Public Works Department
Transportation Division

INTERSECTION SAFETY ASSESSMENT
CALIFORNIA STREET and ADA STREET

I. OBJECTIVE

Upon preparing an intersection safety assessment, the Public Works – Transportation Division completes a study of intersection conditions, such as volumes, sight lines, speeds, and reported collision histories. The results of this study are measured against minimum criteria adopted by the City, and when additional measures are not justified, we do not recommend them.

Traffic evaluations included in this intersection safety assessment include:

A. ADDITION OF TRAFFIC CONTROL DEVICES
B. MARKING OF CROSSWALKS
C. SPEEDS & TRAFFIC CALMING NEEDS
D. SIGHTLINES
E. TURNING RADII & MANEUVERABIITY
F. COLLISION HISTORY
G. INTERSECTION GEOMETRY

Staff has completed their data collection, review, and analysis of the intersection and has briefed the findings in this report.

II. DATA COLLECTION

The data collected for this assessment are summarized in this section.

A. FIELD OBSERVATIONS

1. Intersection geometry
   - Diverters installed diagonally from the northwest corner to the southeast area of the intersection
   - Chamfered southeast corner
   - California Street, north of Ada Street, intersects at an approximate angle of 75 degrees
   - California Street, south of Ada, has a downward slope towards the intersection

2. California Street, from Hopkins Street to Ada Street
   - Two-lane, north-west, undivided local roadway
   - 25 MPH Posted Speed Limit
   - Class III Bicycle Boulevard
   - Roadway width = 40 feet; Block length = 320 feet
   - Unmarked northern crosswalk located at the Ada intersection
   - Uncontrolled at the intersection

3. California Street, from Rose Street to Ada Street
   - Two-lane, north-west, undivided local roadway
   - 25 MPH Posted Speed Limit
   - Class III Bicycle Boulevard
   - Roadway width = 36 feet; Block length = 360 feet
   - Unmarked southern crosswalk located at the Ada intersection
   - Uncontrolled at the intersection

4. Ada Street, from Sacramento Street to California Street
    - Two-lane, east-west, undivided local roadway
    - 25 MPH Posted Speed Limit
    - Roadway Width = 36 feet; Corridor Length = 460 feet
    - Unmarked western crosswalk located at the California intersection
    - Uncontrolled at the intersection
    - Northside street sweeping / no parking – 12:30 PM to 3:30 PM, 2nd Thursday of the month
    - Southside street sweeping / no parking – 12:30 PM to 3:30 PM, 2nd Friday of the month

5. Ada Street, from McGee Street to California Street
    - Two-lane, east-west, undivided local roadway
    - 25 MPH Posted Speed Limit
    - Roadway Width = 36 feet; Corridor Length = 300 feet
    - Unmarked western crosswalk located at the California intersection
    - Stop-controlled at the California intersection
    - Northside street sweeping / no parking – 12:30 PM to 3:30 PM, 2nd Thursday of the month
    - Southside street sweeping / no parking – 12:30 PM to 3:30 PM, 2nd Friday of the month

B. DIMENSIONS AND MEASUREMENTS

Dimensions of the red curbs, driveways, curb lengths between curb cuts, and curb ramps are noted in Figure 1.

Figure 1. California Street and Ada St intersection measurements

C. ROADWAY GRADES / SLOPES

Using a smart level, staff measured the roadway slope at seven (7) intersection approach locations. Eastbound Ada Street, westbound Ada Street, and northbound California Street sloped towards the intersection, while southbound California Street was nearly flat and sloped away from the intersection.

The roadway grades and their approximate locations of measurement, marked by the placement of the arrow on the figure, are depicted in Figure 2.

Figure 2. Roadway Grades / Slopes

D. VOLUMES

Various volume data was collected as part of this safety assessment, including turning movement counts (TMC), average daily traffic (ADT), and volumes by vehicle classifications.

1. Turning Movement Counts (TMC)

   Staff collected a manual turning movement count on two (2) separate days – Thursday, February 20, 2025 and Wednesday, April 23, 2025. These counts were collected during non-peak times to reflect typical traffic patterns.

There was no rain on the collected days and February 20, 2025 was sunny and bright while the weather on April 23, 2025 was overcast.

The extrapolated turning movement counts captured volumes for vehicles, pedestrians, and bicyclists. The volumes from February 20, 2025 is summarized in Figure 3 and the volumes from April 23, 2025 is summarized in Figure 4.

