

RTIP ID# LALS01

TCWG Consideration Date January 26, 2021

**Project Description** *(clearly describe project)*

Caltrans proposes improvements along the Parkway that would enhance safety and operations. The improvements would address existing traffic conflicts by allowing vehicles more efficient ingress and egress from the on and off-ramps. The Parkway is 8.1 miles of winding scenic roadway running generally parallel to the Los Angeles River. The limits of the proposed Project are along a 4.81-mile segment on the Parkway between the Figueroa Street off-ramp at Post Mile 25.78 in the City of Los Angeles and Orange Grove Avenue at Post Mile 30.59 in the City of South Pasadena as shown in Figure 1 below. The project corridor has three lanes in each direction separated by a concrete barrier with no usable inside/outside shoulders. There are occasional non-standard pull-out areas along the right side in both directions. The inside lane is paved with Asphalt Concrete (AC) and the outer two lanes are paved with Portland Cement Concrete (PCC). The posted speed limit is 55 miles per hour (mph).

**Alternative 1. No Build Alternative**

The No Build Alternative would maintain the existing facility in its present condition and without any improvements. No change in environmental conditions would occur under this alternative as the Project would not take place. No construction costs are associated with this alternative and there are no impacts to rights-of-way, utilities, or traffic. The No Build Alternative would not meet the Purpose and Need as non-standard features would not be improved on the Parkway. The facility would continue to experience an increased accident rate, exceeding the state average for similar highway facilities. In addition, this alternative is inconsistent with Caltrans' mission, vision, and goals.

**Alternative 2. Hard Shoulder Running (HSR)**

The existing outside lane would be converted to a permanent shoulder used as a part-time travel lane during congested periods. Drivers would be able to use the new shoulder as a third lane, but only during these periods. During other times, there will only be two open lanes on the Parkway, plus the shoulder. Lanes will be controlled using a series of overhead Dynamic Message Signs (DMS) located strategically along the corridor to dynamically switch between shoulder and driving lane mode of operations in response to prevailing traffic conditions. The exact hours of operation will depend on traffic volumes, but preliminary analysis of traffic data suggests that three lanes would be maintained from 6 to 10 AM and 4 to 7 PM in the southbound direction and 2 to 8 PM in the northbound direction.

Approximately 52 overhead and 7 ground-mounted signs will be installed. Also, the outside lane will be painted, using a color to distinguish it from the middle lane, to communicate the unique driving rules to drivers. To enforce operations and ensure compliance, improvements to four existing emergency pull-out areas will be included. As part of this alternative, additional minor safety measures will also be included such as signing, pavement markings, and delineators. However, no other major infrastructure modifications will be included with this alternative.

**Alternative 3. Dynamic Flex Lane (DFL)**

Similar to Alternative 2, the Dynamic Flex Lane alternative would use variable lane operations depending on traffic conditions. For this alternative, the third (outside) lane would be closed to through traffic during the non-congested periods. However, drivers will always be able to use the portion of lane between the on- and off-ramps, but only to enter and exit the Parkway. During congested periods, drivers will be able to use all three lanes. The exact hours of operation will depend on traffic volumes, but preliminary analysis of traffic data suggests that three lanes would be maintained from 6 to 9 AM and 5 to 7 PM in the southbound, and 2 to 9 PM in the northbound.

Similar to Alternative 2, DMSs will be required; approximately 47 new overhead signs and 6 ground-mounted signs will be installed. Also, the outside lane will be painted and a Queue Warning System and improved pull-out areas (the same as Alternative 2) will be used to enhance safety and operations. As part of this alternative, additional minor safety measures will also be included such as signing, pavement markings, and delineators. However, no other major infrastructure modifications will be included with this alternative.

#### **Alternative 4. Arroyo Seco Restoration**

This alternative includes a package of safety-related improvements to address both corridor-wide and location-specific safety issues. The posted speed limit would be reduced from 55 mph to 45 mph. To facilitate enforcement operations and ensure compliance, improvements to four existing emergency pull-out areas will be included (same as Alternative 2). To further assist the California Highway Patrol with enforcement, stationary cameras will be strategically placed to help enforce the new speed limit, which may require legislation.

Improvements to existing signing and lighting would occur as part of this Alternative. The retroreflectivity of signs (ability of signs to reflect light back to vehicle driver) degrades over time, and the majority of the signs along the corridor (guide, warning, and regulatory) do not meet current retroreflectivity requirements and may need to be replaced. With this alternative, any guide, warning, and regulatory signs that do not meet current requirements would be upgraded to meet current retroreflectivity requirements and to increase the sizing and spacing of the lettering on the signs. These sign improvements would be upgraded based on both the current requirements in the California Manual of Uniform Traffic Control Devices (MUTCD) and on the context-sensitive solutions identified in the Parkway's Historic District Treatment Plan. To ensure that these improvements will not change the visual elements of the signing and lighting, Caltrans will coordinate with the State Historic Preservation Officer (SHPO).

The flashing beacons would also be replaced with light-emitting diode (LED) lighting instead of the current incandescent lighting the beacons, which will improve visibility. Finally, this alternative would retrofit lighting throughout the corridor (including any available soffits in the undercrossings) with Caltrans-approved LED luminaires that are retrofit on the current electroliers. Also, a Queue Warning System and improved pull-out areas (the same as Alternative 2) will be used to enhance safety and operations. Other safety improvement measures may also be considered such as High Friction Surface Treatment and delineators. However, no major infrastructure modifications will be included with this alternative.

