



YUCCA TRAIL SAFETY ANALYSIS: IMMEDIATE IMPROVEMENTS

PREPARED FOR:
THE TOWN OF YUCCA VALLEY

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EXECUTIVE SUMMARY

▪ Purpose of Report and Study Objectives

The purpose of this study is to evaluate roadway safety at high collision locations along the Yucca Trail corridor in the Town of Yucca Valley (Town).

Due to the high frequency of accidents along the Yucca Trail corridor, the Town would like to implement countermeasures in the short term, mid-term, and long term in order to address these safety issues.

The objectives of this study include the following:

- Document existing traffic conditions within the study area;
- Examine accident data within the study area;
- Review the Town’s General Plan for proposed land use around Yucca Trail and future projected traffic counts on Yucca Trail and at major intersections;
- Review connectivity between Twentynine Palms Highway (SR-62) and Yucca Trail;
- Review offset intersections and driveways;
- Review ultimate cross section for Yucca Trail;
- Analyze possible countermeasures within the study area;
- Provide recommendations for median openings;
- Provide circulation recommendations for side streets.
- Provide recommendation for traffic control, striping, and markings.

▪ Study Locations

The study area for this report includes Yucca Trail from Sage Avenue to La Contenta Road.

▪ Short Range Recommendations

Sage Avenue/Yucca Trail

- Add “TRAFFIC FROM LEFT DOES NOT STOP” plaque [W4-4aP(LT)] to stop sign for eastbound direction.
- Add “ONCOMING TRAFFIC DOES NOT STOP” plaque (W4-4bP) to stop sign for northbound direction.
- Refresh all existing striping & markings with thermoplastic to improve visibility.
- Cost Estimate: \$3000

Warren Vista Avenue/Yucca Trail

- Convert intersection to all way stop in interim condition. This will require stop signs (R1-1), all way plaques (R1-3P), and stop ahead warning signs (W3-1) for eastbound and westbound directions. This will also require all way plaques (R1-3P) for northbound and southbound directions. Oversized signs, flashing beacons, and/or Light Emitting Diode (LED) enhanced signs along Yucca Trail are recommended to improve visibility and compliance.
- Add “Stop Ahead” pavement markings adjacent to stop ahead warning signs for eastbound and westbound directions.
- Remove or trim vegetation to increase sight distance to the east.
- Refresh existing striping & markings with thermoplastic to improve visibility.

- Perform public outreach and education before significant changes to traffic control.
- Cost Estimate: \$7000

Palomar Avenue/Yucca Trail

- Replace signal ahead warning sign with oversized signs for all directions.
- Increase yellow interval to a minimum of 4.8 seconds for southbound direction, 5.2 seconds for eastbound and northbound directions, and 5.5 seconds for westbound direction to meet CA-MUTCD Table 4D-102(CA).
- Refresh existing striping & markings with thermoplastic to improve visibility.
- Cost Estimate: \$3000

■ Mid-Range Recommendations

Sage Avenue/Yucca Trail (Option 1)

- Realign Yucca Trail and Sage Avenue such that the north leg and east leg are the major/through movements and the west leg is the minor/side movement. The south leg (commercial driveway) will need to be closed or relocated to the west to access the minor leg of the intersection.
- This option may impact the parking lot of the property on the northeast corner of the intersection (KFC)

Sage Avenue/Yucca Trail (Option 2)

- Close Sage Avenue between Yucca Trail and Twentynine Palms Highway (SR-62).
- Traffic will be rerouted to Barberry Avenue or Dumosa Avenue. A new traffic signal may be required at Barberry Avenue/Twentynine Palms Highway (SR-62) and/or at Barberry Avenue/Yucca Trail.

Warren Vista Avenue/Yucca Trail

- Install traffic control signal for ultimate condition. This will require replacing all stop ahead warning signs (W3-1) and pavement markings with signal ahead warning signs (W3-3) and pavement markings. Oversized signs, flashing beacons, and/or Light Emitting Diode (LED) enhanced signs along Yucca Trail are recommended to improve visibility and compliance.
- Cost Estimate: \$250,000

■ Long Range Recommendations

- Monitor daily traffic volumes on Yucca Trail on a regular (annual) basis to determine when detailed level of service analysis may be necessary. Detailed analysis should be used to determine when roadway widening, median construction, or traffic signal installation is appropriate.
- Monitor accidents along Yucca Trail to determine when safety warrants for traffic signals or multi-way stops are met.

▪ Purpose of Report and Study Objectives

The purpose of this study is to evaluate roadway safety at high collision locations along the Yucca Trail corridor in the Town of Yucca Valley (Town).

Due to the high frequency of accidents along the Yucca Trail corridor, the Town would like to implement countermeasures in the short term, mid-term, and long term in order to address these safety issues.

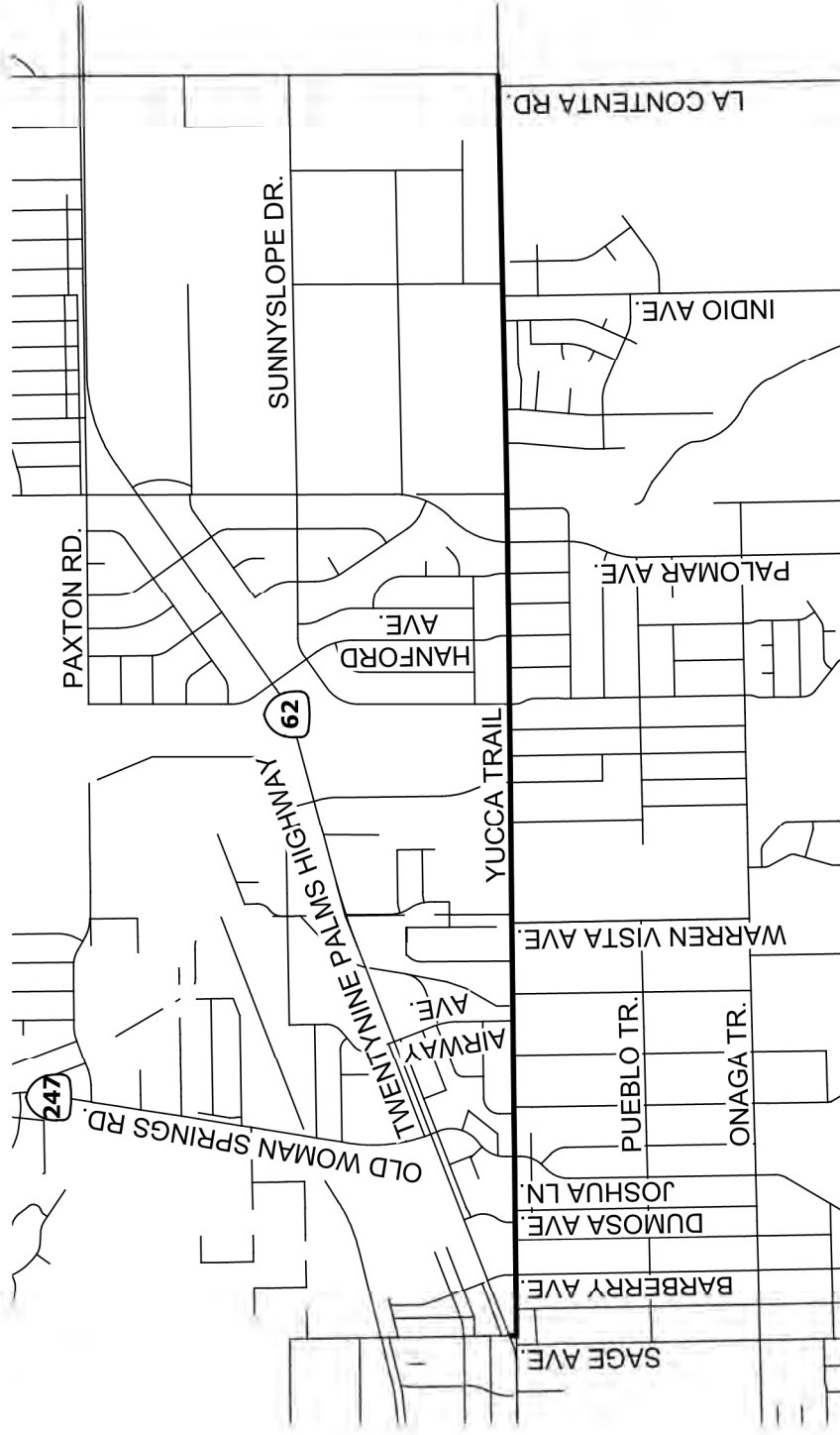
The objectives of this study include the following:

- Document existing traffic conditions within the study area;
- Examine accident data within the study area;
- Review the Town’s General Plan for proposed land use around Yucca Trail and future projected traffic counts on Yucca Trail and at major intersections;
- Review connectivity between Twentynine Palms Highway (SR-62) and Yucca Trail;
- Review offset intersections and driveways;
- Review ultimate cross section for Yucca Trail;
- Analyze possible countermeasures within the study area;
- Provide recommendations for median openings;
- Provide circulation recommendations for side streets.
- Provide recommendation for traffic control, striping, and markings.

▪ Study Area

The study area for this report includes Yucca Trail from Sage Avenue to La Contenta Road. A vicinity map is presented on Figure 2-A.

Figure 2-A – Vicinity Map



EXISTING CONDITIONS

▪ Roadway Descriptions

Yucca Trail is an east-west roadway and is designated as a four-lane divided arterial (100' right-of-way [ROW]) between Sage Avenue and La Contenta Road in the Town's General Plan Circulation Element. It is the second busiest corridor in the Town after Twentynine Palms Highway (SR-62). It is currently striped with one through lane in each direction between Sage Avenue and La Contenta Road, except between Barberry Avenue and Lupine Drive, where there are two westbound through lanes. There are left-turn and right-turn lanes at some intersections between Sage Avenue and La Contenta Road. The posted speed limit varies from 45mph to 55mph.

Sage Avenue is a north-south roadway and is designated as a two-lane arterial (70' ROW) between Joshua Drive and Sunnyslope Drive in the Town's General Plan Circulation Element. A short segment of Sage Avenue connects Twentynine Palms Highway (SR-62) and Yucca Trail. The alignment of Sage Avenue south of Yucca Trail is disconnected from the northern portion and shifted to the west. Yucca Valley High School is located approximately 1/4 mile south of the Sage Avenue/Yucca Trail intersection.

Barberry Avenue is a north-south roadway and does not have a designated roadway classification in the Town's General Plan Circulation Element. The posted speed limit is 25mph south of Yucca Trail; there is no posted speed limit between Yucca Trail and Twentynine Palms Highway (SR-62).

Dumosa Avenue is a north-south roadway and does not have a designated roadway classification in the Town's General Plan Circulation Element. There is no posted speed limit immediately to the north or south of Yucca Trail. The alignment of Dumosa Avenue south of Yucca Trail is disconnected from the northern portion and shifted to the east by approximately 150'.

Joshua Lane is a north-south roadway and is designated as a two-lane arterial (70' ROW) south of Yucca Trail and as a four-lane divided arterial (100' ROW) between Yucca Trail and Twentynine Palms Highway (SR-62) in the Town's General Plan Circulation Element. The posted speed limit is 40mph south of Yucca Trail and 35mph north of Yucca Trail.

Airway Avenue is a north-south roadway and does not have a designated roadway classification in the Town's General Plan Circulation Element. There is no posted speed limit immediately to the north of Yucca Trail.

Warren Vista Avenue is a north-south roadway and is designated as a two-lane collector (66' ROW) between Vaduz Avenue and Twentynine Palms Highway (SR-62) in the Town's General Plan Circulation Element. The posted speed limit is 40mph immediately south of Yucca Trail; there is no posted speed limit immediately north of Yucca Trail.

Hanford Avenue is a north-south roadway and does not have a designated roadway classification in the Town's General Plan Circulation Element. There is no posted speed limit immediately to the north or south of Yucca Trail.

Palomar Avenue is a north-south roadway and is designated as a two-lane arterial (70' ROW) from Joshua Lane to Twentynine Palms Highway (SR-62) in the Town's General Plan Circulation Element. The posted speed limit is 45mph north of Yucca Trail and 50mph south of Yucca Trail.

Indio Avenue is a north-south roadway and is designated as a two-lane collector (66' ROW) south of Yucca Trail and as a two-lane industrial (70' ROW) between Yucca Trail and Twentynine Palms Highway (SR-62) in the Town's General Plan Circulation Element. The posted speed limit is 25mph south of Yucca Trail; there is no posted speed limit north of Yucca Trail. The alignment of Indio Avenue south of Yucca Trail is disconnected from the northern portion and shifted to the west by approximately 175'.