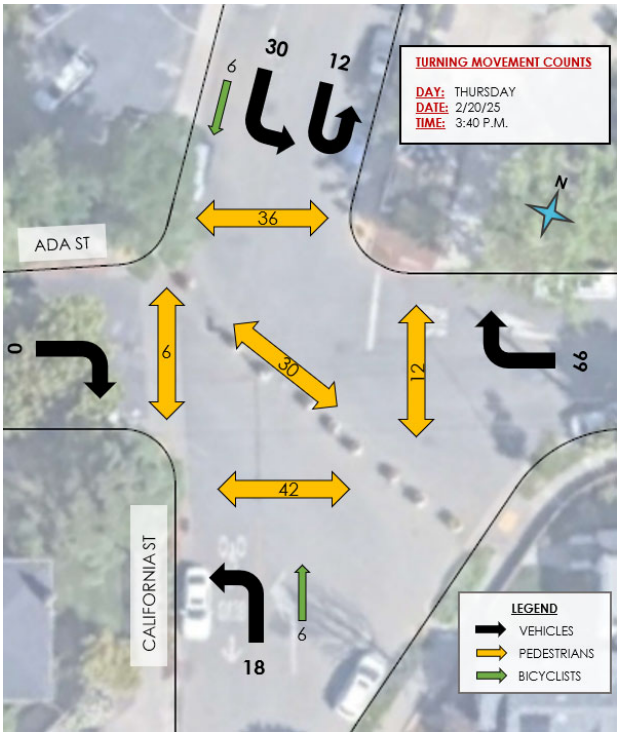


Figure 3. Turning Movement Counts on 2/20/25

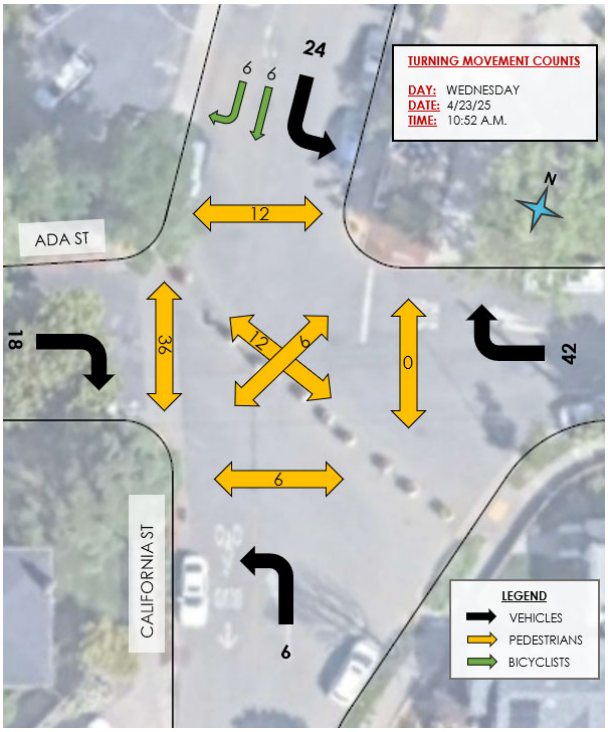


Figure 4. Turning Movement Counts from 4-23-25

2. Average Daily Traffic (ADT)

In addition to turning movement counts, three-day 24-hour average daily traffic (ADT) volumes were collected for California Street. The ADT data on California Street, north of Ada Street, was collected from Tuesday, February 25, 2025 to Thursday, February 27, 2025 and the ADT data on California

Street, south of Ada Street, was collected on Tuesday, March 18, 2025 to Thursday, March 20, 3025. This ADT data is summarized in Tables 1 and 2.

Table 1. ADT for California Street, north of Ada Street

	AVERAGE DAILY TRAFFIC (VEHICLES)		
DATE	**NORTHBOUND**	**SOUTHBOUND**	**TOTAL**
2/25/2025	689	624	1314
2/26/2025	725	606	1331
2/27/2025	741	587	1328
Average	**718**	**606**	**1324**

Table 1 summarizes the ADT for California Street, north of Ada Street, between Ada Street and Hopkins Street. The northbound volumes represent the number of vehicles leaving the intersection while the southbound volumes represent the volume of vehicles entering the intersection.

Table 2. ADT for California Street, south of Ada Street

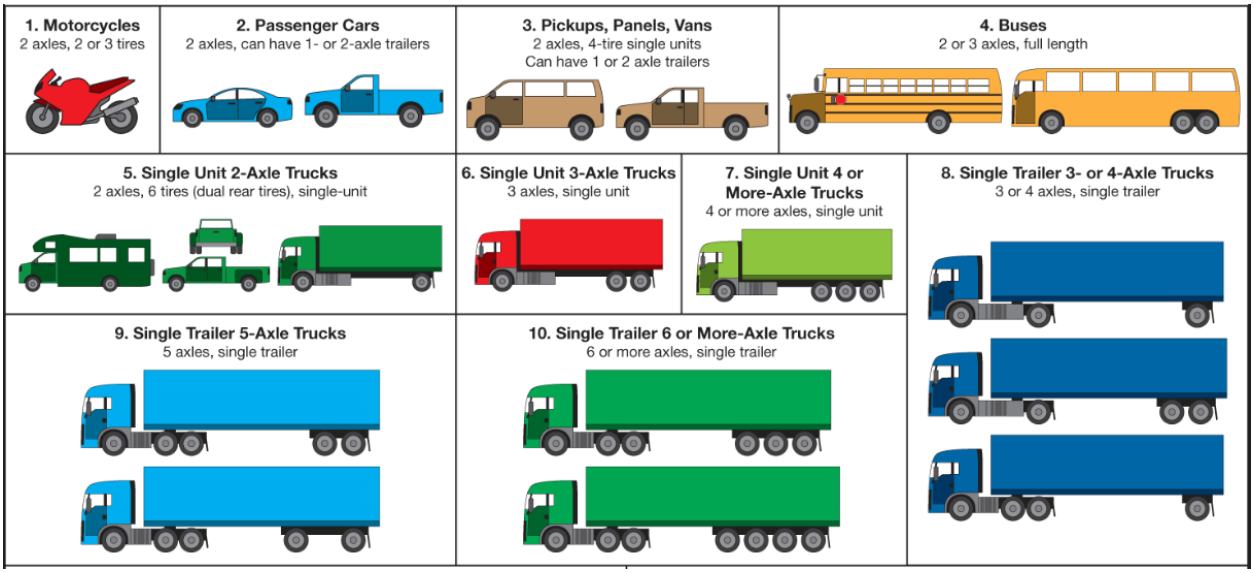
	AVERAGE DAILY TRAFFIC (VEHICLES)		
DATE	**NORTHBOUND**	**SOUTHBOUND**	**TOTAL**
3/18/2025	124	175	299
3/19/2025	143	174	317
3/20/2025	150	161	311
Average	**139**	**170**	**309**

Table 2 summarizes the ADT for California Street, south of Ada Street, between Ada Street and Rose Street. The northbound volumes represent the number of vehicles entering the intersection while the southbound volumes represent the volume of vehicles leaving the intersection.

3. Vehicle Classifications

Data on the vehicle classification types, as defined by the Federal Highway Administration (FHWA), was collected concurrently with the ADT. Table 3 summarizes the various vehicle classification types.

Table 3. FHWA Vehicle Classifications



The three-day total volumes of the various vehicle classification types entering the California Street and Ada Street intersection are summarized in Table 4.

Table 4. Vehicle Classifications Entering the Intersection

VEHICLE CLASSIFICATION		NORTHBOUND	SOUTHBOUND
1	Motorcycles	5	42
2	Passenger Cars	350	1,613
3	Pickups, Vans	46	102
4	Buses	2	0
5	Single Unit 2-Axle Trucks	7	46
6	Single Unit 3-Axle Trucks	7	7
7	Single-Unit ≥4-Axle Trucks	0	0
8	Single Trailer 3- or 4-Axle Trucks	0	4
9	Single Trailer 5-Axle Trucks	0	4
10	Single Trailer >6-Axle Trucks	0	0

E. SPEEDS

Concurrently with the three-day 24-hour ADT and vehicle classification volumes data collection, vehicular travel speeds were also collected for California Street. The data on California Street, north of Ada Street, was collected from Tuesday, February 25, 2025 to Thursday, February 27, 2025 and the data on California Street, south of Ada Street, was collected on Tuesday, March 18, 2025 to Thursday, March 20, 3025. The 85th percentile speed data, the speed that 85% of the traffic is traveling or slower, for both locations are summarized in Tables 5 and Table 6.

Table 5. Speeds on California Street, north of Ada Street

	85th PERCENTILE SPEED (MPH)	
DATE	**NORTHBOUND**	**SOUTHBOUND**
2/25/2025	16	17
2/26/2025	17	18
2/27/2025	14	16
Average	**16**	**17**

Table 5 summarizes the 85th percentile speeds for California Street, north of Ada Street, between Ada Street and Hopkins Street. The northbound speeds represent the speed of vehicles leaving the intersection while the southbound values represent the speeds of vehicles entering the intersection. The average 85th percentile speed for southbound California Street, north of Ada Street, approaching the intersection was 17 miles per hour (MPH).