#### **Alternative 5. Two-Lane (With Auxiliary Lanes)**

This alternative would reduce the Parkway to two through lanes in each direction north of the Avenue 43 interchange south-side ramps. Parts of the right outside lane would be converted to a permanent shoulder. This full shoulder would be provided on approximately 61 percent of the corridor and would provide space for increased acceleration and deceleration distances for on- and off-ramps. There would be full-time auxiliary lanes between interchanges where the distances between the entrance and exit ramps is short. With this approach, through vehicles would be unlikely to use the outside auxiliary (#3) lane, providing safer merge and diverge operations for ramp traffic. At all other locations, there will be sufficient distance to provide standard acceleration and deceleration geometry, further improving ramp operations.

This alternative will require changes to the pavement and/or striping to accommodate the new lane configuration. However, no other major infrastructure modifications will be included with this alternative. No overhead dynamic lane control signs would be needed. However, a Queue Warning System (via DMSs) would also be included. Also, the four improved pull-out areas (the same as other Alternatives) will be used to enhance safety and operations.

### **Alternative 6. Interchange Improvements**

To address safety and operational deficiencies at spot safety locations, improvements would be constructed at four interchanges, as described below. The four improved pull-out areas (similar Alternatives 2, 3, 4, and 5) will be used to enhance safety and operations.

#### Alternative 6.1 - Avenue 43 Interchange

To enhance safety at the nonstandard hook ramps at this interchange, reconfigurations of the existing entrance and exit ramps are proposed. A roundabout at the ramp terminal intersection with Avenue 43 and Mosher Avenue would provide increased acceleration and deceleration distances for traffic entering and exiting the freeway. This improvement would also increase the ramp curve radii of the ramps. The roundabout would occupy an empty lot bounded by the Arroyo Seco Channel, Avenue 43 and Mosher Avenue.

#### Alternative 6.2 - Avenue 52 Interchange

Interchange improvements are proposed for the southbound entrance ramp at Avenue 52. The existing entrance ramp would be realigned to increase the acceleration distance, improve curve sight distance and provide more standard shoulder widths along the ramp. The entrance ramp will be lengthened by approximately 1100 feet and tie into the freeway lanes further south. This will require encroachment into the City of Los Angeles right-of-way to the north. It would also require the realignment of the unpaved path between the existing residential properties and the proposed ramp.

#### Alternative 6.3 - Via Marisol/Avenue 57 Interchange

Interchange improvements are proposed for the southbound exit and entrance ramps at Via Marisol/Avenue 57. The reconfiguration of the southbound entrance ramp would have the new alignment exiting the mainline just north of the Via Marisol overcrossing. After the ramp goes under the overcrossing, it would terminate at Avenue 57. This improvement would require the reconstruction of the existing Via Marisol overcrossing. A new southbound entrance ramp would relocate the existing entrance ramp from Avenue 57 to the Via Marisol overcrossing. The proposed entrance ramp would cross over the new exit ramp described above and merge with the freeway approximately at the location of the existing southbound ramps.

#### Alternative 6.4 - Marmion Way/Avenue 64 Interchange

Interchange improvements are proposed for the southbound entrance ramps at Marmion Way/Avenue 64. The existing entrances at Avenue 66 and La Riba Way would be permanently closed. Southbound traffic entering the Parkway would use a new Marmion Way/Avenue 64 entrance ramp that connects just north of the overcrossing and merges with the Parkway at approximately the same location as the existing entrance. This improvement would eliminate the two stop-controlled entrance ramps and provide longer acceleration distances for entering traffic.

See attached Figure 1 for the Project Limits.

<b>Type of Project</b> (use Table 1 on instruction sheet) Change to existing State highway				
<b>County</b> Los Angeles		<b>Narrative Location/Route &amp; Postmiles</b> LA-110-Post Mile 25.78/30.59 <b>Caltrans Projects – EA#</b> 07-33150		
<b>Lead Agency:</b> Caltrans				
<b>Contact Person</b> Andrew Yoon		<b>Phone#</b> 213.266.6892	<b>Fax#</b> 213.897.0683	<b>Email</b> Andrew.yoon@dot.ca.gov
<b>Hot Spot Pollutant of Concern</b> (check one or both) <b>PM2.5 X</b> <b>PM10 X</b>				
<b>Federal Action for which Project-Level PM Conformity is Needed</b> (check appropriate box)				
<b>Categorical Exclusion (NEPA)</b>	<input checked="" type="checkbox"/> <b>EA or Draft EIS</b>	<b>FONSI or Final EIS</b>	<b>PS&amp;E or Construction</b>	<b>Other</b>
<b>Scheduled Date of Federal Action:</b> May 2022				
<b>NEPA Assignment – Project Type</b> (check appropriate box)				
<input checked="" type="checkbox"/> <b>Exempt (Alt 1 through 5)</b>	<b>Section 326 –Categorical Exemption</b>		<input checked="" type="checkbox"/> <b>Section 327 – Non-Categorical Exemption</b>	
<b>Current Programming Dates</b> (as appropriate)				
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>	<b>CON</b>
<b>Start</b>	December 2020	June 2021	June 2021	October 2022
<b>End</b>	May 2021	November 2021	August 2022	March 2024
<b>Project Purpose and Need (Summary):</b> (attach additional sheets as necessary)				
<b>Purpose</b> The purpose of the proposed Project is to enhance safety and operations along the Arroyo Seco Parkway (State Route 110). The improvements would address existing traffic conflicts by allowing vehicles more efficient ingress and egress from the on- and off-ramps along the Parkway.				
<b>Need</b> Built in 1940, the design of the Parkway predates current highway standards. High accident rates are attributed to the geometric constraints of the Parkway with on and off-ramp locations that do not provide adequate acceleration/deceleration distance for merging and exiting vehicles, especially during off-peak hours when speeds are highest. A traffic analysis shows the study segment experiences accident rates that are twice as high as comparable state facilities. The actual accident rates of each ramp were all higher than the average accident rates of similar ramps. Mapping each accident location confirms accidents tend to group at the on and off-ramps. Therefore, there is a need to provide engineering solutions to address safety issues attributed to the outdated design and geometric constraints of the Parkway, focusing on the improvement of ramp entrances and exits.				

