> <th>CONDITION</th> <th>✓</th> <th>FULFILLED</th> </tr> </thead> <tbody> <tr> <td>TWO CONDITIONS SATISFIED 80%</td> <td>A. MINIMUM VEHICULAR VOLUME AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC</td> <td></td> <td>Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> <tr> <td colspan="4">AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS</td> </tr> </tbody> </table>							REQUIREMENT	CONDITION	✓	FULFILLED	TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		Yes <input type="checkbox"/> No <input type="checkbox"/>	AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS													
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The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.																												

Chapter 4C – Traffic Control Signal Needs Studies
Part 4 – Highway Traffic Signals

November 7, 2014

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(MUTCD 2009 Edition, including Revisions 1 & 2, as amended for use in California)

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Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

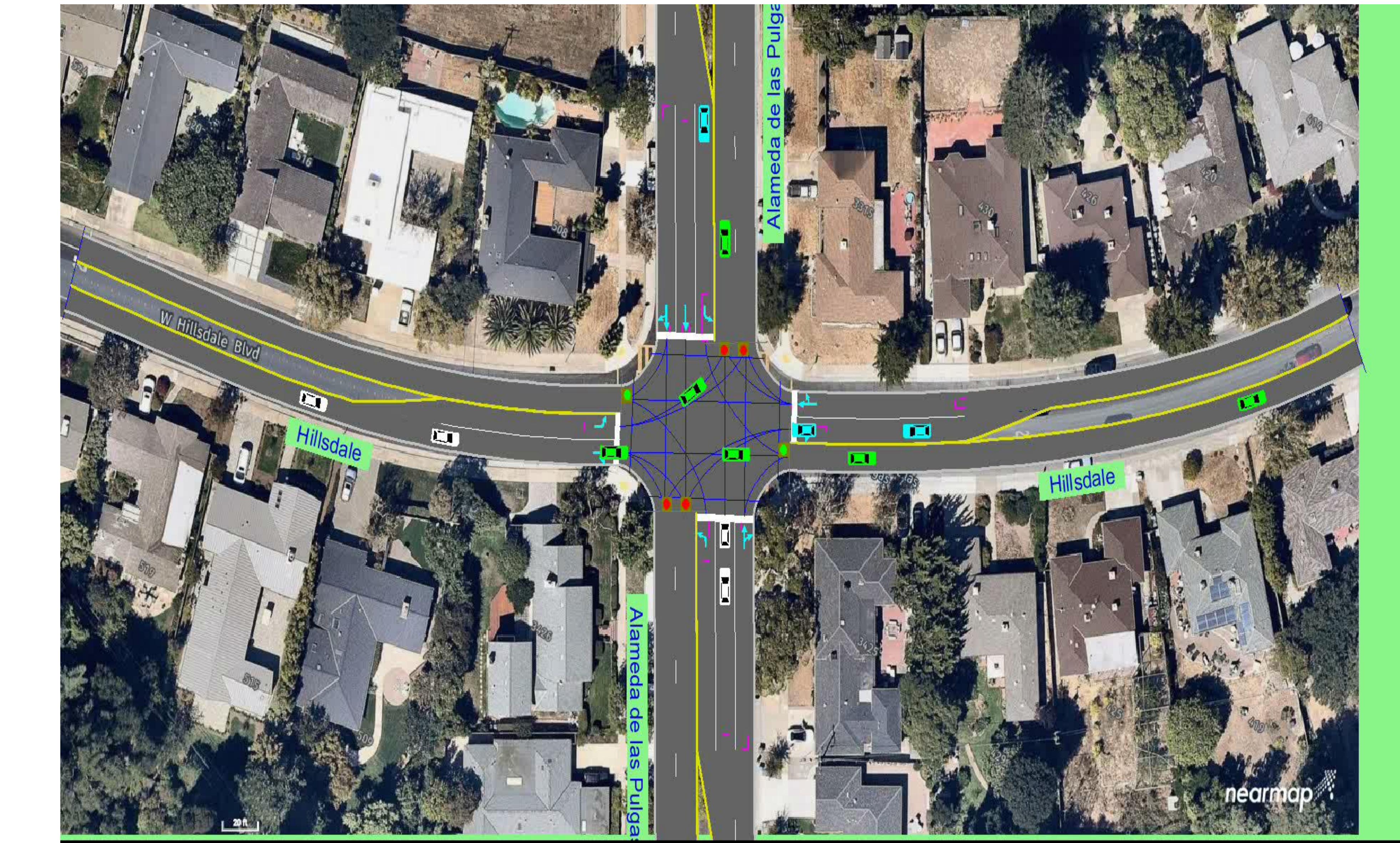
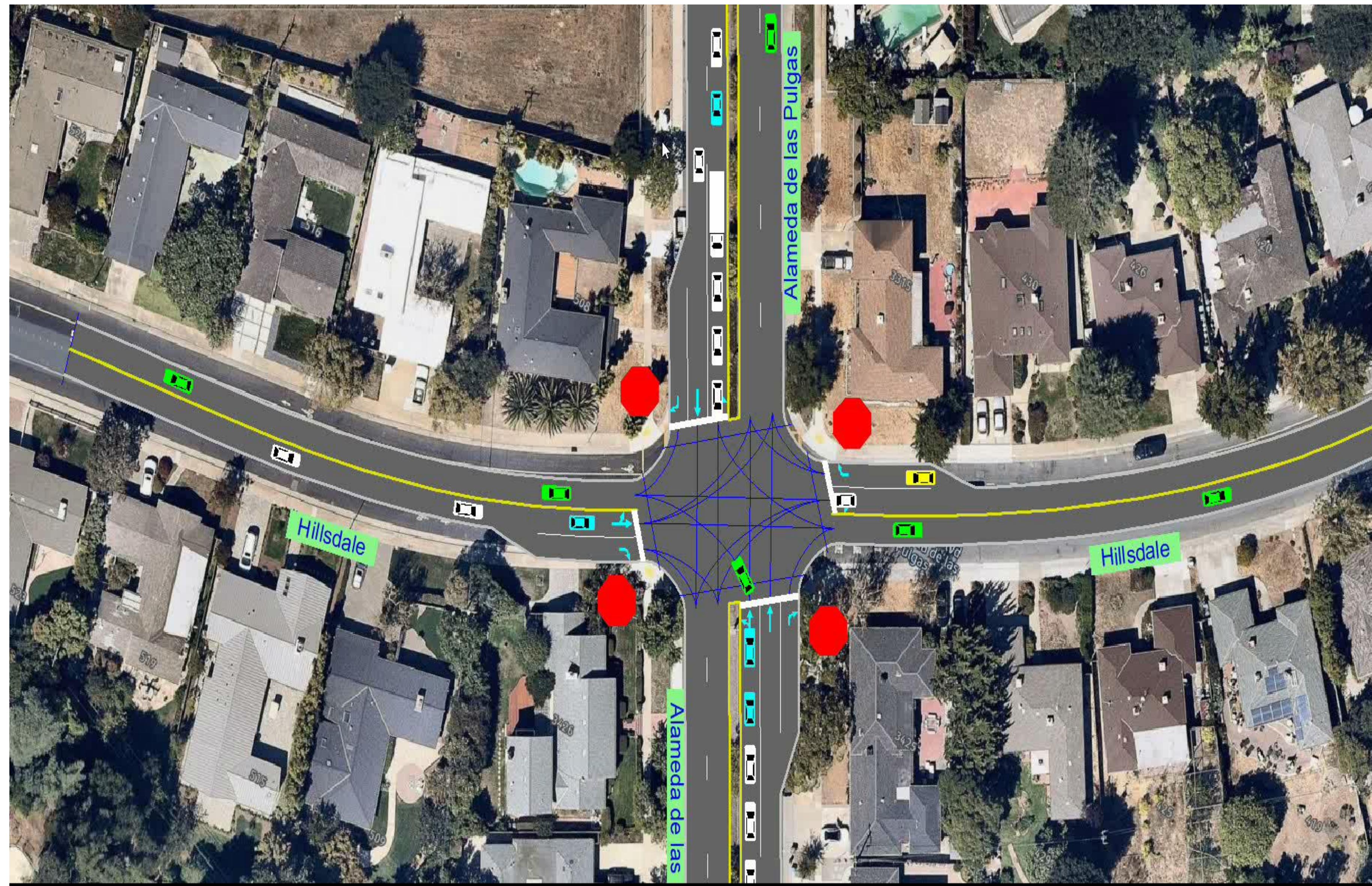
WARRANT 2 - Four Hour Vehicular Volume		SATISFIED* YES <input type="checkbox"/> NO <input type="checkbox"/>
Record hourly vehicular volumes for any four hours of an average day.		
APPROACH LANES	2 or One More	Hour
Both Approaches - Major Street		
Higher Approach - Minor Street		
*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS) Yes <input type="checkbox"/> No <input type="checkbox"/>		
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS) Yes <input type="checkbox"/> No <input type="checkbox"/>		
WARRANT 3 - Peak Hour (Part A or Part B must be satisfied)		SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/>
PART A (All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)		
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND Yes <input type="checkbox"/> No <input type="checkbox"/>		
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND Yes <input type="checkbox"/> No <input type="checkbox"/>		
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches. Yes <input type="checkbox"/> No <input type="checkbox"/>		
PART B		SATISFIED YES <input type="checkbox"/> NO <input type="checkbox"/>
APPROACH LANES	2 or One More	Hour
Both Approaches - Major Street		
Higher Approach - Minor Street		
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) Yes <input type="checkbox"/> No <input type="checkbox"/>		
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS) Yes <input type="checkbox"/> No <input type="checkbox"/>		
The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.		