Table 6. Speeds on California Street, south of Ada Street

	85th PERCENTILE SPEED (MPH)	
DATE	**NORTHBOUND**	**SOUTHBOUND**
3/18/2025	25	24
3/19/2025	24	24
3/20/2025	24	24
Average	**24**	**24**

Table 6 summarizes the 85th percentile speeds for California Street, south of Ada Street, between Ada Street and Rose Street. The northbound speeds represent the speed of vehicles entering the intersection while the southbound values represent the speed of vehicles leaving the intersection. The average 85th percentile speed for northbound California Street, south of Ada Street, approaching the intersection was 24 miles per hour (MPH).

F. COLLISION DATA

An investigation of the 10-year reported collision history from January 1, 2015 to December 31, 2024 revealed three (3) reported collisions, summarized in Table 7. Two (2) of the collisions occurred within a 12-month period of each other in 2019.

Table 7. Collision History

DATE	TIME	PARTY #1	PARTY #2	PARTY #3	COLLISION TYPE	PRIMARY COLLISION FACTOR	INJURY
10/6/2019	12:33	Bicyclist	n/a	n/a	Hit Object	Unsafe Speed	1
4/2/2019	7:55	Vehicle	Parked Vehicle	n/a	Sideswipe	Unsafe Starting or Backing	0
7/3/2016	15:10	Vehicle	Parked Vehicle	Pedestrian	Rear-End	Unsafe Starting or Backing	1

A collision diagram with approximate collision locations is found below in Figure 4.

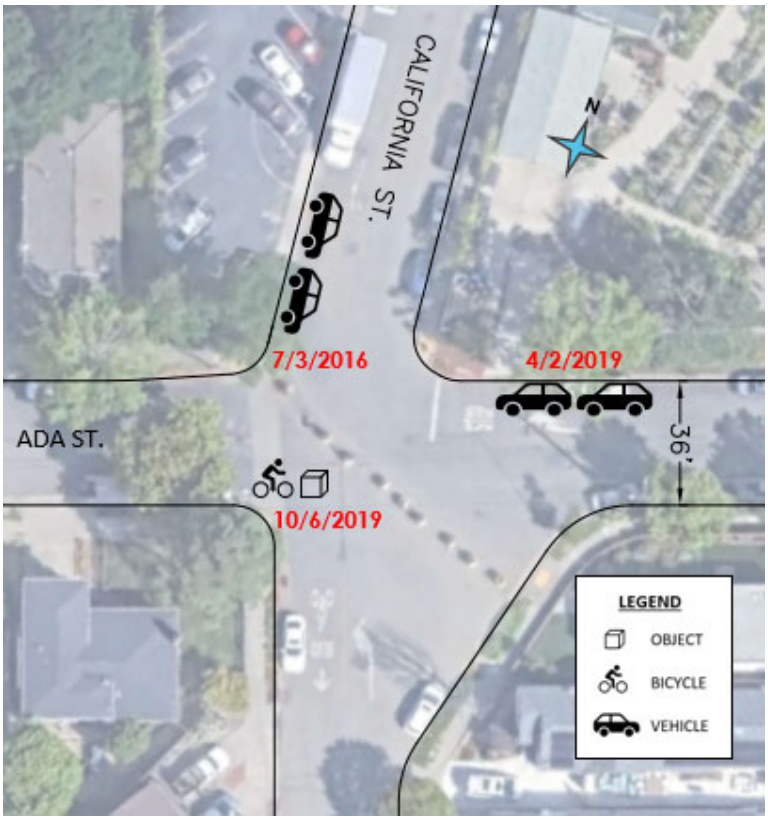


Figure 4. Collision Diagram

III. EVALUATION

The intersection safety assessment includes the evaluation of several factors summarized in this section.

A. TRAFFIC CONTROL DEVICES (ALL-WAY STOP)

The California Department of Transportation has guidelines for the engineering study of a multi-way stop sign installation (Table 8). These criteria may be found in Section 2B.07 of the California Manual on Uniform Traffic Control Devices.

Table 8. Criteria for a Multi-Way Stop Sign Installation

CRITERIA		
A		Where traffic control signals are justified, the multi way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.
B		A collision history, as indicated by five (5) or more reported crashes in a 12-month period that are susceptible to correction by a multi way stop installation. Such collisions include right and left turn collisions as well as right angle collisions.
C	**1**	The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any eight hours of an average day, **AND**
	2	The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same eight hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour, **BUT**
	3	If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70% of the above values.
D		Where no single criterion is satisfied, but where Criteria B, C1, and C2 are all satisfied to 80% of the minimum values. Criterion C3 is excluded from this condition.

1. Criteria A

   A traffic signal is not justified at this location; therefore, the multi-way stop would not serve as an interim measure while arrangements for the installation of the traffic control signal are being made.

2. Criteria B

   Collisions that are susceptible to correction by a multi-stop installation include broadside and turning collisions. A summary of the 10-year collision history, from 01/01/2015 to 12/31/2024, is summarized in Table 9. The three (3) reported collisions were of collision types that are not susceptible to correction. Hence, the intersection did not meet the collision threshold of five (5) reported collisions susceptible to correction by a multi-way stop installation.

Table 9. Collision Types

DATE	COLLISION TYPE	SUSCEPTIBLE TO CORRECTION?
10/6/2019	Hit Object	NO
4/2/2019	Sideswipe	NO
7/3/2016	Rear-End	NO

3. Criteria C-1

   The extrapolated manual turning movement counts collected on Thursday, 2/20/2025 and Wednesday, 4/23/2025 are summarized in Table 10.

Table 10. One-Hour Vehicular Estimates

DATE	NORTHBOUND	SOUTHBOUND	TOTAL
2/20/2025	18	42	60
4/23/2025	6	24	30

The estimated vehicular volume entering the intersection from California Street approaches, for both approaches, was 60 vehicles per hour on 2/20/2025 and 30 vehicles per hour on 4/23/2025, which are lower than the threshold of 300 vehicles per hour for any eight hours of a typical day from the major street. Hence, Criteria C-1 was not met.

4. Criteria C-2

   Meeting Criteria C requires that Criteria C-1 is met. As shown in the evaluation of Criteria C-1 above, it has already been determined that Criteria C cannot be met. However, for the purpose of providing a comprehensive evaluation, Criteria C-2 values were calculated.

Table 11. Extrapolated One-Hour Combined Volume Estimates

DATE	VEHICLES	BICYCLISTS	PEDESTRIANS	TOTAL
2/20/2025	66	0	78	144
4/23/2025	60	0	18	78

The total estimated combined vehicle-bicyclists-pedestrian volume entering the intersection from Ada Street approaches (total of both approaches) was 144 units per hour on 2/20/2025 and 78 units per hour on 4/23/2025, which are lower than the threshold of 200 vehicles per hour for any eight hours of a typical day from the minor street. Hence, Criteria C-2 was not met on either day.