**Surrounding Land Use/Traffic Generators** *(especially effect on diesel traffic)*

The limits of the proposed project will be along a 4.81-mile segment of the Parkway between Figueroa Street off-ramp (PM 25.78) in the City of Los Angeles and Orange Grove Avenue (PM 30.59) in the City of South Pasadena in Los Angeles county. It is a vital corridor linking the cities of Pasadena and Los Angeles. Sensitive land uses along the project corridor include a mix of residential uses, parks, open spaces, and commercial uses with senior facility, health center, residential within buffer zones of 500 to 2000 feet.

**Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

See attachment A

**RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

See attachment A

**Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

N/A

**RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

N/A

**Describe potential traffic redistribution effects of congestion relief** *(impact on other facilities)*

The Project is proposed to enhance safety and operations along the Arroyo Seco Parkway (State Route 110). When implemented, the project improvements are anticipated to address existing traffic conflicts by allowing vehicles more efficient ingress and egress from the on and off-ramps along the Parkway.

**Comments/Explanation/Details** *(attach additional sheets as necessary)*

The proposed Project is not a new or expanded highway project that would have a significant number of or increase in the number of diesel vehicles. The Build Alternatives propose to enhance safety and operations along the Parkway. As shown in Attachment A, ADT between Build Alternatives 2, 3, 4, and 6 remain the same compared to the No-Build Alternative (Alternative 1) while Build Alternative 5 ADT is not anticipated to increase significantly compared to No-Build Alternative. In addition, the opening year (2025) and horizon year (2045) truck percentage remain the same at 1 percent among all Build Alternatives and No-Build Alternative.

The proposed Build Alternatives would address existing traffic conflicts by allowing vehicles more efficient ingress and egress from the on and off ramps along the Parkway. The project does not affect any intersections that are at Level of Service D, E, or F with a significant number of diesel vehicles or those that will change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.

The proposed Build Alternatives do not include the construction of a new bus or rail terminal with a significant number of diesel vehicles congregating at a single location.

The proposed Build Alternatives do not expand an existing bus or rail terminal with significant increases in the number of diesel vehicles congregating at a single location.

The proposed Build Alternatives are not in or affecting locations, areas, or categories of sites that are identified in the PM2.5 and PM10 applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Therefore, it is requested that the SR-110 Arroyo Seco Parkway Safety and Operational Enhancements proposed Build Alternatives and/or project features that are not exempt from the requirements to demonstrate conformity pursuant to 40 CFR93.126, be concurred as not of air quality concern for particulate matters (PM10 and PM2.5).