La Contenta Road is a north-south roadway and is designated as a four-lane divided arterial (100' ROW) from Yucca Trail to Twentynine Palms Highway (SR-62) in the Town's General Plan Circulation Element. There is no posted speed limit immediately north or south of Yucca Trail. La Contenta Middle School is located approximately 1/8 mile north of the La Contenta Road/Yucca Trail intersection. South of Yucca Trail, La Contenta Road is unpaved.

▪ Existing Traffic Controls and Intersection Geometrics

The existing traffic control and intersection geometrics of the study area are shown on Figure 3-A.

Sage Avenue/Yucca Trail

The intersection of Sage Avenue and Yucca Trail is stop-controlled and has the following lane geometrics:

- Northbound: One shared left-turn, through, and right-turn lane. Stop controlled. (Commercial driveway)
- Southbound: One shared left-turn, through, and right-turn lane (29' width). Uncontrolled.
- Eastbound: One left-turn lane (12' width, 95' pocket). One shared through and right-turn lane (13' width). Stop controlled.
- Westbound: One shared left-turn and through lane (12' width). One right-turn lane (13' width, 100' pocket). Stop controlled.

The traffic control at this intersection is not standard. Since the south leg of the intersection is a driveway to a commercial property, the north leg would normally be considered the "terminating highway" at a T-intersection and would typically be required to yield to the east-west "continuing highway." The stop control at this intersection requires all other directions to yield right-of-way to the southbound direction. Photos of existing conditions are included in Appendix A.

Barberry Avenue/Yucca Trail

The intersection of Barberry Avenue and Yucca Trail is all-way stop-controlled and has the following lane geometrics:

- Northbound: One shared left-turn, through, and right-turn lane (18' width). Stop controlled.
- Southbound: One left-turn lane (12' width, 70' pocket). One through lane (12' width). One right-turn lane (16' width, 70' pocket). Stop controlled.
- Eastbound: One left-turn lane (12' width, 95' pocket). One shared through and right-turn lane (22' width). Stop controlled.
- Westbound: One left-turn lane (12' width, 115' pocket). One through lane (12' width). One right-turn lane (varies 14' to 24' width). Stop controlled.

Dumosa Avenue/Yucca Trail

The intersection of Dumosa Avenue and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane (15' width). Stop controlled.
Southbound: One shared left-turn, through, and right-turn lane (18' width). Stop controlled.
Eastbound: One shared left-turn, through, and right-turn lane (33'± width). Uncontrolled.
Westbound: One shared left-turn and through lane (12' width). One shared through and right-turn lane (25' width). Uncontrolled.

The north leg and south leg are offset by approximately 150'.

Joshua Lane/Yucca Trail

The intersection of Joshua Lane and Yucca Trail is controlled by a traffic signal and has the following lane geometrics:

Northbound: One left-turn lane (12' width). One through lane (12' width). One shared through and right-turn lane (12' width).
Southbound: One left-turn lane (14' width). One through lane (12' width). One right-turn lane (17' width).
Eastbound: One left-turn lane (12' width). One shared through and right-turn lane (width).
Westbound: One left-turn lane (12' width). One through lane (12' width). One shared through and right-turn lane (18' width).

All left-turn phasing is protected.

Airway Avenue/Yucca Trail

The intersection of Airway Avenue and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane. Stop controlled. (Private driveway)
Southbound: One shared left-turn, through, and right-turn lane (18' width). Stop controlled.
Eastbound: One left-turn lane (12' width, 100' pocket). One shared through and right-turn lane (21' width). Uncontrolled.
Westbound: One shared through and right-turn lane (12' width). Uncontrolled.

The north leg and south leg (private driveway) are offset by approximately 40'.

Warren Vista Avenue/Yucca Trail

The intersection of Warren Vista Avenue and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane (19' width). Stop controlled.
Southbound: One shared left-turn, through, and right-turn lane (12' width). Stop controlled.
Eastbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.
Westbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.

There are wide paved shoulders (10'+) for the eastbound and westbound direction. For the westbound direction, the shoulder starts approximately 200' before the intersection. Photos of existing conditions are included in Appendix A.

Hanford Avenue/Yucca Trail

The intersection of Hanford Avenue and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane (15' width). Stop controlled.
Southbound: One shared left-turn, through, and right-turn lane (15' width). Stop controlled.
Eastbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.
Westbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.

Palomar Avenue/Yucca Trail

The intersection of Palomar Avenue and Yucca Trail is controlled by a traffic signal and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane (30' width).
Southbound: One shared left-turn, through, and right-turn lane (28' width).
Eastbound: One left-turn lane (12' width, 45' pocket). One through lane (12' width). One right-turn lane (14' width, 45' pocket).
Westbound: One left-turn lane (12' width, 50' pocket). One through lane (12' width). One right-turn lane (14' width, 50' pocket).

All left-turn phasing is permissive. Photos of existing conditions are included in Appendix A. The signal timing sheet for this intersection was also received from the city and reviewed for compliance with CA-MUTCD requirements.

Indio Avenue/Yucca Trail

The intersection of Indio Avenue and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane (17' width). Stop controlled.
Southbound: One shared left-turn, through, and right-turn lane (16' width). Stop controlled.
Eastbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.
Westbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.

The north leg and south leg are offset by approximately 175'.

La Contenta Road/Yucca Trail

The intersection of La Contenta Road and Yucca Trail is side-street stop-controlled and has the following lane geometrics:

Northbound: One shared left-turn, through, and right-turn lane. Stop controlled. (dirt road)
Southbound: One left-turn lane (12' width, 75' pocket). One shared through and right-turn lane (12' width). Stop controlled.
Eastbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.
Westbound: One shared left-turn, through, and right-turn lane (12' width). Uncontrolled.

Existing Traffic Volumes

Existing turning movement counts were conducted at the intersections of Sage Avenue/Yucca Trail and Barberry Avenue/Yucca Trail. An origin-destination study was conducted for all of the businesses along Yucca Trail between Sage Avenue and Barberry Avenue in order to estimate the impacts of mitigations at the intersection.

Existing machine counts at the intersection of Warren Vista Avenue and Yucca Trail were received from the Town and reviewed. These counts do not include turning movements at the intersection, only total vehicles approaching the intersection. Because the CA-MUTCD guidance and options allows adjustment of left-turn and right-turn traffic using engineering judgment in the signal warrant analysis, additional turning movement counts were conducted by Counts Unlimited, Inc.

Turning movement counts were also conducted at the intersection of Palomar Avenue/Yucca Trail.

All traffic count worksheets are provided in Appendix B.

▪ Speed Surveys

The Town conducted radar speed surveys along Yucca Trail in 2013 and 2014 at the following locations:

1. Between Sage Avenue and Joshua Lane (2/12/14)
2. Between Joshua Lane and Airway Avenue (2/12/14)
3. Between Airway Avenue and Palomar Avenue (3/5/13)
4. Between Palomar Avenue and La Contenta Road (3/5/13)

Table 3-1 presents the results of the speed surveys.

Table 3-1 – Speed Survey Results

Location	85th Percentile Speed	10mph Pace	Posted Speed Limit
1. Sage Ave to Joshua Ln	39	31-40	40
2. Joshua Ln to Airway Ave	42	35-44	40
3. Airway Ave to Palomar Ave	51	44-53	50
4. Palomar Ave to La Contenta Rd	57	49-58	55

▪ Collision History

Collision data was downloaded from the Statewide Integrated Traffic Records System (SWITRS) website for the study period of January 1, 2010 to September 18, 2015. The Town also provided collision reports for accidents that were not included in the SWITRS database. A collision diagram is shown on Figure 3-E. Collision records are included in Appendix C.

Sage Avenue/Yucca Trail

There were a total of 2 collisions reported at or within the influence area of the intersection of Sage Avenue and Yucca Trail during the study period. Both accidents were property damage only. The primary collision factors/traffic violations were unsafe speed and automobile right-of-way (vehicle at stop sign shall yield). Both accidents occurred during daytime hours. The types of collision were broadside and rear end.

Barberry Avenue/Yucca Trail

There were a total of 3 collisions reported at or within the influence area of the intersection of Barberry Avenue and Yucca Trail during the study period. All three accidents were property damage only. The primary collision factors/traffic violations were unsafe starting or backing, automobile right-of-way (vehicle at stop sign shall yield), and unsafe speed. All three accidents occurred during daytime hours. The types of collision were broadside, sideswipe, and rear end.

Dumosa Avenue/Yucca Trail

There were a total of 4 collisions reported at or within the influence area of the intersection of Dumosa Avenue and Yucca Trail during the study period. All four accidents were property damage only. The primary collision factors/traffic violations were unsafe lane change, unsafe speed, and automobile right-of-way (yield to opposing traffic). All four accidents occurred during daytime hours. The types of collision were broadside, head on, and rear end.

Joshua Lane/Yucca Trail

There were a total of 6 collisions reported at or within the influence area of the intersection of Joshua Lane and Yucca Trail during the study period. One accident had visible injuries and the remaining four accidents were property damage only. Three of the accidents occurred before the existing traffic signal was installed at this location (including the injury accident). The remaining three accidents occurred after the traffic signal was installed and operational. The primary collision factors/traffic violations before the installation of the traffic signal were traffic signs (stop before limit line or crosswalk) and automobile right-of-way (yield to vehicle on right at all-way stop). The primary collision factors/traffic violations after the installation of the traffic signal were automobile right-of-way (stop at red arrow), unsafe starting or backing, and unsafe speed. All six accidents occurred during daytime hours. The types of collision were broadside and rear end.

Airway Avenue/Yucca Trail

There were a total of 2 collisions reported at or within the influence area of the intersection of Airway Avenue and Yucca Trail during the study period. Both accidents had visible injuries. The primary collision factors/traffic violations were automobile right-of-way (stop sign). Both accidents occurred during daytime hours. Both collisions were broadside.

Warren Vista Avenue/Yucca Trail

There were a total of 16 collisions reported at or within the influence area of the intersection of Warren Vista Avenue and Yucca Trail during the study period. Of these accidents, 1 was fatal (6%), 1 had severe injuries (6%), 3 had visible injuries (19%), 2 had complaints of pain (13%), and the remaining 9 were property damage only (56%). Almost all of the accidents were due to automobile right-of-way (stop at sign until safe, left turn yield to opposing traffic, yield to vehicle already in intersection – 13 accidents, 81%) or traffic sign violations (stop before limit line – 2 accidents, 13%). The remaining accident was due to driving on the wrong side of road (unsafe passing at intersection). 13 of the accidents occurred during daytime hours (81%), 2 during dusk-dawn hours (13%), and one during nighttime hours (6%). Almost all of the accidents were classified as broadside (15 accidents, 94%), with one classified as head-on (6%). A collision diagram is shown on Figure 3-E.

Hanford Avenue/Yucca Trail

There were a total of 9 collisions reported at or within the influence area of the intersection of Hanford Avenue and Yucca Trail during the study period. Of these accidents, 2 had visible injuries and the remaining 7 were property damage only. All of the accidents were due to automobile right-of-way (stop at sign until safe, left turn yield to opposing traffic, yield to vehicle already in intersection) or traffic sign violations (stop before limit line). Almost all of the accidents were classified as broadside, with one collision with a pedestrian.

Palomar Avenue/Yucca Trail

There were a total of 21 collisions reported at or within the influence area of the intersection of Palomar Avenue and Yucca Trail during the study period. A traffic signal was installed at this location in 2013. 5 of the accidents occurred before the signal was installed and are not being considered in this safety analysis. Of

the remaining 16 accidents, 2 had complaints of pain (13%) and 14 were property damage only (87%). The most common primary collision factors/traffic violations were: automobile right-of-way (left turn yield to opposing traffic – 7 accidents, 44%) and traffic signals (stop at circular red – 5 accidents, 31%). 11 of the accidents occurred during daytime hours (69%), 1 during dusk-dawn hours (6%), and 3 during nighttime hours (19%). 10 of the accidents were classified as broadside (63%), 5 as head-on (31%), and 1 as sideswipe (6%).

Indio Avenue/Yucca Trail

There were a total of 3 collisions reported at or within the influence area of the intersection of Indio Avenue and Yucca Trail during the study period. All three accidents were property damage only. The primary collision factors/traffic violations were driving on the wrong side of road, automobile right-of-way and unknown. Two of the three accidents occurred during daytime hours. The types of collision were broadside and sideswipe.