5. Criteria C-3

   The 85th percentile approach speed of the major street California Street does not exceed 40 mph, so Criteria C3 is not applicable to the intersection.

6. Criteria D

Criteria D is met when Criteria B, Criteria C-1, and Criteria C-2 are all satisfied to 80% of the minimum values. As shown in Table 12, Criteria B is not satisfied to 80% of the minimum value of four (4) collisions in a 12-month period. Criteria C-1 is not satisfied to 80% of the minimum value of 240 vehicles per hour and Criteria C-2 is not satisfied to 80% of the minimum value of 160 units per hour. Therefore, Criteria D thresholds have not been met.

Table 12. Criteria B and C Summary

DATE	CRITERIA B (collisions)	CRITERIA C1 (vehicles/hour)	CRITERIA C2 (units/hour)
80% of Min	4	240	160
2/20/2025	2	60	174
4/23/2025	2	30	96

The intersection of California Street and Ada Street meets zero (0) of the four (4) all-way stop warrants as summarized in Table 13. Therefore, an all-way stop at the intersection is not recommended.

Table 13. All-Way Stop Case Results

CRITERIA		THRESHOLD	INTERSECTION RESULT	CASE RESULT
A		Yes	No	Not Satisfied
B		5	2	Not Satisfied
C	C-1	300	60	Not Satisfied
	C-2	200	174	Not Satisfied
	C-3	Yes	No	Not Applicable
D	B	4	2	Not Satisfied
	C-1	240	60	Not Satisfied
	C-2	160	174	Not Satisfied

B. CROSSWALKS

The crosswalk guidelines used for this analysis are consistent with Section 3B.18 of the latest version of the California MUTCD and provide additional guidance subject to engineering judgment on a case-by-case basis.

The decision-making processes for marking crosswalks differ depending on whether the location is controlled or uncontrolled by traffic signals, stop signs, or pedestrian hybrid beacons.

Figure 5 shows the labels assigned for each unmarked crosswalk at the California Street and Ada Street intersection. Crosswalk #1 is controlled by a stop sign and represents a controlled crossing, shaded orange in the figure. Crosswalks #2 to #4 are uncontrolled crossings and are shaded in blue.

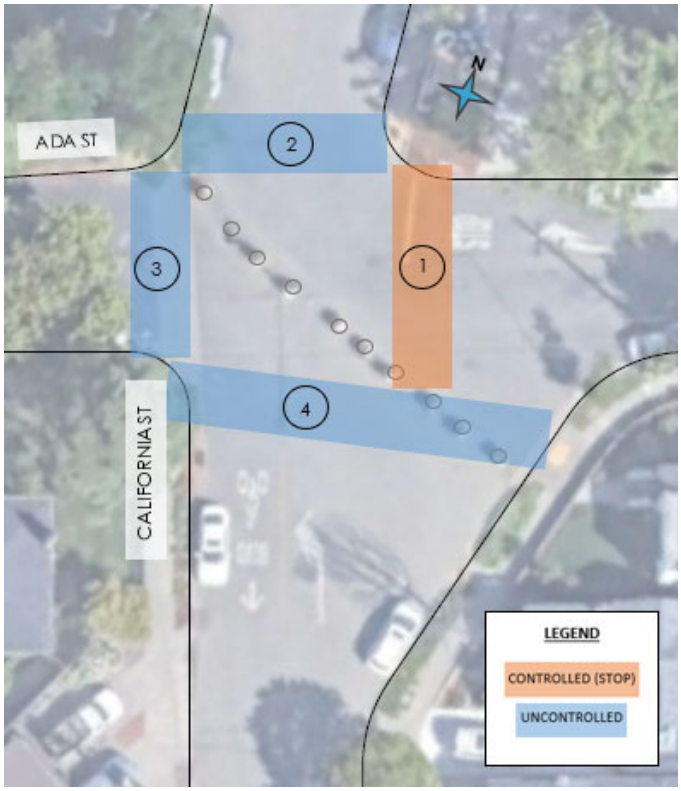


Figure 5. Unmarked Crosswalks at the Study Intersection

1. Controlled Crosswalk #1

   At controlled intersection approaches, crosswalks should only be marked if one of the following conditions in Table 14 apply.

Table14. Criteria for Marking Crosswalks at Controlled Approaches

CRITERIA FOR CONTROLLED APPROACHES	
A	The crosswalk is located in a school zone, defined by the CA MUTCD as designated roadway segment approaching, adjacent to, and beyond school buildings or grounds, or along which school related activities occur. Typically extending 500 feet from school grounds, **OR**
B	Elderly or disabled pedestrian volumes of 20 or more are expected during the peak hour of pedestrian demand, **OR**
C	Pedestrian volumes of 60 or more are expected during the peak hour of pedestrian, **OR**
D	Safety or efficiency reasons dictate directing pedestrians to a particular leg of the intersection.

- Criteria A

  Crosswalk 1 is not located within a school zone (500 feet from school grounds). Thus, Criteria A has not been met.

- Criteria B

  Elderly or disabled pedestrians of 20 or more are not expected during the peak hour; therefore, Criteria B has not been met.

- Criteria C

  The ten-minute manual volume spot checks collected on Thursday, 2/20/2025 and Wednesday, 4/23/2025 were extrapolated to one hour and summarized in Table 15.

Table 15. One-Hour Pedestrian Estimates

DATE	PEDESTRIANS
2/20/2025	6
4/23/2025	0

The total estimated pedestrian volume is 6 pedestrians, which is much lower than the 60 pedestrians outlined in Criteria C.

- Criteria D

  If uncontrolled Crosswalks 2, 3, and 4 meet minimum requirements for marked crosswalks, then controlled Crosswalk 1 will also be marked to encourage pedestrians to use a controlled crossing when crossing Ada Street.

2. Uncontrolled Crosswalks #2, #3, and #4

   At uncontrolled intersection approaches, crosswalks should only be marked if the following conditions in Table 16 apply.

Table16. Criteria for Marking Crosswalks at Uncontrolled Approaches

CRITERIA FOR UNCONTROLLED APPROACHES	
A	There is sufficient demand (see Demand section below*); **AND**
B	The location is more than 300 feet from a controlled crossing location; **AND**
C	Adequate stopping sight distance exists between approaching motorists and pedestrians starting to cross the street at the crosswalk; **AND**
D	The location has street lighting adjacent to the crosswalk; **AND**
E	Safety considerations arising from roadway configuration, vehicle volumes or vehicle speeds do not preclude marking a crosswalk.