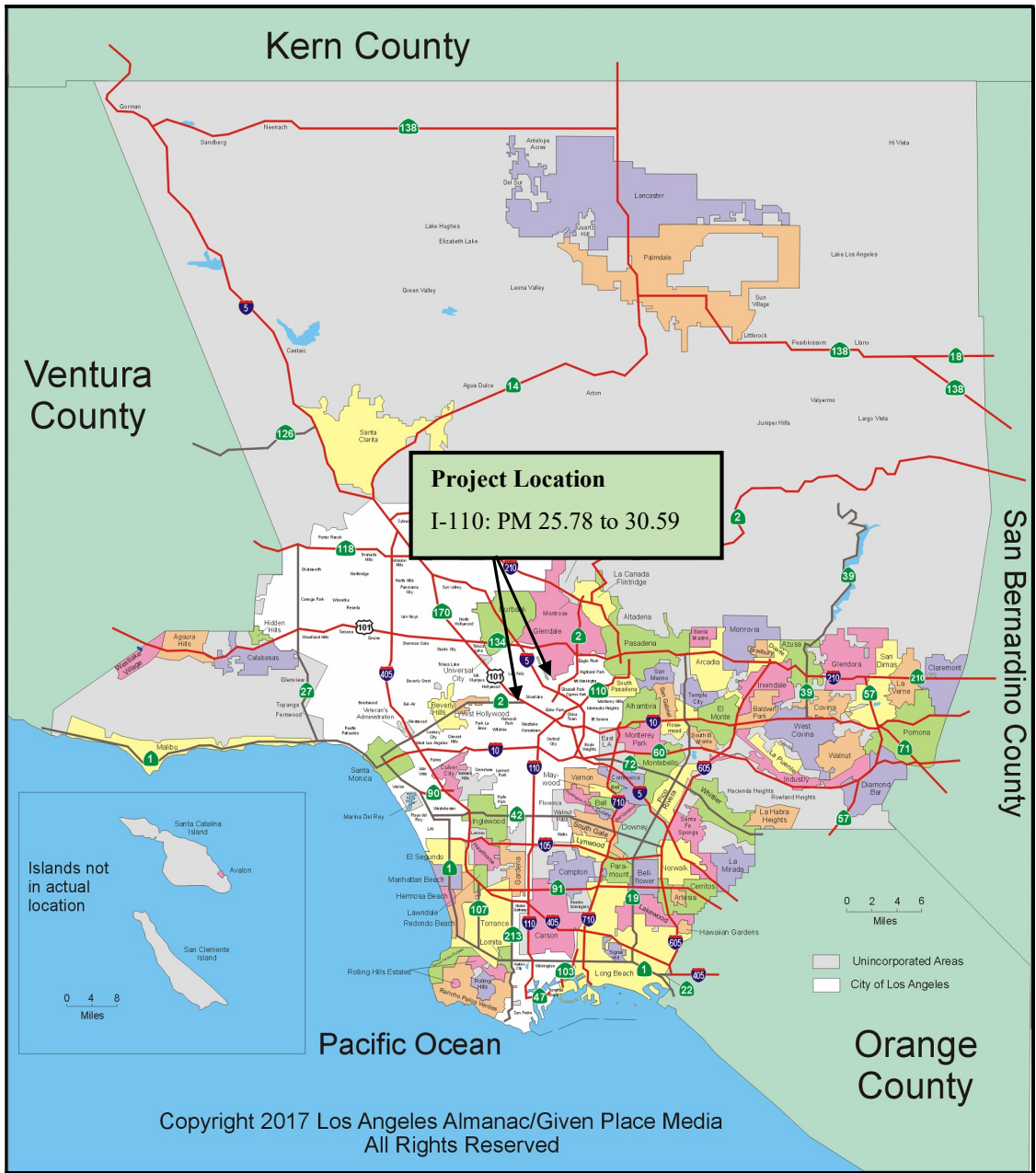


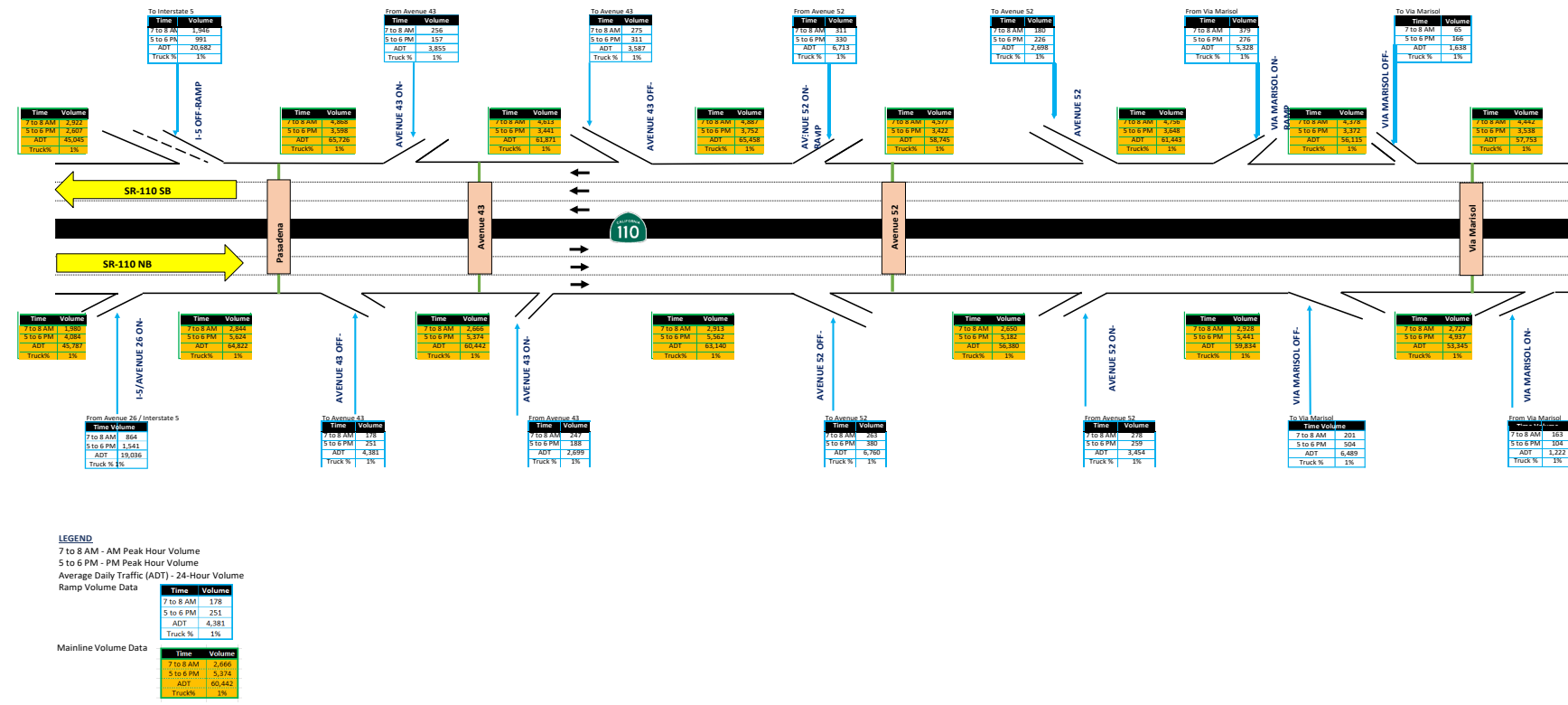
Figure 1. Project limits

# Attachment A

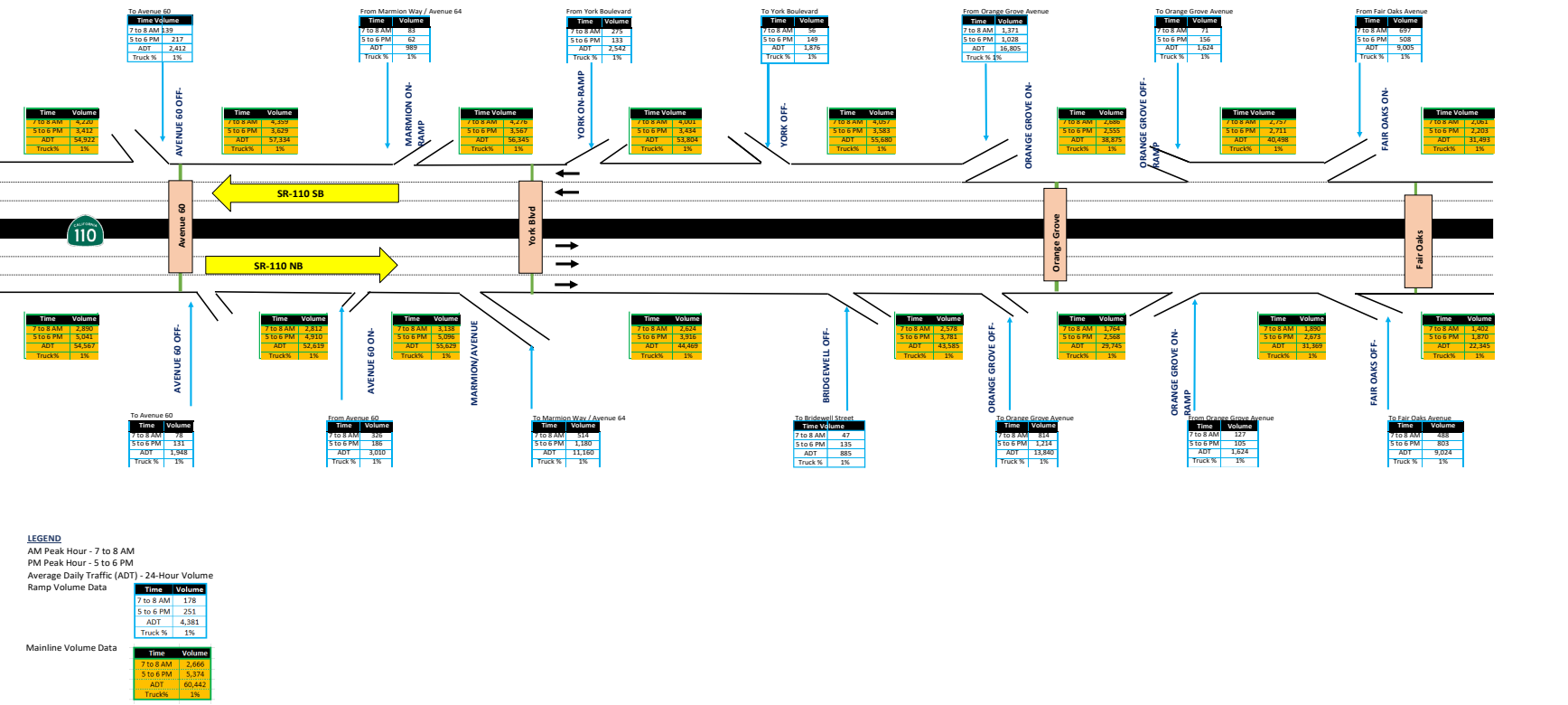


SR-110 Arroyo Seco Safety Operational Enhancements Project PA/ED