La Contenta Road/Yucca Trail

There were a total of 6 collisions reported at or within the influence area of the intersection of La Contenta Road and Yucca Trail during the study period. Of these accidents, one had a fatality, 4 had complaints of pain, and the remaining accident was property damage only. The primary collision factors/traffic violations were automobile right-of-way (left turn yield to opposing traffic, stop at sign until safe), following too closely, and unsafe speed. All of the injury accidents occurred during daytime hours. The types of collision were head on, broadside, rear end, and overturned.

General Plan

Circulation Element

The Town's General Plan Circulation Element Roadway Classifications at General Plan Buildout for the study area is presented on Figure 3-F. The standard cross-sections of arterial, industrial, and collector roadways are presented on Figure 3-G.

Land Use

The Town's General Plan Land Use for the study area is presented on Figure 3-H. As shown, the areas south of Yucca Trail are almost entirely residential land uses. The areas between Yucca Trail and Twentynine Palms Highway (SR-62) are a mix of residential and commercial, except on the east end between Avalon Avenue and La Contenta Road, where the East Side SPA includes a large amount of industrial land use.

Roadway Segment ADT

Table 3-2 presents the existing and future roadway segment average daily traffic (ADT) volumes for roadways in the study area reported in the Town's General Plan Environmental Impact Report (EIR).

Table 3-2 – Roadway Segment ADT

Location	Existing ADT	Future ADT
Yucca Trail between Sage Ave. and Sage Ave.	4,341	7,480
Yucca Trail between Barberry Ave. and Condalia Ave.	6,923	14,470
Yucca Trail between Valley Vista Ave. and Joshua View Dr.	8,083	16,070
Yucca Trail between Hanford Ave. and La Habra Ave.	7,442	22,600
Yucca Trail between Indio Ave. and La Contenta Rd.	6,058	16,720
Joshua Lane south of Yucca Trl.	5,090	10,580
Joshua Lane north of Yucca Trl.	7,022	14,070
Warren Vista Avenue north of Yucca Trl.	2,801	3,970
Palomar Avenue south of Yucca Trl.	4,423	14,720
Palomar Avenue north of Yucca Trl.	2,707	10,970
La Contenta Rd. north of Yucca Trl.	2,170	8,430

Source: Town of Yucca Valley General Plan - Circulation Element - Transportation Study (Fehr & Peers, June 2013)

▪ **Connectivity between Twentynine Palms Highway (SR-62) and Yucca Trail**

Twentynine Palms Highway (SR-62) and Yucca Trail are the two busiest corridors in the Town. Table 4-1 presents all of the existing connection roadways between these corridors, including the length of the connection and type of control at each end.

Table 3-3 – Connectivity between Twentynine Palms Highway (SR-62) and Yucca Trail

Connection Road	Length (feet)	Control at SR-62	Control at Yucca Trail
Sage Avenue	150	Signal	Stop
Barberry Avenue	375	SSSC	AWSC
Dumosa Avenue	675	Signal	SSSC
Joshua Lane	1,175	Signal	Signal
Airway Avenue	1,550	Signal	SSSC
Warren Vista Avenue	2,150	Signal	AWSC
Hanford Avenue/Balsa Avenue	3,150	Signal	SSSC
Palomar Avenue/Avalon Avenue	4,950	Signal	Signal
La Contenta Road	5,225	Signal	SSSC

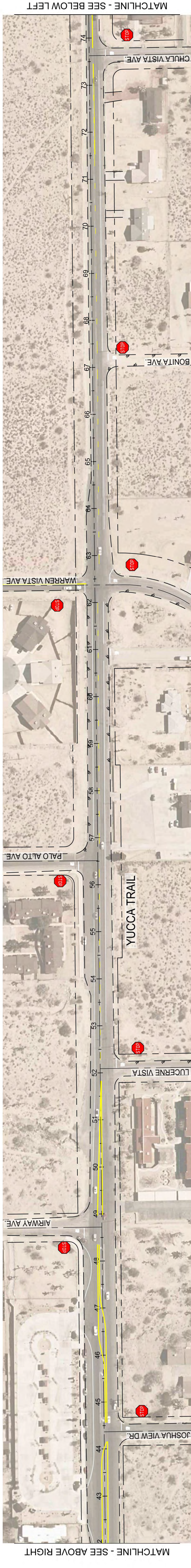
AWSC = All-Way Stop-Control
SSSC = Side-Street Stop-Control

▪ **Yucca Trail Cross-Section**

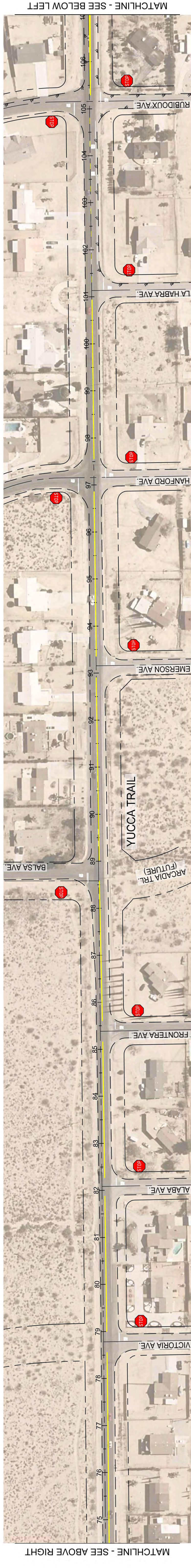
The General Plan Roadway Cross-Section for Yucca Trail includes four travel lanes (4x12'), a raised median/turn lane (16'), shoulders for parking or bike lane on each side (2x8'), sidewalks on each side (2x6'), and landscaping on each side (2x4'). The total right-of-way required for this cross-section is 100'.



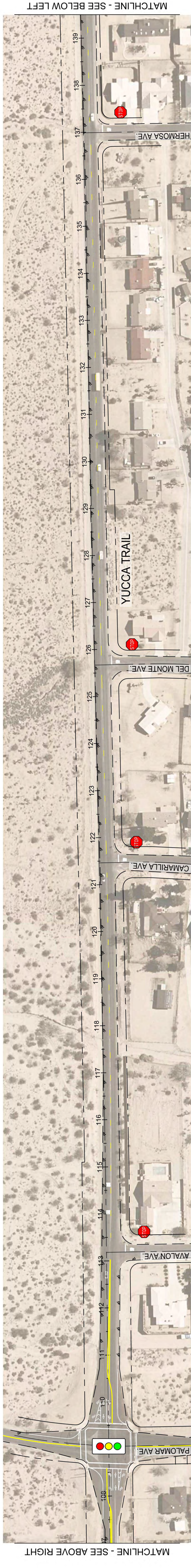
MATCHLINE - SEE BELOW LEFT



MATCHLINE - SEE ABOVE RIGHT



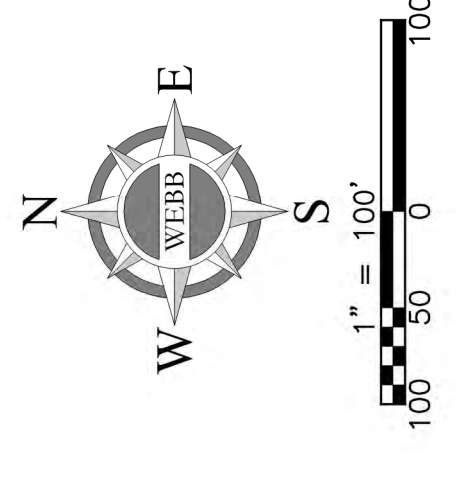
MATCHLINE - SEE ABOVE RIGHT



MATCHLINE - SEE ABOVE RIGHT



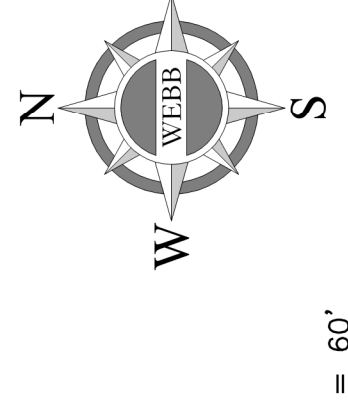
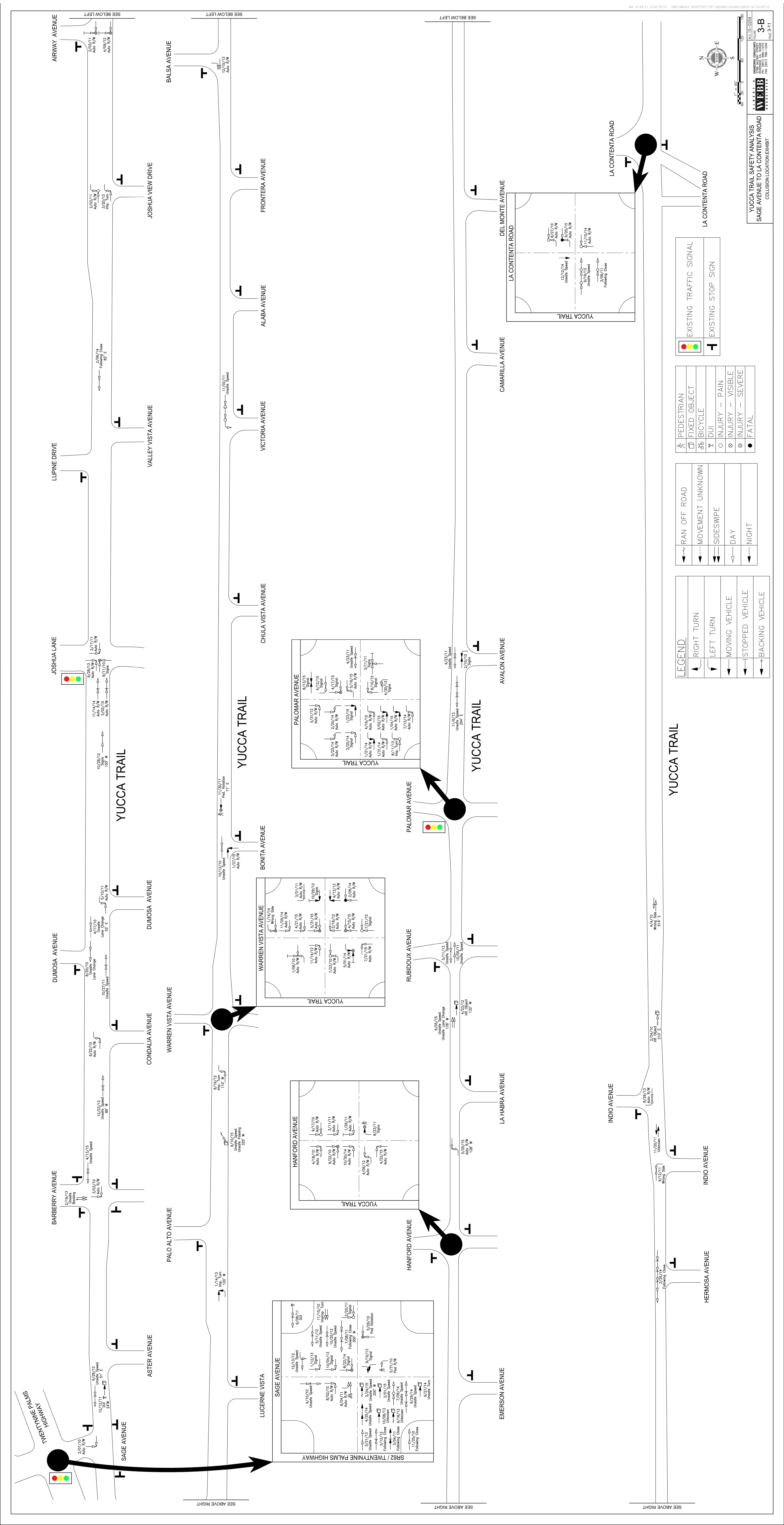
MATCHLINE - SEE ABOVE RIGHT