*Demand for Uncontrolled Locations

At uncontrolled intersection approaches, crosswalks should be considered for marking only if there is sufficient demand according to the following criteria:

- The crosswalk is located in a school area; **OR**
- Pedestrian volumes of 15 or more per hour are expected during multiple hours throughout the day; **OR**
- Pedestrian volumes of 20 or more are expected during the peak hour of pedestrian demand; **AND**
- Pedestrians have fewer than five gaps in traffic per five-minute period.

- Criteria A-1

  Crosswalks 2 to 4 are not located within a school zone, defined by the California MUTCD as 500 feet from school grounds. Thus, Criteria A-1 has not been met for all the crosswalks.

- Criteria A-2

  The ten-minute manual volume spot checks collected on Thursday, 2/20/2025 and Wednesday, 4/23/2025 were extrapolated to one hour and summarized in Table 17.

Table17. One-Hour Pedestrian Estimates for Uncontrolled Crosswalks

	CROSSWALK #		
	2	**3**	**4**
PEDESTRIANS PER HOUR	36	36	42

The pedestrian demand at Crosswalk 2, 3, and 4 have an estimated average of 36, 36, and 42 pedestrians per hour, respectively, which meets the demand criteria of 15 or more per hour. Thus, Crosswalks 2, 3, and 4 satisfy Criteria A-2 for minimum pedestrian demand.

- Criteria A-3

  Minimum volumes of 20 pedestrians or more during the peak hour combined with having fewer than five (5) gaps in traffic to cross per five-minute period are required for satisfying Criteria A-3.

  Crosswalks 2, 3, and 4 are expected to have 20 pedestrians or more during the peak hour but because there were more than five (5) gaps in traffic to cross, Crosswalks 2, 3, and 4 do not meet Criteria A-3.

- Criteria B

  The distance to the next controlled crossing location was measured at 330 feet, 460 feet, and 360 feet for Crosswalk 2, 3, and 4, respectively. These distances meet the threshold for Criteria B.

Table18. Distance from a Controlled Crossing Location

	CROSSWALK #		
	2	**3**	**4**
DISTANCE FROM CLOSEST CONTROLLED CROSSWALK	330'	460'	360'

- Criteria C

  Adequate stopping sight distance of 155 feet in advance of the crossing exists between motorists and pedestrians crossing for Crosswalks 2, 3, and 4; therefore, Criteria C for stopping sight distances is met.

- Criteria D

  The location has street lighting adjacent to Crosswalks 2, 3, and 4, meaning that Criteria D has been met.

- Criteria E

  Safety considerations arising from roadway configuration, vehicle volumes, or vehicle speeds do not preclude marking a crosswalk at the locations for Crosswalks 2, 3, and 4. Thus, Criteria E has been met.

➢ Crosswalk Marking Case Results

The recommendation to mark the controlled Crosswalk #1 is dependent on the results of the recommendations to mark the uncontrolled Crosswalks #2, #3, and #4. Crosswalks #2 to #4 have met all four (4) of the minimum criteria for marking crosswalks at uncontrolled locations. Because the three (3) uncontrolled locations are recommended for markings, the one (1) controlled crosswalk is also recommended for marking to encourage and channel pedestrians to use a controlled crossing when crossing Ada Street. Therefore, marking the crosswalks at Crosswalks 1, 2, 3, and 4 are recommended.

Table19. Crosswalk Marking Case Results

		CROSSWALK #			
CRITERIA		**1**	**2**	**3**	**4**
A	A-1	NO	NO	NO	NO
	A-2		YES	YES	YES
	A-3		NO	NO	NO
B		NO	YES	YES	YES
C		NO	YES	YES	YES
D		YES	YES	YES	YES

C. SPEEDS

The results of this evaluation are measured against the City of Berkeley Traffic Calming Program minimum criteria adopted through City Council Resolution No. 64-732-N.S., and if additional measures are not justified, they are not recommended.

The following criteria in Table 20 were considered to determine the recommendation of any traffic calming devices.

Table 20. Minimum Criteria to Qualify for Traffic Calming

CRITERIA TO QUALIFY FOR TRAFFIC CALMING	
A	Where the 85th percentile speed profile is greater than 5 mph over the speed limit, **OR**
B	Proximity to school or park (within two blocks), or senior center (within one block) combined with 85th percentile speed profile greater than 3 mph over the speed limit, **OR**
C	Mitigate a documented collision pattern (bike, pedestrian, motor vehicle), **OR**
D	Where there is a number of "cut-through" motor vehicles on the street or in the neighborhood, per ITE volume guidelines for neighborhood streets (2,500 vehicles per day average).

3. California Street between Hopkins Street and Ada Street

   The average 85th percentile speed data collected on California Street between Hopkins Street and Ada Street was 16.5 mph. This speed is not only lower than the established threshold of five (5) mph over the posted speed limit for consideration of physical traffic calming measures, but also lower than the posted speed limit.

4. California Street between Ada Street and Rose Street

   The average 85th percentile speed data collected on California Street between Ada Street and Rose Street was 24 mph. This speed is not only lower than the established threshold of five (5) mph over the posted speed limit for consideration of physical traffic calming measures, but also lower than the posted speed limit.

Table 21. 85th Percentile Speeds on California Street

LOCATION			DIRECTION	85TH % SPEED (MPH)
STREET	**LIMIT 1**	**LIMIT 2**		
California Street	Hopkins Street	Ada Street	North	16
			South	17
	Ada Street	Rose Street	North	24
			South	24

D. SIGHT LINES

Adequate stopping sight distance for a roadway with a posted speed limit of 25 mph is 155 feet. This means that motorist must have unobstructed sight lines from 155 feet in advanced of point where stopping may need to occur, such as a stop sign, yielding for pedestrians in a crosswalk, or vehicular cross traffic.

This stopping sight distance also provides motorists stopped at limit lines with adequate sight lines of approaching cross traffic to determine safe gaps for crossing. Figure 6 shows the unobstructed horizontal sight lines from a motorist stopped on the minor street Ada Street.

Figure 6. Horizontal sight lines from minor street

Because vertical sight lines cannot be verified from a bird's eye view, like horizontal sight lines, photos from a motorist's point of view were taken to confirm that adequate visibility exists at the California Street and Ada Street location. Four (4) photos for each approach are found in Figures 7 to 22 and descriptions of each motorist point of view may be summarized by the following:

- Looking for cross traffic straight ahead
- Looking for cross traffic from the left
- Looking for cross traffic from the right
- From 155 feet in advance of the intersection

Table 22. Figure Numbers of Sightline Photos

STREET NAME	DIRECTION	FIGURE #	SIGHTLINE VIEW	SIGHTLINE DIRECTION
CALIFORNIA STREET	NORTHBOUND	7	FORWARD	NORTH
		8	LEFT	WEST
		9	RIGHT	EAST
		10	155 FEET BEHIND INTERSECTION	INTERSECTION
	SOUTHBOUND	11	FORWARD	SOUTH
		12	LEFT	EAST
		13	RIGHT	WEST
		14	155 FEET BEHIND INTERSECTION	INTERSECTION
ADA STREET	EASTBOUND	15	FORWARD	EAST
		16	LEFT	NORTH
		17	RIGHT	SOUTH
		18	155 FEET BEHIND INTERSECTION	INTERSECTION
	WESTBOUND	19	FORWARD	WEST
		20	LEFT	SOUTH
		21	RIGHT	NORTH
		22	155 FEET BEHIND INTERSECTION	INTERSECTION

Figures 7 to10 are photos of the unobstructed sight lines in the northbound California Street direction. These photos verify that sight lines for the intersection approach in all directions (north, west, and east) and 155 feet in advance of the intersection are adequate.