Existing (Year 2019) Traffic Volumes

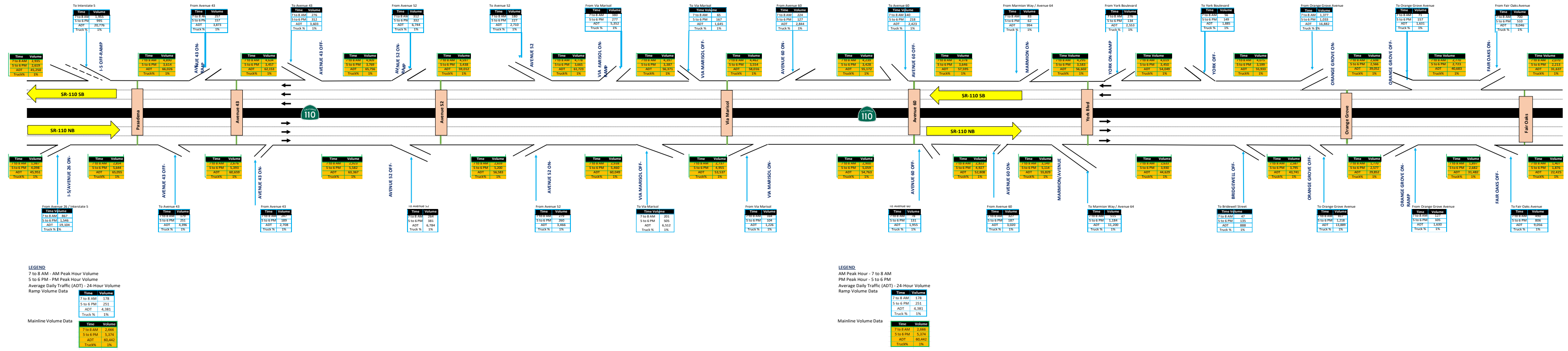


Existing (Year 2019) Traffic Volumes

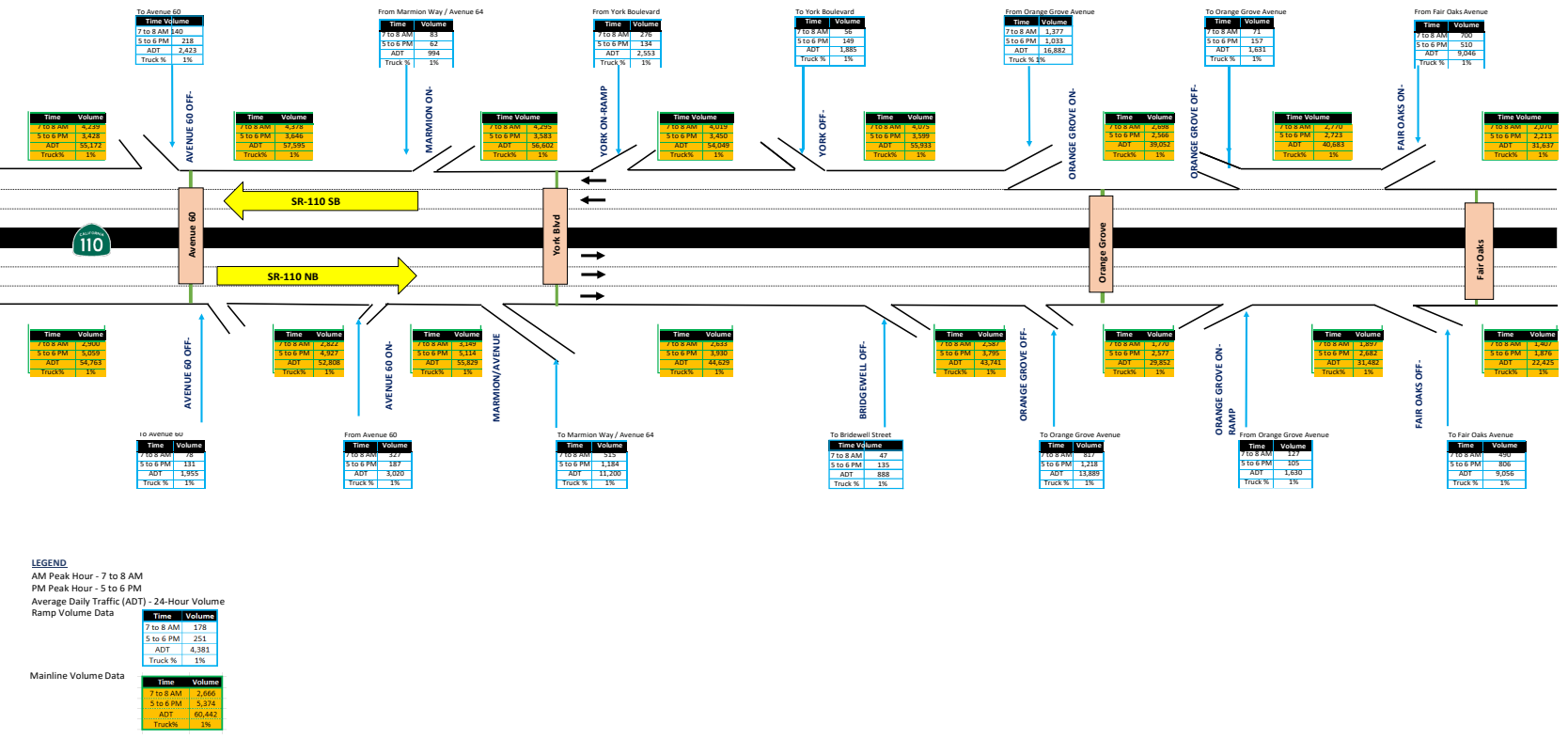


SR-110 Arroyo Seco Safety Operational Enhancements Project PA/ED