LEGEND

-  EXISTING TRAFFIC SIGNAL
-  EXISTING STOP SIGN

**YUCCA TRAIL SAFETY ANALYSIS
SAGE AVENUE TO LA CONTENTA ROAD
EXISTING GEOMETRY AND CONTROL**



	EXISTING TRAFFIC SIGNAL
	EXISTING STOP SIGN

	PEDESTRIAN
	FIXED OBJECT
	BICYCLE
	DUI
	INJURY - PAIN
	INJURY - VISIBLE
	INJURY - SEVERE
	FATAL

	RAN OFF ROAD
	MOVEMENT UNKNOWN
	SIDESWIPE
	DAY
	NIGHT

	RIGHT TURN
	LEFT TURN
	MOVING VEHICLE
	STOPPED VEHICLE
	BACKING VEHICLE

LEGEND

	RIGHT TURN
	LEFT TURN
	MOVING VEHICLE
	STOPPED VEHICLE
	BACKING VEHICLE

	RAN OFF ROAD
	MOVEMENT UNKNOWN
	SIDESWIPE
	DAY
	NIGHT

	PEDESTRIAN
	FIXED OBJECT
	BICYCLE
	DUI
	INJURY - PAIN
	INJURY - VISIBLE
	INJURY - SEVERE
	FATAL

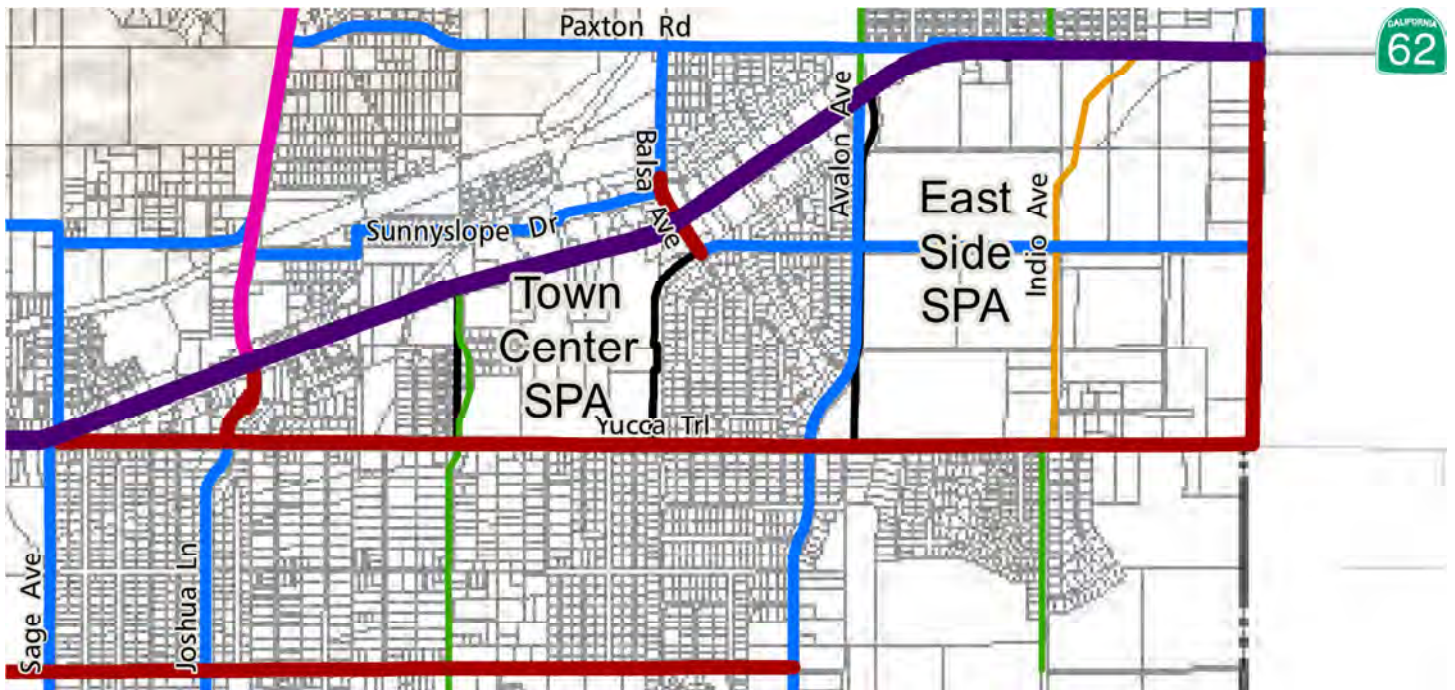
	EXISTING TRAFFIC SIGNAL
	EXISTING STOP SIGN

	RAN OFF ROAD
	MOVEMENT UNKNOWN
	SIDESWIPE
	DAY
	NIGHT

	PEDESTRIAN
	FIXED OBJECT
	BICYCLE
	DUI
	INJURY - PAIN
	INJURY - VISIBLE
	INJURY - SEVERE
	FATAL

	EXISTING TRAFFIC SIGNAL
	EXISTING STOP SIGN

Figure 3-C – General Plan Roadway Classification at General Plan Buildout

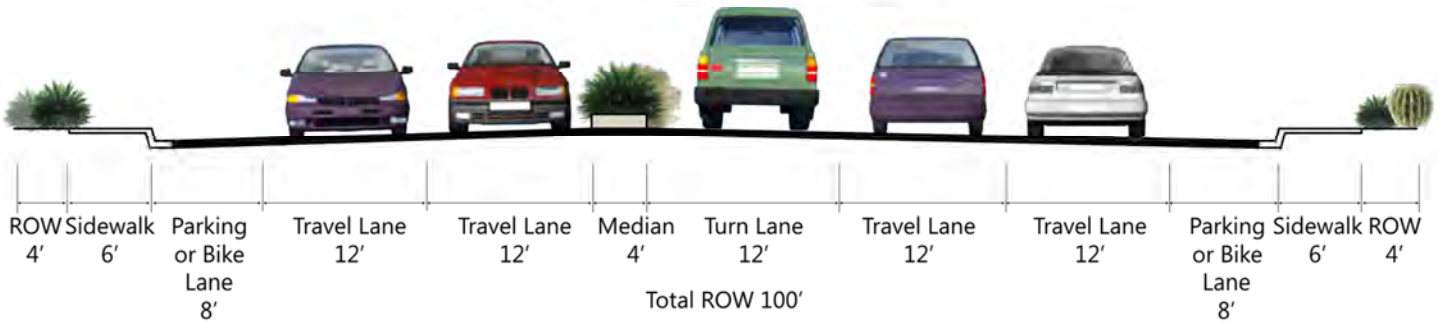


ROADWAY CLASSIFICATIONS

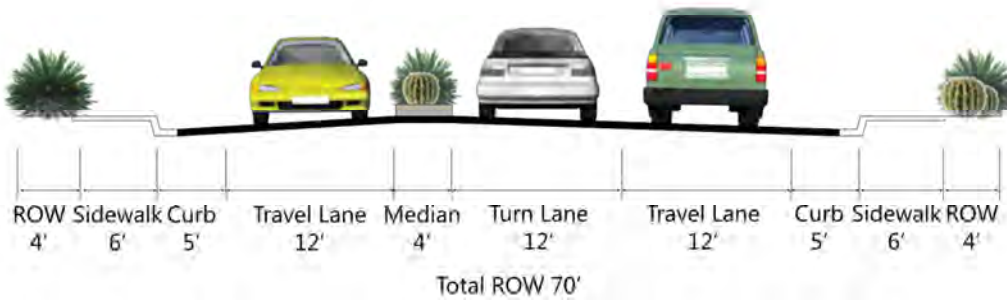
-  Highway – 6 Lanes Divided – 134'
-  Highway – 4 Lanes Divided – 92'
-  Arterial – 4 Lanes Divided – 100'
-  Arterial – 2 Lanes – 70'
-  Industrial – 2 Lanes with Striped Median – 70'
-  Collector – 2 Lanes – 66'
-  SPA - Special Policy Area
-  Town Limits

Figure 3-D – General Plan Cross-Section

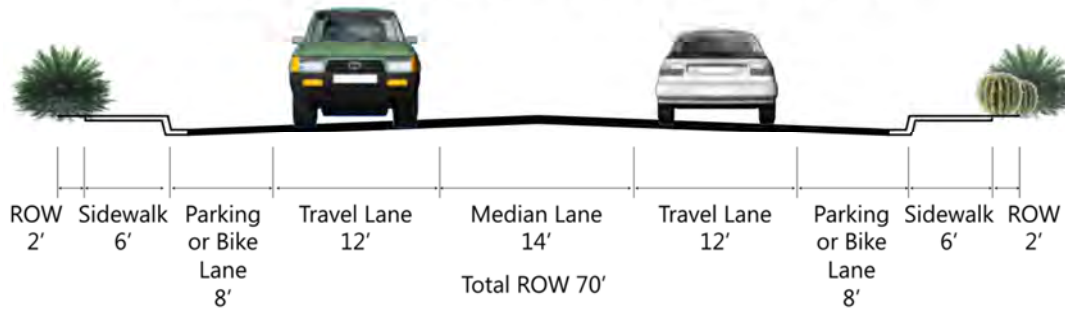
ARTERIAL - 4 LANES DIVIDED



ARTERIAL - 2 LANES DIVIDED



INDUSTRIAL - 2 LANES (WITH STRIPED MEDIAN LANE)



COLLECTOR - 2 LANES (WITH OPTIONAL STRIPED MEDIAN LANE)

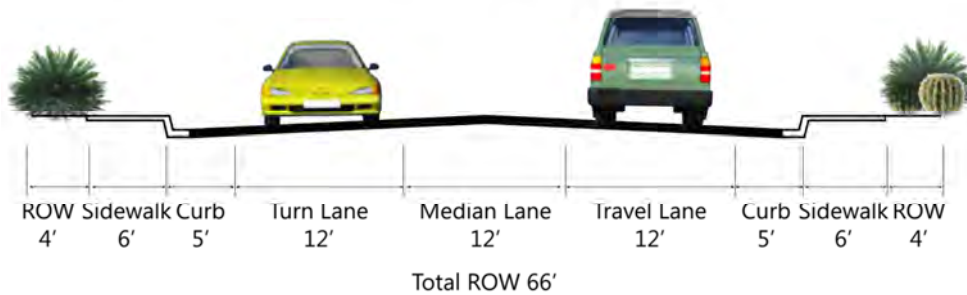
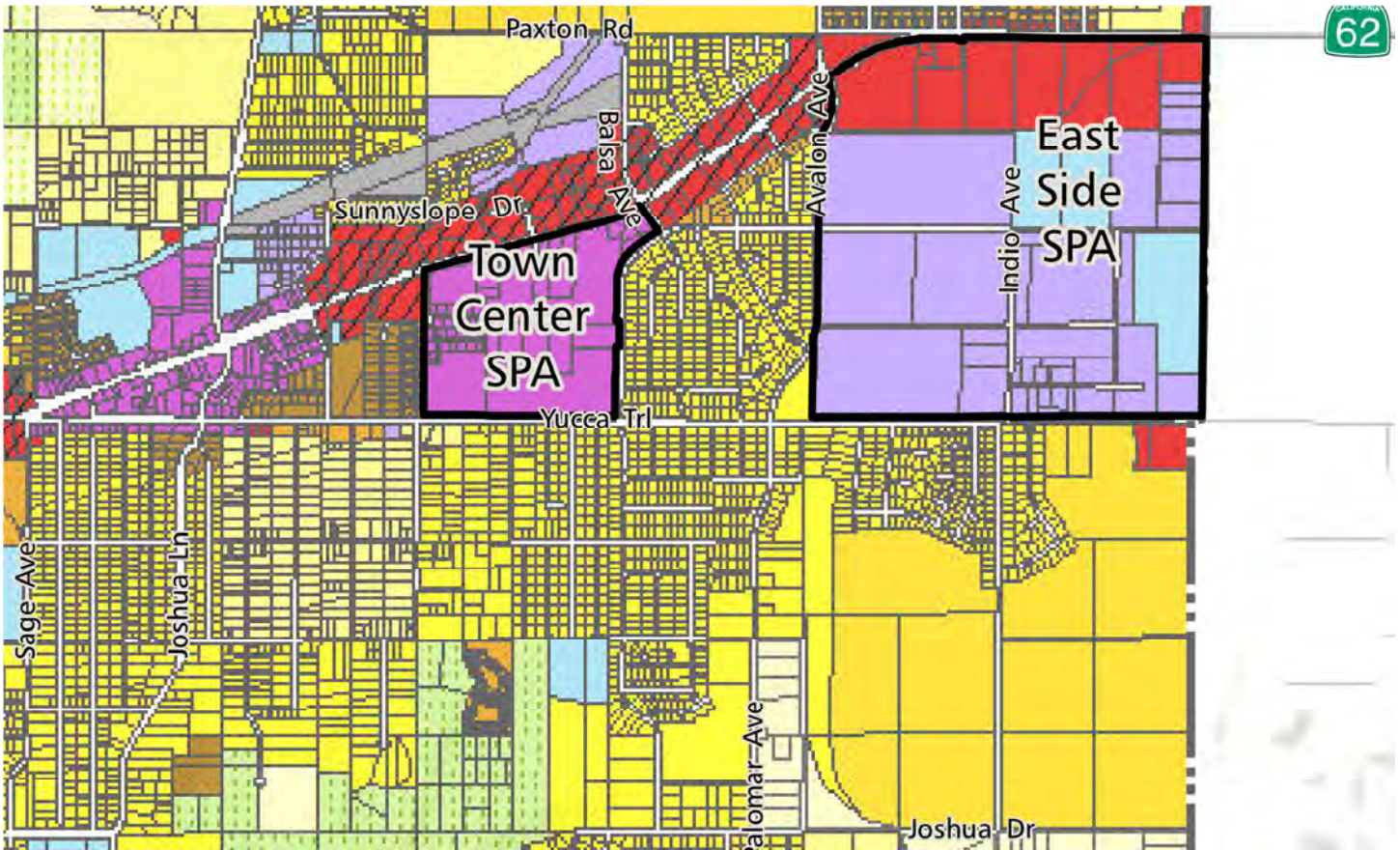