Figure 7. Northbound California Street forward ahead (north) sightline

Figure 8. Northbound California Street left (west) sightline

Figure 9. Northbound California Street right (east) sightline

Figure 10. Northbound California Street sightline from 155 feet in advance of intersection

Figures 11 to 14 are photos of the unobstructed sight lines in the southbound California Street direction. These photos verify that sight lines for the intersection approach in all directions (south, east, and west) and 155 feet in advance of the intersection are adequate.

Figure 11. Southbound California Street forward ahead (south) sightline

Figure 12. Southbound California Street left (east) sightline

Figure 13. Southbound California Street right (west) sightline

Figure 14. Southbound California Street sightline from 155 feet from the intersection

Figures 15 to 17 are photos of the unobstructed sight lines in the eastbound Ada Street direction. These photos verify that sight lines for the intersection approach in all directions (east, north, south) and 155 feet in advance of the intersection are adequate.

Figure 15. Eastbound Ada Street sightline of forward ahead (east) sightline

Figure 16. Eastbound Ada Street sightline to the left (north)

Figure 17. Eastbound Ada Street sightline to the right (south) sightline

Figure 18. Eastbound Ada Street sightline from 155 feet from the intersection

Figures 19 to 22 are photos of the unobstructed sight lines in the westbound Ada Street direction. These photos verify that sight lines for the intersection approach in all directions (west, south, and north) and 155 feet in advance of the intersection are adequate.

Figure 19. Westbound Ada Street sightline of forward ahead (west) sightline

Figure 20. Westbound Ada Street sightline to the left (south)

Figure 21. Westbound Ada Street sightline to the right (north) sightline

Figure 22. Westbound Ada Street sightline from 155 feet from the intersection

E. TURNING RADII

The maneuverability of various vehicle types was analyzed with the Vehicle Tracking module in AutoCAD, also known as AutoTurn. Figure 23 depicts the maneuverability of passenger cars turning left from California Street concurrently with other passenger cars turning right from Ada Street.

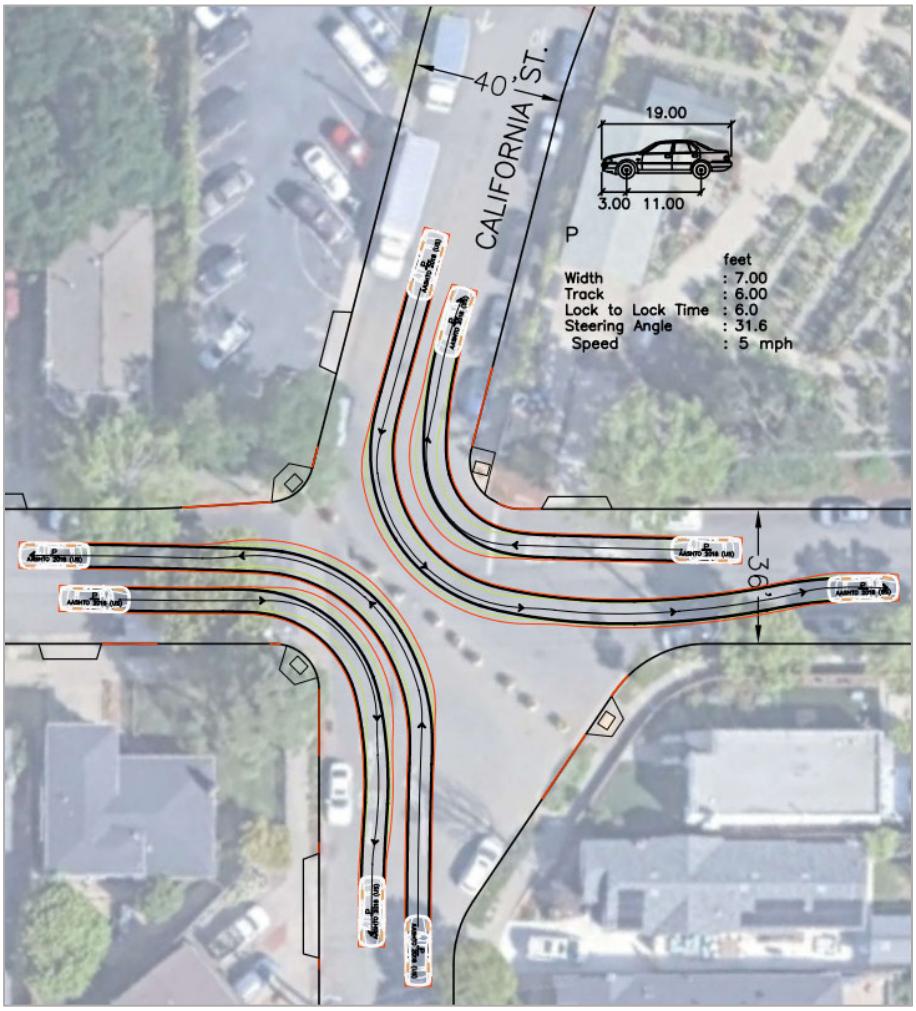


Figure 23. Turning Analysis of Passenger Vehicles

This turning analysis verifies that two passenger cars, if needed, can make concurrent turns with plenty of room left over. Figure 24 analyzes the maneuverability of single-unit, two-axle truck turning left from California Street concurrently with other single-unit, two-axle trucks turning right from Ada Street.