Year 2025 Alternatives 1, 2, 3, 4, and 6 Traffic Volumes

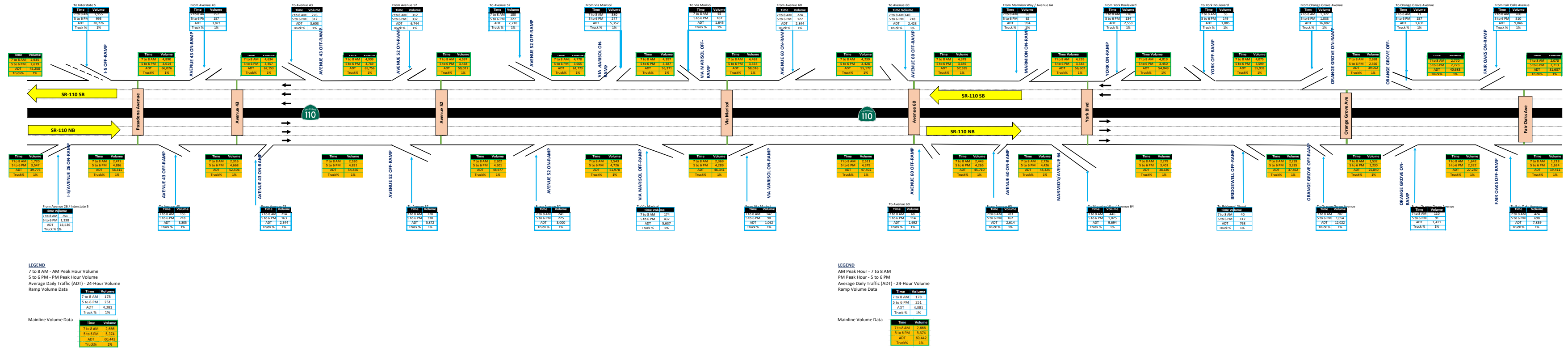


Year 2025 Alternatives 1, 2, 3, 4, and 6 Traffic Volumes

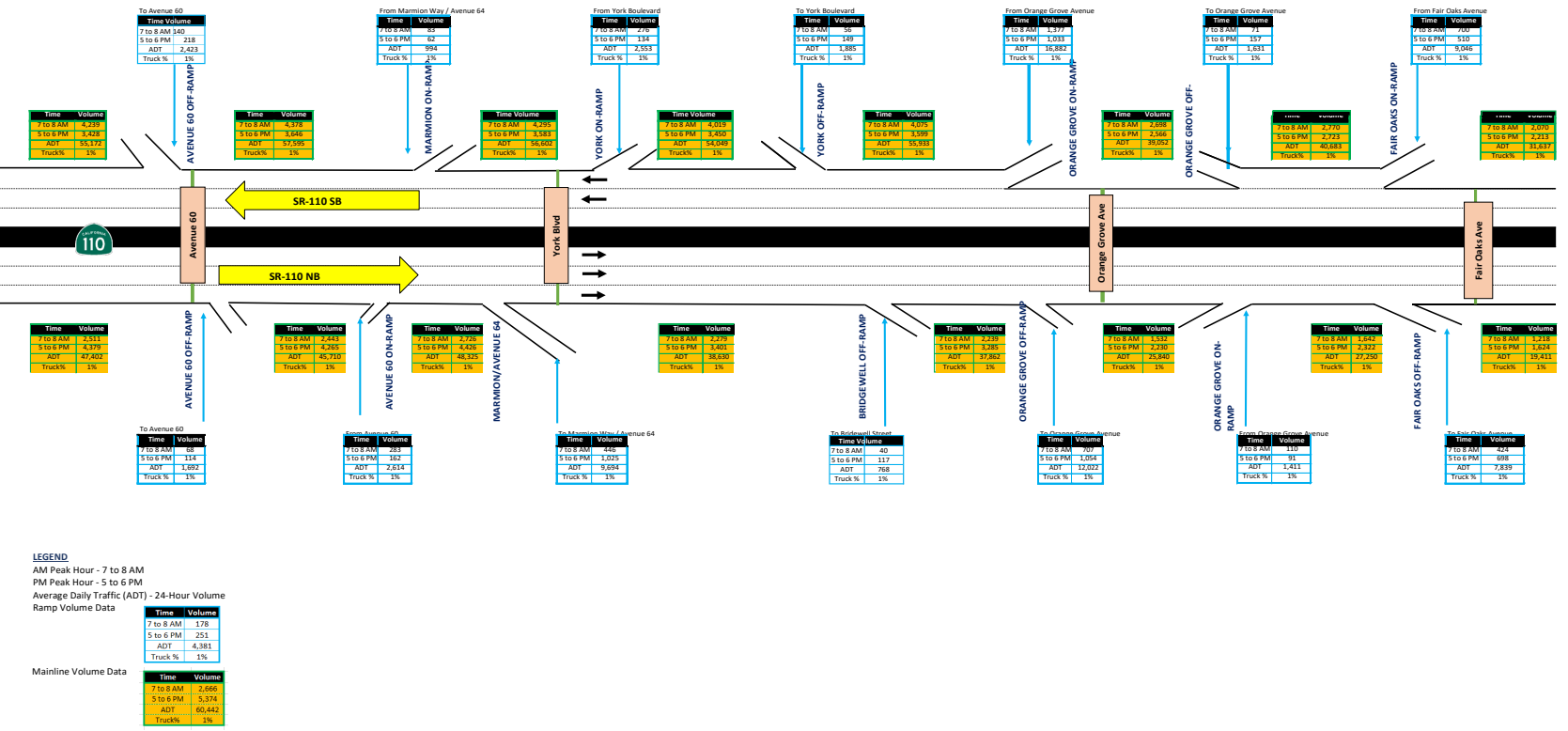