Figure 3-E – General Plan Land Use



GENERAL PLAN DESIGNATION

- | | |
|--|--|
|  Hillside Residential (HR) 20 ac min |  Open Space - Conservation (OSC) |
|  Rural Living (RL-10) 10 ac min |  Open Space - Recreation (OSR) |
|  Rural Living (RL-5) 5 ac min |  Public/Quasi-Public (P/QP) |
|  Rural Residential (RR-2.5) 2.5 ac min |  Airport (A) |
|  Rural Residential (RR-1) 1 ac min | Old Town Specific Plan |
|  Rural Residential (RR-0.5) 0.5 ac min |  Old Town Industrial/Commercial (OTIC) |
|  Low Density Residential (LDR) 2.1-5.0 du/ac |  Old Town Mixed Use (OTMU) |
|  Medium Density Residential (MDR) 5.1-8.0 du/ac |  Old Town Commercial/Residential (OTCR) |
|  Medium High Density Res. (MHDR) 8.1-14.0 du/ac |  Old Town Highway Commercial (OTHC) |
|  Commercial (C) | Special Policy Areas and Overlays |
|  Mixed Use (MU) |  Corridor Residential Overlay |
|  Industrial (I) |  SPA - Special Policy Area |
| |  Town Limits |

FINDINGS

▪ Sage Avenue/Yucca Trail

A field review of the intersection of Sage Avenue/Yucca Trail revealed that drivers may be confused about the traffic control at this intersection. In a period of 15 minutes, two drivers were observed violating automobile right-of-way rules. Because of the non-standard configuration of stop signs, some drivers may assume the intersection is all-way stop controlled and may not realize that the southbound approach does not stop.

The intersection of Sage Avenue/Twenty-nine Palms Highway (SR-62) is located immediately to the north of Yucca Trail and the storage space for northbound left-turning vehicles at Twenty-nine Palms Highway is only 50'. If the northbound left-turn queue backs up to Yucca Trail (2 or 3 vehicles), the line-of-sight for westbound vehicles to see southbound vehicles could be blocked and their ability to judge

Local Traffic

Based on the turning movement counts and origin-destination study, 4 of the 655 vehicles (0.6%) during the AM Peak Hour and 87 of the 889 vehicles (9.8%) during the PM Peak Hour are accessing the local businesses along Yucca Trail.

Level of Service and Queueing Analysis

The level of service and queueing at this intersection were analyzed using PTV Vistro software. The analysis methodology used for these calculations is based on HCM2010. The existing delays, levels of service, and 95th percentile queues at this intersection are reported in Table 4-1. The level of service calculation worksheets are included in Appendix E.

Table 4-1 – Existing Levels of Service and Queueing – Sage Avenue/Yucca Trail

Location	Peak Hour	Delay (sec)	LOS	95th Percentile Queue (ft)					
				NB	SB	EBL	EBT	WBT	WBR
Sage Avenue and Yucca Trail	AM	23.9	C	0	20	24	16	44	17
	PM	49.1	E	0	23	69	55	59	16

As shown in Table 4-1, the intersection is operating at LOS E during the PM Peak Hour. There are also estimated queues of up to 69 ft in the eastbound direction.

▪ Warren Vista Avenue/Yucca Trail

The collision data at this intersection reveals a high number of injury and fatality accidents. Most of the accidents are broadside collisions that involve a vehicle travelling westbound and another vehicle travelling northbound or southbound. Although the posted speed limit on Yucca Trail at this location is 50mph, vehicles travelling westbound may be travelling at a higher speed because of the downhill grade.

At 50mph, the stopping sight distance requirement is 430 ft. From behind the northbound and southbound limit lines, there appears to be at least 430 ft of sign distance in each direction, but the sight distance to the east does not extend much further than the minimum stopping sight distance because of vegetation.

Level of Service and Queueing Analysis

The level of service and queueing at this intersection were analyzed using PTV Vistro software. The analysis methodology used for these calculations is based on HCM2010. The existing delays, levels of service, and 95th percentile queues at this intersection are reported in Table 4-2. The level of service calculation worksheets are included in Appendix E.

Table 4-2 – Existing Levels of Service and Queueing – Warren Vista Avenue/Yucca Trail

Location	Peak Hour	Delay (sec)	LOS	95th Percentile Queue (ft)			
				NB	SB	EBL	WBL
Warren Vista Avenue and Yucca Trail	AM	66.1	F	249	64	71	32
	PM	21.1	C	9	43	80	23

As shown in Table 4-2, the intersection is operating at LOS F during the AM Peak Hour. There are also estimated queues of up to 80 ft in the eastbound direction.

Traffic Signal Warrants

The traffic signal warrants were analyzed at this intersection per CA-MUTCD Section 4C. The following warrants are satisfied based on the existing data available:

- Warrant 1 – Eight Hour Vehicular Volume
- Warrant 2 – Four Hour Vehicular Volume
- Warrant 3 – Peak Hour

The CA-MUTCD states that the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. The traffic signal warrant worksheets are included in Appendix D.

Multi-Way Stop Guidance

The criteria for installing a multi-way stop control were analyzed at this intersection per CA-MUTCD Section 2B.07.

- A. Since the volume based traffic signal warrants are met at this intersection, a multi-way stop can be considered as an interim measure that can be installed quickly before installation of the traffic signal.
- B. From the period 11/25/14 to 7/21/15, there were six (6) reported crashes at this intersection that are susceptible to correction by a multi-way stop installation.
- C. The minimum volume criterion for installing a multi-way stop was not satisfied.
- D. Since criteria A and B were both met, criteria D was not analyzed.

■ Palomar Avenue/Yucca Trail

The collision data at this intersection reveals a high number of accidents between left turning vehicles and opposing through or right-turning vehicles. There are also a number of accidents where the vehicles did not stop at a red traffic signal indication. These types of accidents indicate low visibility and/or awareness of the traffic signal.

A review of this intersection revealed that there are a total of two indications for each direction and that the indication for the westbound direction lines up with the right half of the through lane. There are no far-left

indications and no near-side indications. For westbound left-turning vehicles, the closest signal indication would be over 12' to their right.

The left-turn and right-turn storage pockets for the eastbound and westbound direction at this intersection are very short and do not provide any deceleration area.

Level of Service and Queueing Analysis

The level of service and queueing at this intersection were analyzed using PTV Vistro software. The existing delays, levels of service, and 95th percentile queues at this intersection are reported in Table 4-3. The level of service calculation worksheets are included in Appendix E.

Table 4-3 – Existing Levels of Service and Queueing – Palomar Avenue/Yucca Trail

Location	Peak Hour	Delay (sec)	LOS	95th Percentile Queue (ft)					
				NB	SB	EBL	EBT	WBL	WBT
Palomar Avenue and Yucca Trail	AM	20.5	C	54	32	31	133	13	278
	PM	22.3	C	207	175	47	121	50	133

As shown in Table 4-3, the intersection is operating at LOS C during the AM and PM Peak Hours.

General Plan Circulation – Yucca Trail

The Town of Yucca Valley General Plan Circulation Element provides maximum daily roadway segment capacities for varying facility types. The Circulation Element also sets a level of service (LOS) standard of D for all roadways within the Town. Based on LOS D, the maximum daily roadway segment capacity for collectors and industrial roadways is 14,100 and for 2-lane, undivided arterials is 17,600. These maximum daily values are guidelines and based on assumed roadway characteristics and daily traffic patterns. Since the existing Yucca Trail has multiple closely spaced driveways and cross-streets, it is likely that the roadway characteristics are more similar to a collector than an arterial. Based on the future ADT values presented on Table 3-2, Yucca Trail between Barberry Avenue and La Contenta Road will ultimately need to be widened to 4 lanes. The General Plan EIR did not provide existing or future ADT volumes between Sage Avenue and Barberry Avenue.

Estimated Timing

Based on existing ADT and future ADT volumes presented previously in Table 3-2, a 2 lane facility for Yucca Trail should be sufficient to provide adequate levels of service for a significant amount of time. Assuming a buildout year of 2035 and linear growth, most segments along Yucca Trail will not have an ADT greater than 14,100 until at least year 2030. The only segment that is estimated to have an ADT greater than 14,100 before year 2030 is Yucca Trail between Hanford Avenue and La Habra Avenue. This segment is estimated to have an ADT greater than 14,100 in the year 2023. Based on these ADT values, widening Yucca Trail to 4 lanes will likely be needed first between Warren Vista Avenue and Palomar Avenue.

Median Openings

Based on the location of existing side streets and the physical limitations of a raised median with left-turn lanes, a minimum spacing of at least 1/8 mile (660 feet) is suggested for median openings, with a recommended spacing of 1/4 mile (1,320 feet). Since the ultimate curb-to-curb width will be 80', there should be enough width to allow u-turns at all median openings. This will reduce the impact of closing the median at

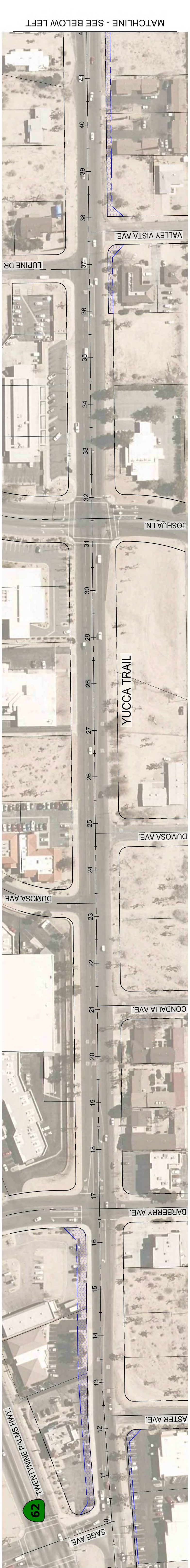
most local side streets and driveways. If u-turns are not allowed along Yucca Trail, a significant amount of local traffic will be rerouted to other local roads where a median opening is provided. This could significantly increase the amount of traffic on those local roads with a median opening.

Traffic Control Signals

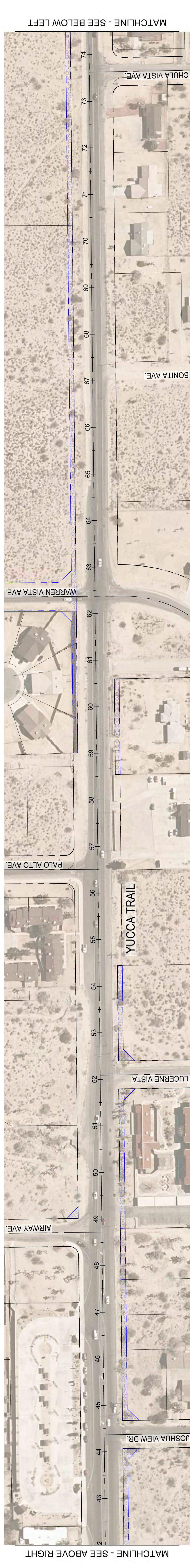
Based on the size and classification of Yucca Trail, a minimum spacing of at 1/4 mile (1,320 feet) is suggested for signalized intersection spacing. This should allow sufficient distance to keep the signals coordinated and allow proper platooning of eastbound and westbound vehicles. Any potential traffic signal should not be installed until an engineering study is performed to determine whether installation of a traffic signal is justified at that location. At any location where a traffic signal is justified, an all-way stop controlled intersection may be installed as an interim measure that can be installed quickly before installation of the traffic signal.