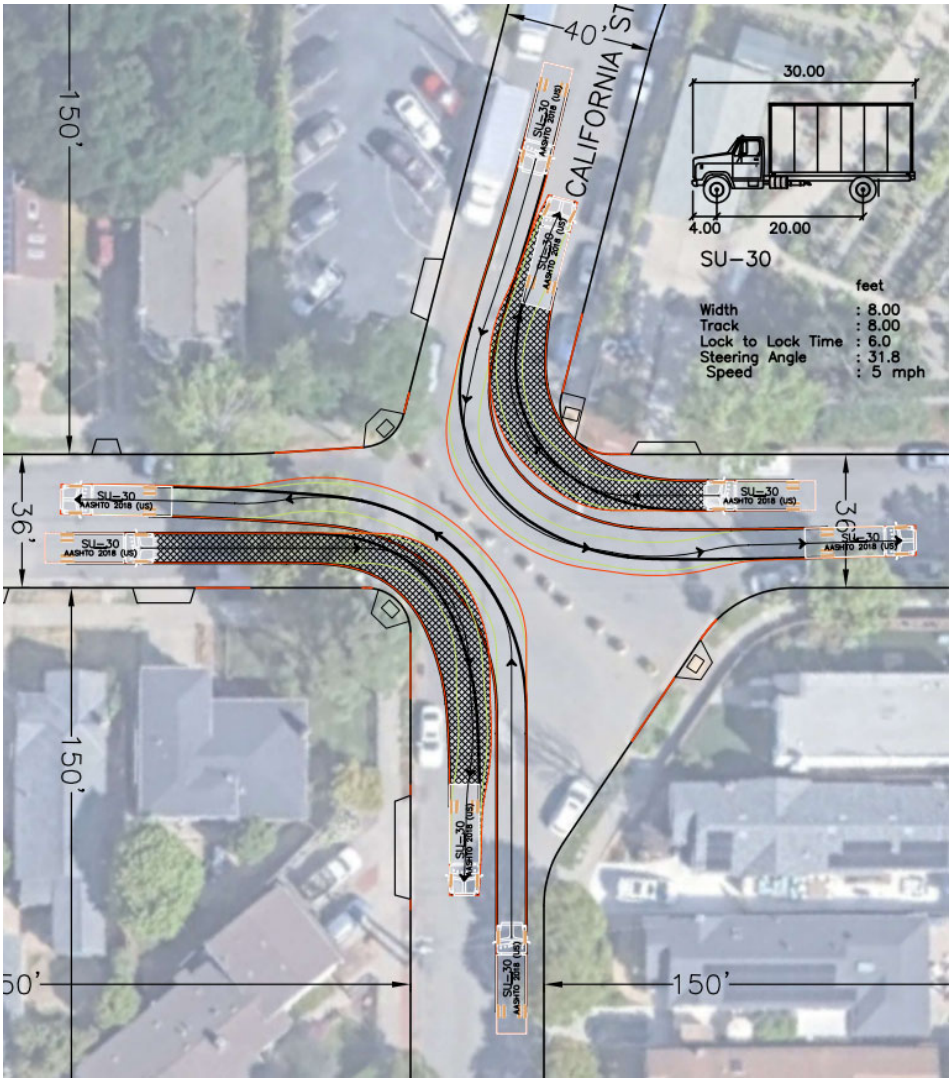


Figure 24. Turning Analysis of Single-Unit Trucks

The turning analysis of two (2) single-unit, two-axle trucks reveals that vehicles of this classification type or larger would not be able to make concurrent left turns. However, the likelihood of these vehicle types turning at the same time without one yielding the right-of-way to the other is slim to none.

F. COLLISION DATA

There were three (3) reported collisions within the 10-year period from 1/1/2015 to 12/31/2024.

1. The collision that occurred on 7/3/2016 was a result of a motorist attempting to parallel park.
2. The collision that occurred on 4/2/2019 was a hit and run to a parked vehicle. The sobriety of the motorist that fled the scene is unknown, but is suspected to have been under the influence.
3. The collision that occurred on 10/6/2019 was a result of an elderly bicyclist hitting a fixed object.

These collisions are not susceptible to correction by additional engineering features.

G. INTERSECTION GEOMETRY

The geometry of the California Street and Ada Street is unique and atypical for some of the following reasons:

1. Chamfered southeast corner which measures approximately 70 feet in the north-south direction by 50 feet in the east-west direction

2. Angle at which California Street north of Ada Street intersects Ada Street

3. The downward slope towards the intersection for California Street, south of Ada Street

4. Diagonal diverters that restrict vehicular movements

5. One (1) of the four (4) approaches is stop-controlled

To further clarify right-of-way at an atypical geometric intersection, like this intersection, improvements towards familiarizing the intersection may be helpful.

IV. ASSESSMENT

After a thorough investigation of several factors, recommendations for improvements have been concluded and summarized in Table 23.

Table 23. Safety Assessment Summary

EVALUATION TYPE	CASE RESULT	RECOMMENDATION
TRAFFIC CONTROL DEVICES	ALL-WAY STOP NOT WARRANTED	NONE
CROSSWALKS	MARKING CROSSWALKS ARE WARRANTED	INSTALL HIGH-VISIBILITY CROSSWALKS FOR ALL FOUR (4) LEGS + ADDITIONAL CROSSWALK IMPROVEMENTS
SPEED	85TH PERCENTILE SPEEDS ARE SLOWER THAN 25 MPH	NONE
SIGHT LINES	ADEQUATE STOPPING SIGHT DISTANCES EXIST	NONE
TURNING RADII	TURNING MANEUVERABILITY IS ACCEPTABLE	GUIDELINE PAVEMENT STRIPING THROUGH THE INTERSECTION
COLLISIONS	NO COLLISIONS SUSCEPTIBLE TO CORRECTION THRU ADDITIONAL ENGINEERING MEASURES	NONE
INTERSECTION GEOMETRY	UNIQUE AND ATYPICAL GEOMETRY MAY CAUSE UNFAMILIARITY	MAKE THE INTERSECTION UNIFORM TO TYPICAL INTERSECTIONS BY SQUARING THE CHAMFERED CORNER

A. TRAFFIC CONTROL DEVICES

The all-way stop analysis indicated that an all-way stop is not warranted at this intersection. Therefore, no additional traffic control devices are recommended at this intersection.

B. CROSSWALKS

Analysis of the three (3) uncontrolled, unmarked crosswalks revealed that sufficient pedestrian demand, crossings more than 300 feet from the closest controlled crossing location, adequate stopping sight distances, adequate street lighting all exist at these locations. Thus, marking the uncontrolled crosswalks (Crosswalks #2, #3, and #4) are recommended.

The stop-controlled crosswalk located on the eastern leg of the intersection did not meet the warrants for school zone area and pedestrian demand. However, Criteria D of the guidelines state that crosswalks may be recommended if "safety or efficacy reasons dictate directing pedestrians to a particular leg of the intersection." For consistency with typical four-leg intersections, meeting Criteria D was dependent on the recommendation of marking the uncontrolled crosswalks. Because the three (3) *uncontrolled* crosswalks of the intersection were being recommended for marking, it is recommended to mark the remaining the stop-controlled crosswalk (Crosswalk #1) to encourage pedestrians to use a controlled crossing when crossing Ada Street.

C. SPEED

The 24-hour, 7-day speed data collection indicated that 85% of motorists drive at 24 mph or slower for northbound California Street and 16 mph or slower for southbound California Street. Because the posted speed limit at these locations is 25 mph, these speeds are within acceptable range and no traffic calming measures are being recommended.