SR-110 Arroyo Seco Safety Operational Enhancements Project PA/ED

Year 2025 Alternative 5 Traffic Volumes

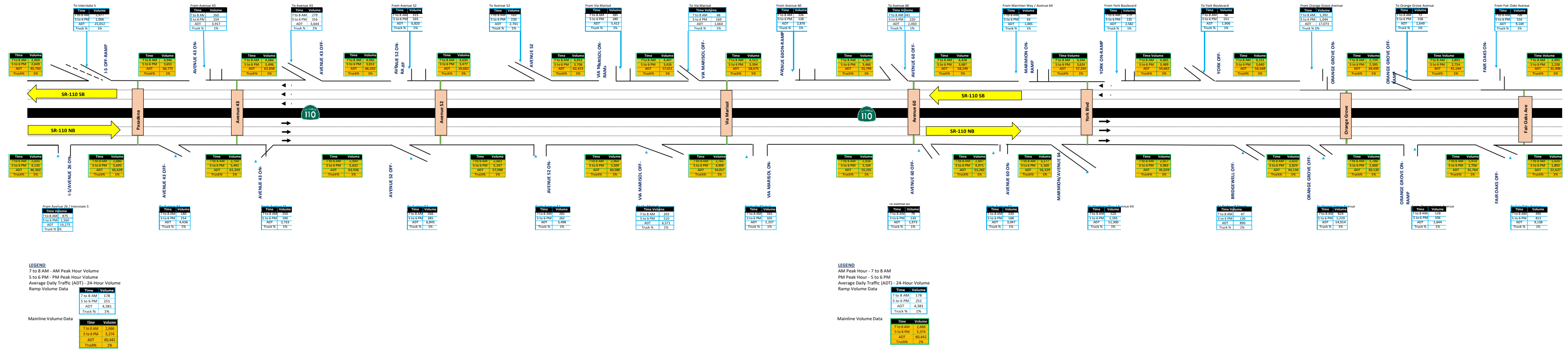


Year 2025 Alternative 5 Traffic Volumes

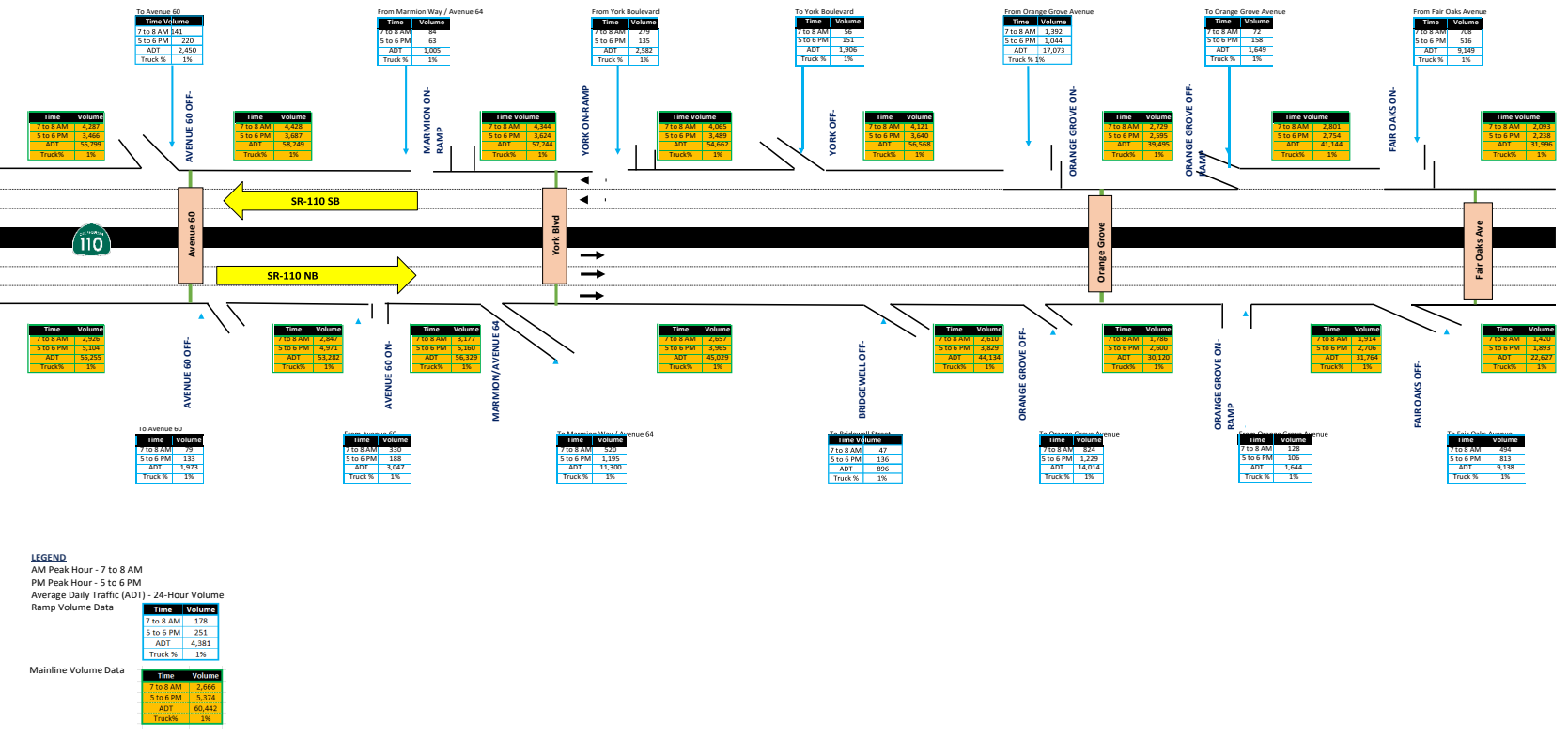