Right-of-Way

An analysis of right-of-way requirements to widen Yucca Trail to 4 lanes is provided on Exhibit 4-A. This analysis is preliminary and based on GIS/APN map data only in order to give an idea of the amount of right-of-way required to build the ultimate roadway section. As shown in the exhibit, most of the needed right-of-way does not look like it will impact existing development except between Sage Avenue and Barberry Avenue. In order to acquire the ultimate right-of-way for this segment, significant impacts will occur to existing development on both the north and south side of Yucca Trail.

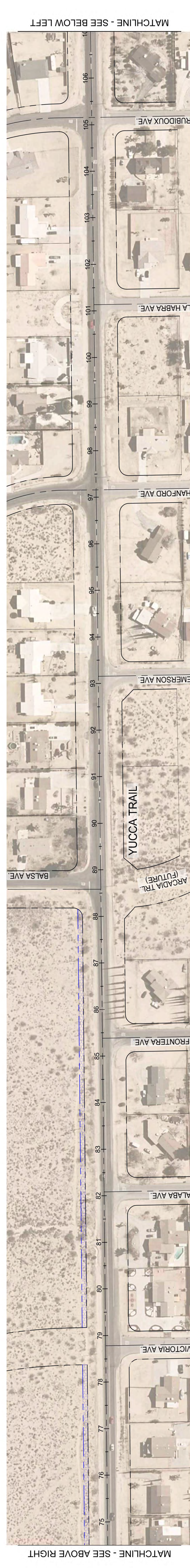


MATCHLINE - SEE BELOW LEFT



MATCHLINE - SEE ABOVE RIGHT

MATCHLINE - SEE BELOW LEFT



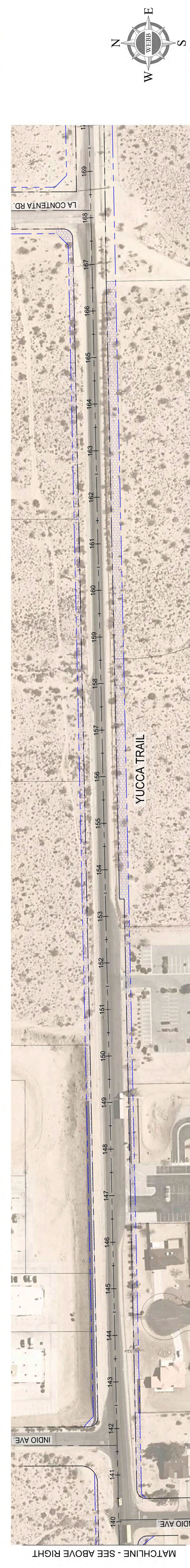
MATCHLINE - SEE ABOVE RIGHT

MATCHLINE - SEE BELOW LEFT



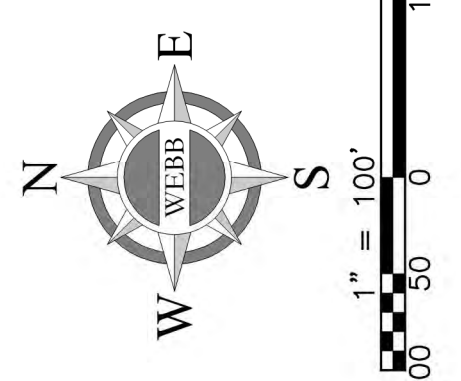
MATCHLINE - SEE ABOVE RIGHT

MATCHLINE - SEE BELOW LEFT



MATCHLINE - SEE ABOVE RIGHT

MATCHLINE - SEE BELOW LEFT



LEGEND

- ULTIMATE RIGHT-OF-WAY
- RIGHT-OF-WAY NEEDED

YUCCA TRAIL SAFETY ANALYSIS
SAGE AVENUE TO LA CONTENTA ROAD
RIGHT-OF-WAY EXHIBIT

ALBERT A. WEBB ASSOCIATES
ENGINEERING CONSULTANTS
3788 MCCRAY STREET
PHOENIX, AZ 85018
PHONE: (602) 888-1000
FAX: (602) 788-1256

W.O. 15-0259
FIGURE 4-A

PAGE 4-5

RECOMMENDATIONS

▪ Short Range Recommendations

Sage Avenue/Yucca Trail

- Add “TRAFFIC FROM LEFT DOES NOT STOP” plaque [W4-4aP(LT)] to stop sign for eastbound direction.
- Add “ONCOMING TRAFFIC DOES NOT STOP” plaque (W4-4bP) to stop sign for northbound direction.
- Refresh all existing striping & markings with thermoplastic to improve visibility.
- Cost Estimate: \$3000

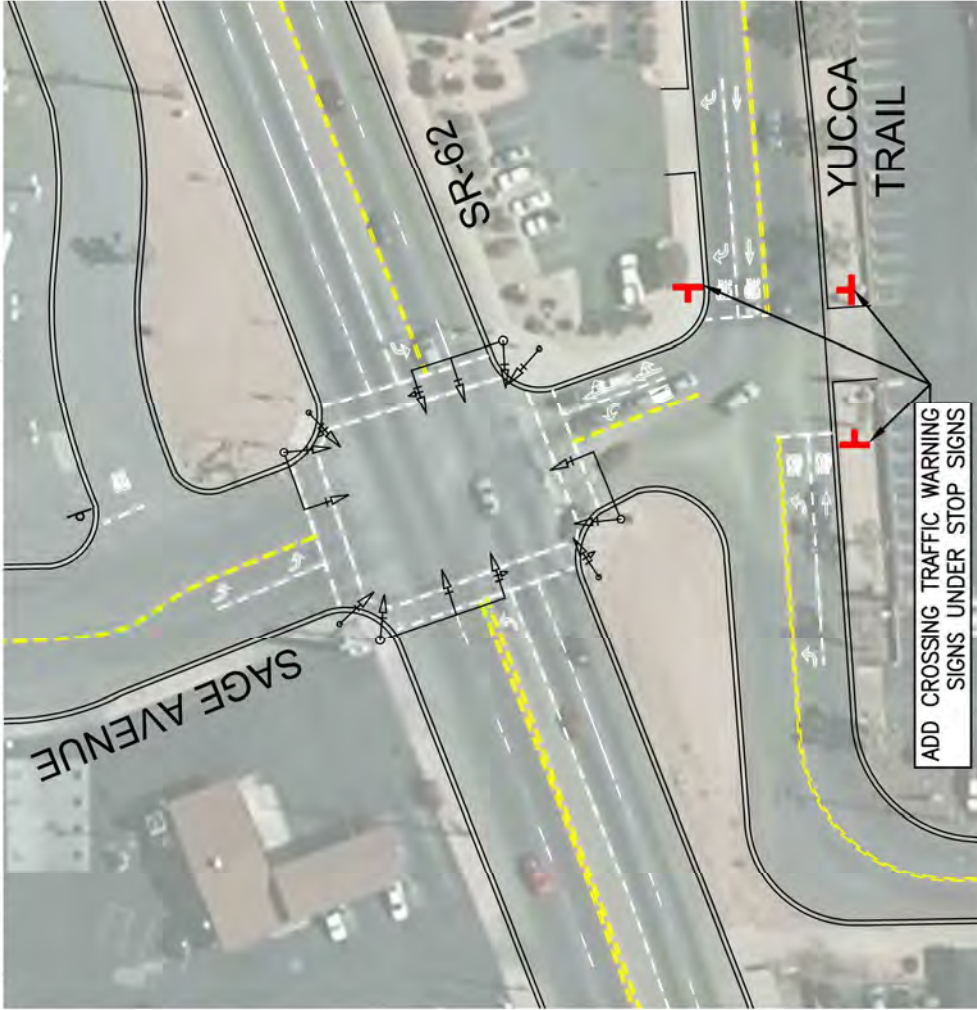
Warren Vista Avenue/Yucca Trail

- Convert intersection to all way stop in interim condition. This will require stop signs (R1-1), all way plaques (R1-3P), and stop ahead warning signs (W3-1) for eastbound and westbound directions. This will also require all way plaques (R1-3P) for northbound and southbound directions. Oversized signs, flashing beacons, and/or Light Emitting Diode (LED) enhanced signs along Yucca Trail are recommended to improve visibility and compliance.
- Add “Stop Ahead” pavement markings adjacent to stop ahead warning signs for eastbound and westbound directions.
- Remove or trim vegetation to increase sight distance to the east.
- Refresh existing striping & markings with thermoplastic to improve visibility.
- Perform public outreach and education before significant changes to traffic control.
- Cost Estimate: \$7000

Palomar Avenue/Yucca Trail

- Replace signal ahead warning sign with oversized signs for all directions.
- Increase yellow interval to a minimum of 4.8 seconds for southbound direction, 5.2 seconds for eastbound and northbound directions, and 5.5 seconds for westbound direction to meet CA-MUTCD Table 4D-102(CA).
- Refresh existing striping & markings with thermoplastic to improve visibility.
- Cost Estimate: \$3000

Figure 5-A – Short Range Recommendation – Sage Avenue & Yucca Trail

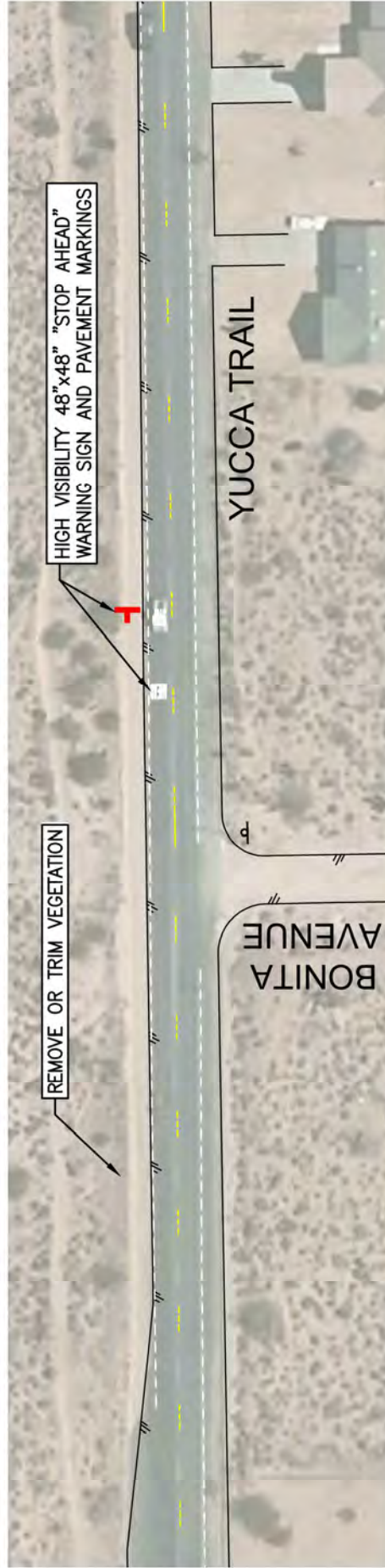


ADD CROSSING TRAFFIC WARNING SIGNS UNDER STOP SIGNS

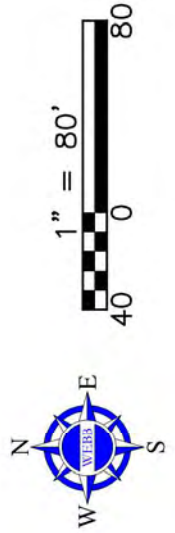
LEGEND	
	PROPOSED IMPROVEMENT
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED SIGN
	SIGNAL HEAD