C – Traffic Control Signal Needs Studies
Highway Traffic Signals

November 7, 2014

Hillsdale/Alameda de las Pulgas Traffic Signal

Morning Peak Hour Comparison



Hillsdale/Alameda de las Pulgas Traffic Signal

Afternoon Peak Hour Comparison

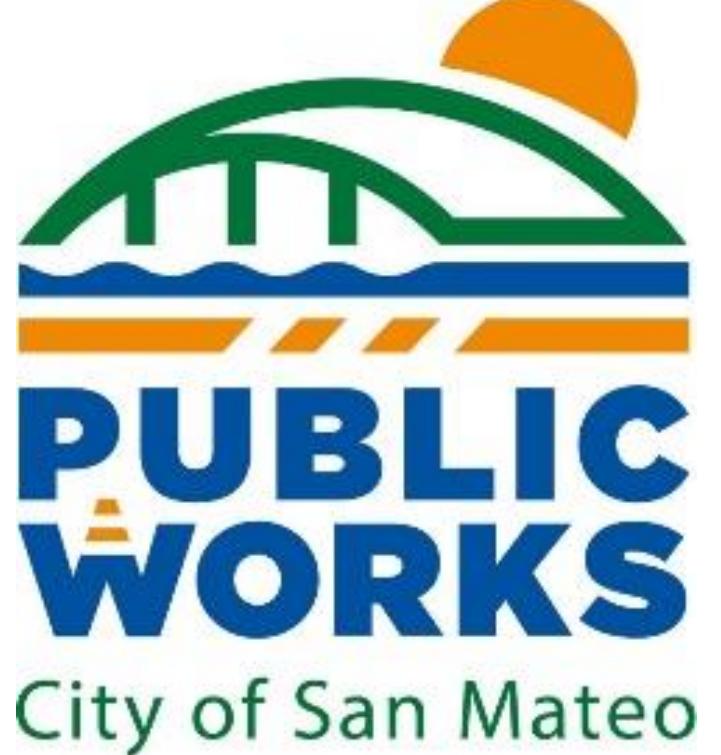


Hillsdale/Alameda de las Pulgas Traffic Signal

- How can you help?
 - What do you think about a potential traffic signal?
 - What are your concerns?
 - What would you like about a traffic signal?



Thank you for your time.



You can reach me at:

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650-522-7313

www.cityofsanmateo.org/publicworks

Stewards of your infrastructure

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