D. SIGHT LINES

The horizontal and vertical sight lines at this intersection are adequate and sufficient, so no visibility improvements are being recommended at this time. However, due to California's new daylighting law Assembly 413, red curbs at all crosswalk approaches will be implemented.

E. TURNING RADII

Analyzing the turning maneuverability of various vehicle types and the classification types of the vehicles that use the intersection reveals that intersection turning space is adequate. However, to ensure that right-of-way through the intersection is clear if concurrent turning occurs, guideline pavement striping through the intersection is being recommended.

F. COLLISIONS

The 10-year collision history did not contain any collisions that are susceptible to correction through additional engineering measures. Thus, no additional improvements arise from this analysis.

G. INTERSECTION GEOMETRY

The chamfered southeast corner makes this intersection unique, which may make travelers uncomfortable or unclear traveling through the intersection. Uniformity of traffic control is vital to their effectiveness. Because of this, it is recommended to square the southeast corner with the low-cost solution of creating a painted safety zone by painting a bulb-out and installing bollards.

The diverters installed diagonally from the northwest to the southwest corners of the intersection also contribute to the uniqueness of the intersection. Because of this, it is being recommended to increase visibility of the diverters

by installing chevron warning signs and reflective markers. This will make the diverters more visible from a further distance, providing more reaction time.

This improvement will make the intersection consistent with typical four-leg intersections and easier to understand and maneuver.

V. RECOMMENDATION

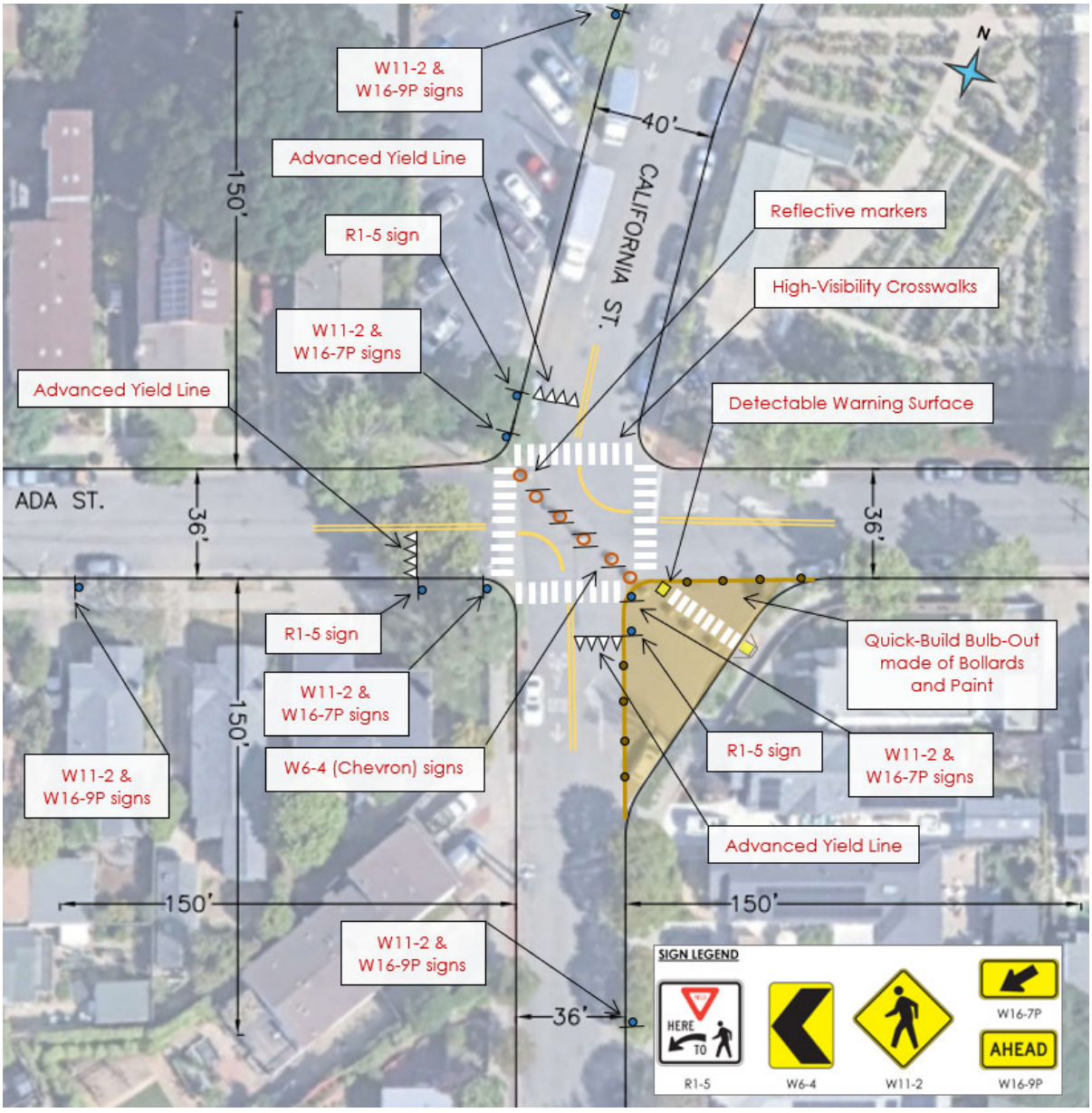


Figure 25. Recommended Improvements

It is recommended to mark the four (4) crosswalks with additional crossing improvements, paint guideline striping through the intersection, install warning signs and reflective markers on the delineators, and install a painted bulb-out at the intersection of California Street and Ada Street. Refer to Figure 25 for more information on the recommended improvements.

VI. NEXT STEPS

The next steps will focus on community feedback and buy-in prior to any Council approval.

A. PUBLIC OUTREACH

Staff plans to notify the public through various media

1. Mailers

   City will mail notifications to the surrounding community, including residents and businesses

2. City Webpage

   This report will be made readily available on the City webpage for public review. Information on public meetings and engagement will be posted.

3. Signs Posted at Intersection

   Information on the report and any upcoming meetings will be advertised at the intersection with A-frames.

4. Flyers

   Flyers will be made available for businesses to post at their establishments

B. PUBLIC ENGAGEMENT

Opportunities for the public to provide feedback will be made available.

1. Community Meeting

   A community meeting where the results and recommendations at this intersection will be presented.

2. Email

   Feedback can always be sent to Transportation@berkeleyca.gov

3. Pop-up Table

   Staff will have a pop-up table set up at the intersection to solicit feedback directly from people who use the intersection

C. COUNCIL APPROVAL

Once feedback from the public is reviewed and addressed, Staff will present the findings in front of City Council for approval of the improvements.