Figure 5-B – Short Range Recommendation – Warren Vista Avenue & Yucca Trail

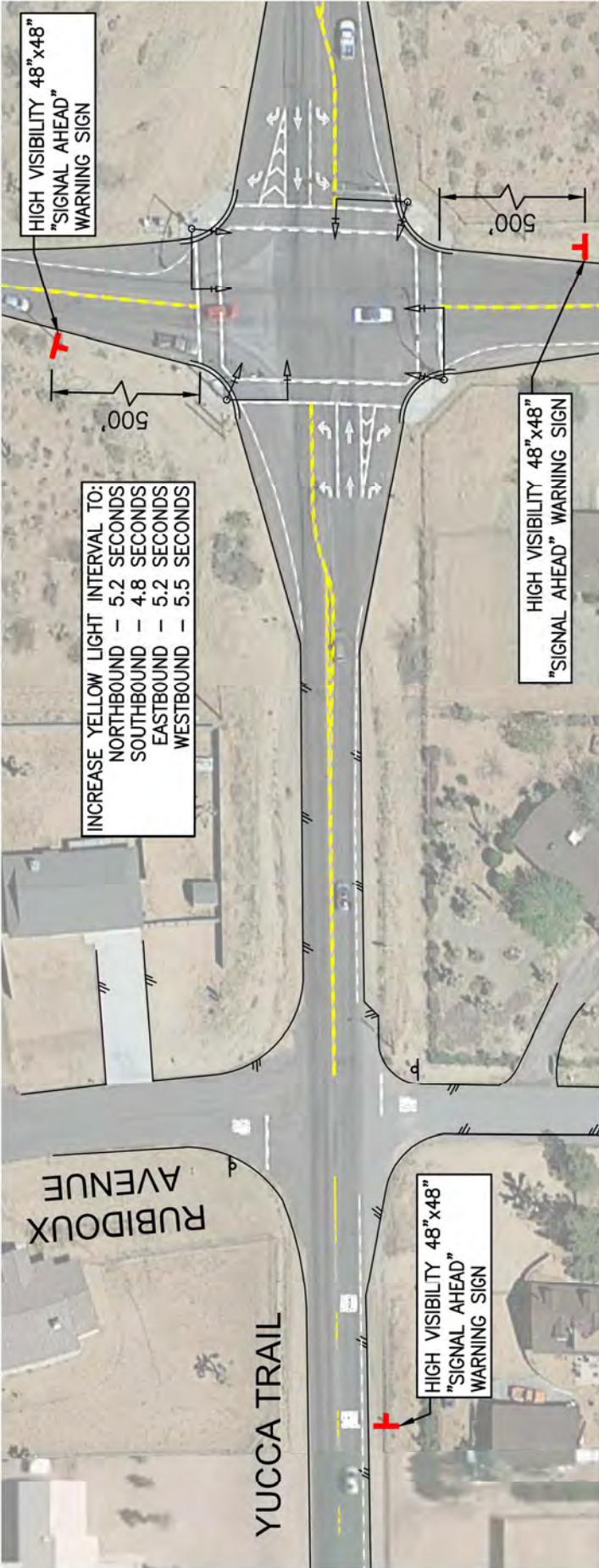


LEGEND	
	PROPOSED IMPROVEMENT
	PROPOSED STRIPING
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED SIGN



PALOMAR AVENUE

Figure 5-C – Short Range Recommendation – Palomar Avenue & Yucca Trail



1" = 80'

LEGEND	
	PROPOSED IMPROVEMENT
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED STOP SIGN
	SIGNAL HEAD

▪ Mid-Range Recommendations

Sage Avenue/Yucca Trail (Option 1)

- Realign Yucca Trail and Sage Avenue such that the north leg and east leg are the major/through movements and the west leg is the minor/side movement. The south leg (commercial driveway) will need to be closed or relocated to the west to access the minor leg of the intersection.
- This option may impact the parking lot of the property on the northeast corner of the intersection (KFC)

Sage Avenue/Yucca Trail (Option 2)

- Close Sage Avenue between Yucca Trail and Twentynine Palms Highway (SR-62).
- Traffic will be rerouted to Barberry Avenue or Dumosa Avenue. A new traffic signal may be required at Barberry Avenue/Twentynine Palms Highway (SR-62) and/or at Barberry Avenue/Yucca Trail.

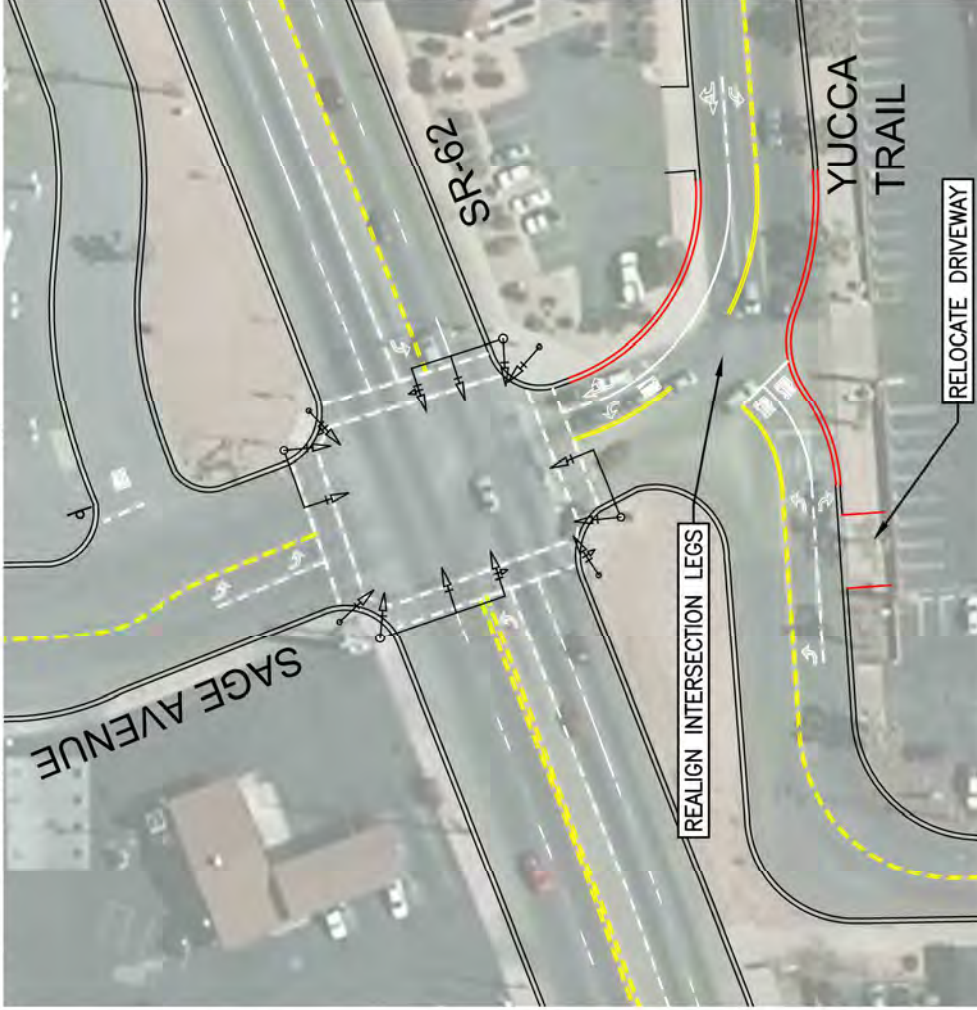
Warren Vista Avenue/Yucca Trail

- Install traffic control signal for ultimate condition. This will require replacing all stop ahead warning signs (W3-1) and pavement markings with signal ahead warning signs (W3-3) and pavement markings. Oversized signs, flashing beacons, and/or Light Emitting Diode (LED) enhanced signs along Yucca Trail are recommended to improve visibility and compliance.
- Cost Estimate: \$250,000

Palomar Avenue/Yucca Trail

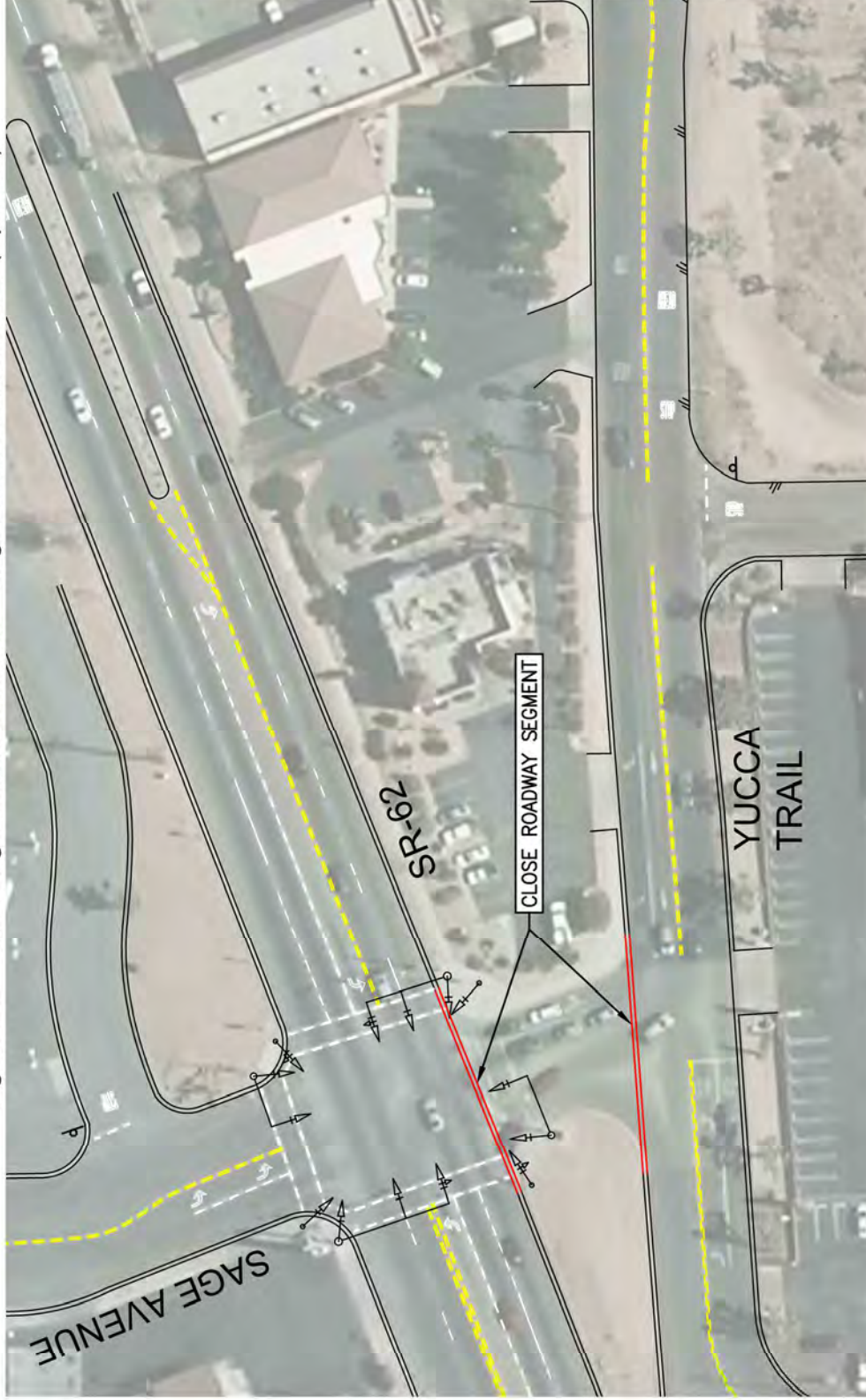
- Widen Yucca Trail to accommodate longer turn lanes.
- Widen Palomar Avenue to install left turn lanes.
- Traffic signal modification is recommended in order to provide optimal visibility of traffic signal heads.
- Cost Estimate: \$300,000

Figure 5-D – Mid-Range Recommendation – Sage Avenue & Yucca Trail (Option 1)



LEGEND	
	PROPOSED IMPROVEMENT
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED SIGN
	SIGNAL HEAD

Figure 5-E – Mid-Range Recommendation – Sage Avenue & Yucca Trail (Option 2)



LEGEND	
	PROPOSED IMPROVEMENT
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED SIGN
	SIGNAL HEAD

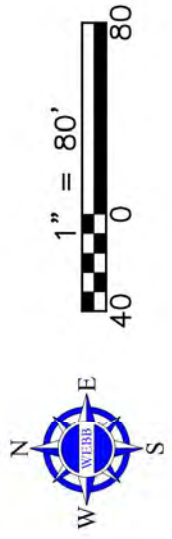
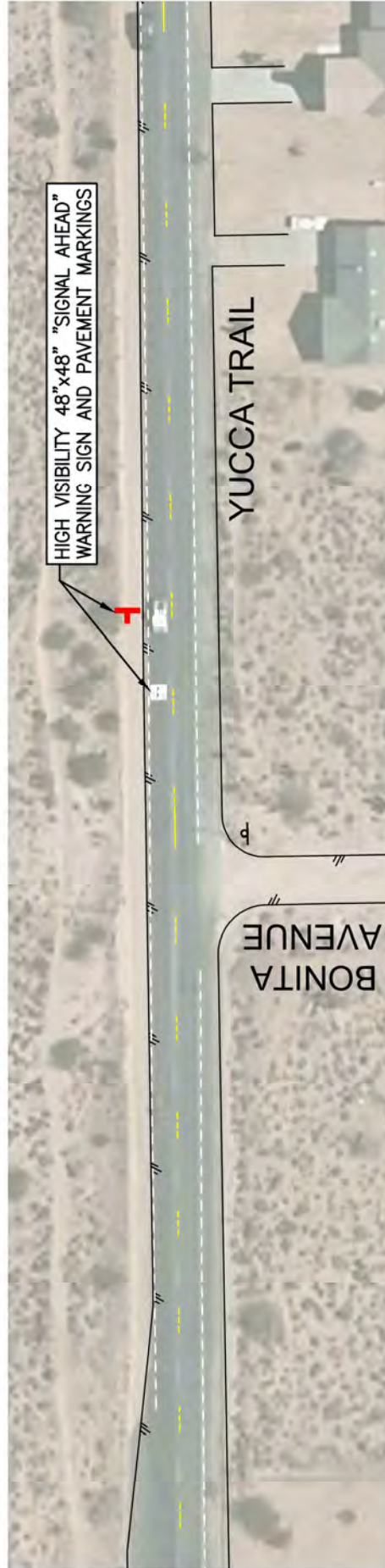
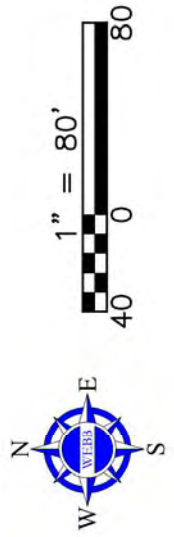


Figure 5-F – Mid-Range Recommendation – Warren Vista Avenue & Yucca Trail



LEGEND	
	PROPOSED IMPROVEMENT
	PROPOSED STRIPING
	EXISTING STRIPING
	EXISTING STOP SIGN
	PROPOSED SIGN



▪ Long Range Recommendations

- Monitor daily traffic volumes on Yucca Trail on a regular (annual) basis to determine when detailed level of service analysis may be necessary. Detailed analysis should be used to determine when roadway widening, median construction, or traffic signal installation is appropriate.
- Monitor accidents along Yucca Trail to determine when safety warrants for traffic signals or multi-way stops are met.

Table 5-1 and Exhibit 5-A present the existing and recommended traffic control, median openings, and circulation recommendations along Yucca Trail between Sage Avenue and La Contenta Road for ultimate conditions.

An estimated cost per linear foot was calculated based on a standard pavement section of 4" asphalt concrete and 4" aggregate base. This cost estimate includes median, sidewalk, and soft costs, but does not include any utility relocation or landscaping. The estimate per linear foot of ultimate street section would be approximately \$360 per foot. For the entire length of Yucca Trail between Sage Avenue and La Contenta Road, the total estimated cost of construction would be \$5.7 million. This cost does not include any right-of-way acquisition or engineering costs.

Table 5-1 – Future Yucca Trail Median Openings and Traffic Control

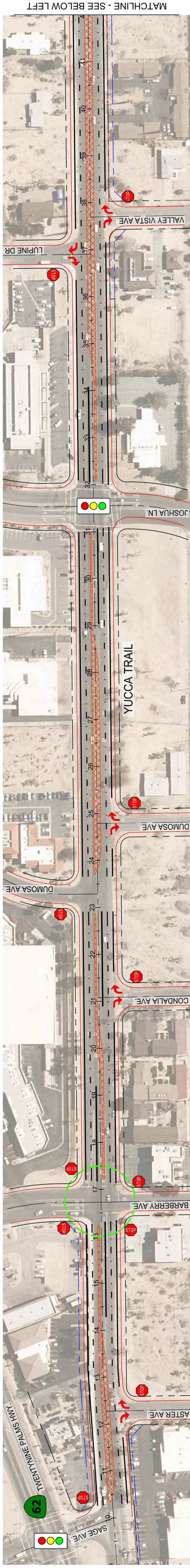
North Leg	South Leg	Approx. Station	Median Open/Closed	Traffic Control	
				Existing	Proposed
Sage Avenue	Driveway (Commercial)	10+00	Open	Stop	Stop
N/A	Aster Avenue	12+40	Closed	SSSC	RIRO
Barberry Avenue	Barberry Avenue	16+80	Open	AWSC	AWSC *
N/A	Condalia Avenue	21+20	Closed	SSSC	RIRO
Dumosa Avenue	N/A	23+40	Open	SSSC	SSSC
Driveway (Commercial)	Dumosa Avenue	25+00	Closed	SSSC	RIRO
Joshua Lane	Joshua Lane	31+60	Open	Signal	Signal
Lupine Drive	Valley Vista Avenue	37+40	Closed	SSSC	RIRO
N/A	Joshua View Drive	44+40	Closed	SSSC	RIRO
Airway Avenue	Driveway (Apartments)	48+80	Open	SSSC	SSSC *
N/A	Lucerne Vista	52+20	Closed	SSSC	RIRO
Palo Alto Avenue	Driveway (Residential)	56+60	Closed	SSSC	RIRO
Warren Vista Avenue	Warren Vista Avenue	62+50	Open	AWSC	Signal
N/A	Bonita Avenue (Dirt road)	67+20	Closed	SSSC	RIRO
N/A	Chula Vista Avenue	73+70	Open	SSSC	SSSC
N/A	Victoria Avenue	78+80	Closed	SSSC	RIRO
N/A	Alaba Avenue	82+20	Closed	SSSC	RIRO
N/A	Frontera Avenue	85+50	Closed	SSSC	RIRO
Balsa Avenue	Arcadia Trail (Future)	88+80	Open	SSSC	SSSC *
N/A	Emerson Avenue	93+20	Closed	SSSC	RIRO
Hanford Avenue	Hanford Avenue	97+20	Open	SSSC	SSSC
N/A	La Habra Avenue	101+20	Closed	SSSC	RIRO
Rubidoux Avenue	Rubidoux Avenue	105+20	Closed	SSSC	RIRO
Palomar Avenue	Palomar Avenue	109+20	Open	Signal	Signal
N/A	Avalon Avenue	113+30	Closed	SSSC	RIRO
N/A	Camarilla Avenue	121+50	Closed	SSSC	RIRO
N/A	Del Monte Avenue	125+80	Open	SSSC	SSSC
N/A	Hermosa Avenue	137+10	Closed	SSSC	RIRO
N/A	Indio Avenue	140+10	Open	SSSC	SSSC *
Indio Avenue	N/A	141+90	Open	SSSC	
La Contenta Road	La Contenta Road	168+20	Open	SSSC	SSSC *

AWSC = All-Way Stop-Control

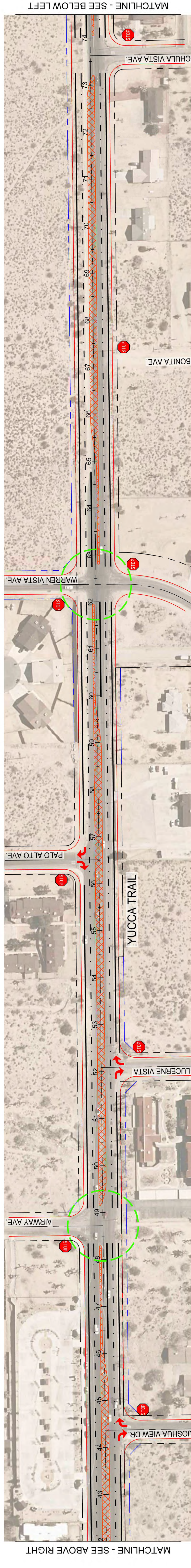
SSSC = Side-Street Stop-Control

RIRO = Right-in, Right-out only (Stop Control)

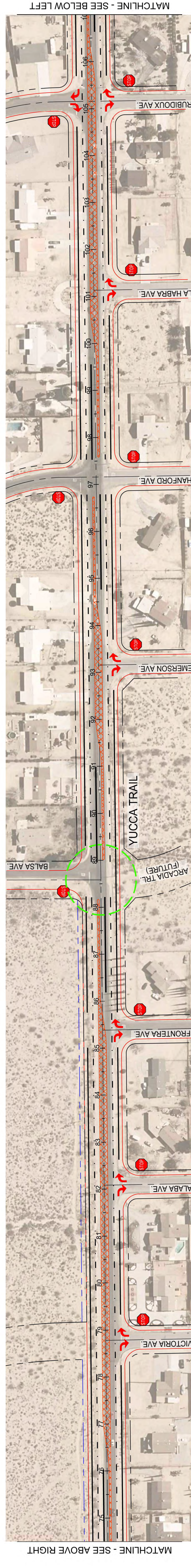
* Potential Traffic Signal Location (if warranted)



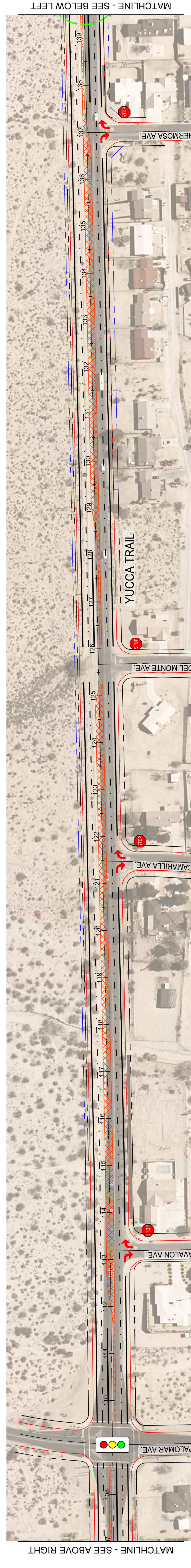
MATCHLINE - SEE BELOW LEFT



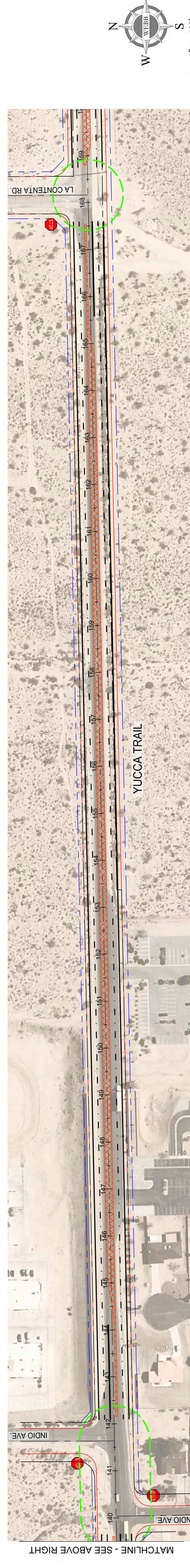
MATCHLINE - SEE ABOVE RIGHT



MATCHLINE - SEE ABOVE RIGHT



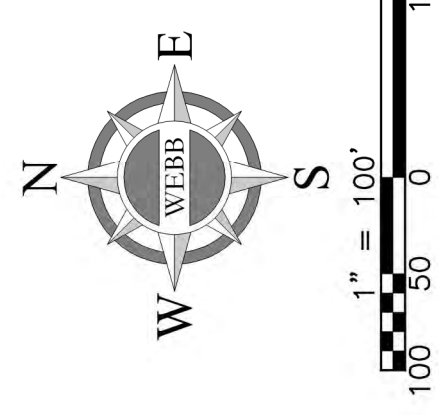
MATCHLINE - SEE ABOVE RIGHT



MATCHLINE - SEE ABOVE RIGHT

LEGEND

- EXISTING TRAFFIC SIGNAL
- EXISTING STOP SIGN
- FUTURE RAISED MEDIAN
- FUTURE RIGHT-IN/RIGHT-OUT ONLY
- POTENTIAL TRAFFIC SIGNAL LOCATION (IF WARRANTED)
- FUTURE CURB
- ULTIMATE RIGHT-OF-WAY



**YUCCA TRAIL SAFETY ANALYSIS
SAGE AVENUE TO LA CONTENTA ROAD
GENERAL PLAN BUILDOUT EXHIBIT**

A L B E R T A .

WEBB

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