SR-110 Arroyo Seco Safety Operational Enhancements Project PA/ED

Year 2045 Alternatives 1, 2, 3, 4, and 6 Traffic Volumes

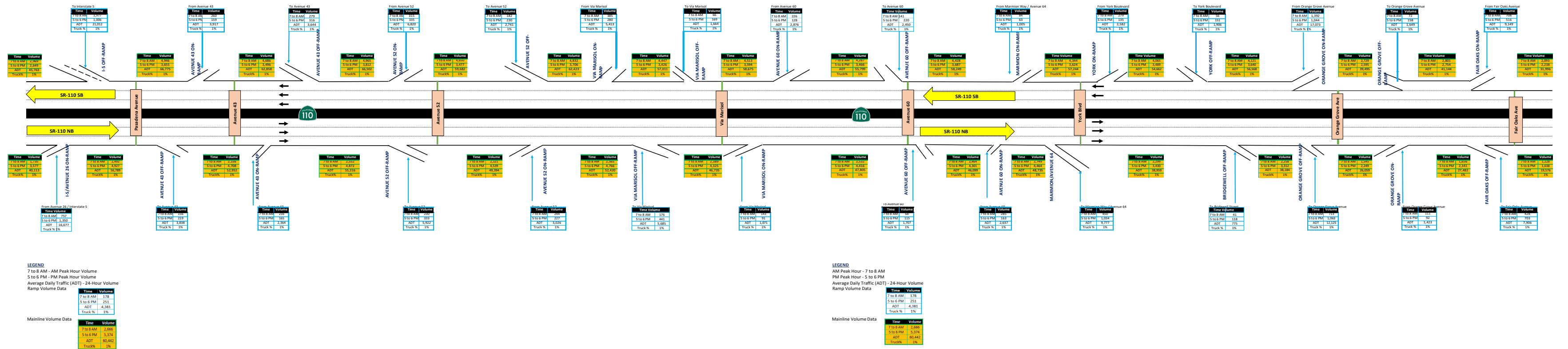


Year 2045 Alternatives 1, 2, 3, 4, and 6 Traffic Volumes

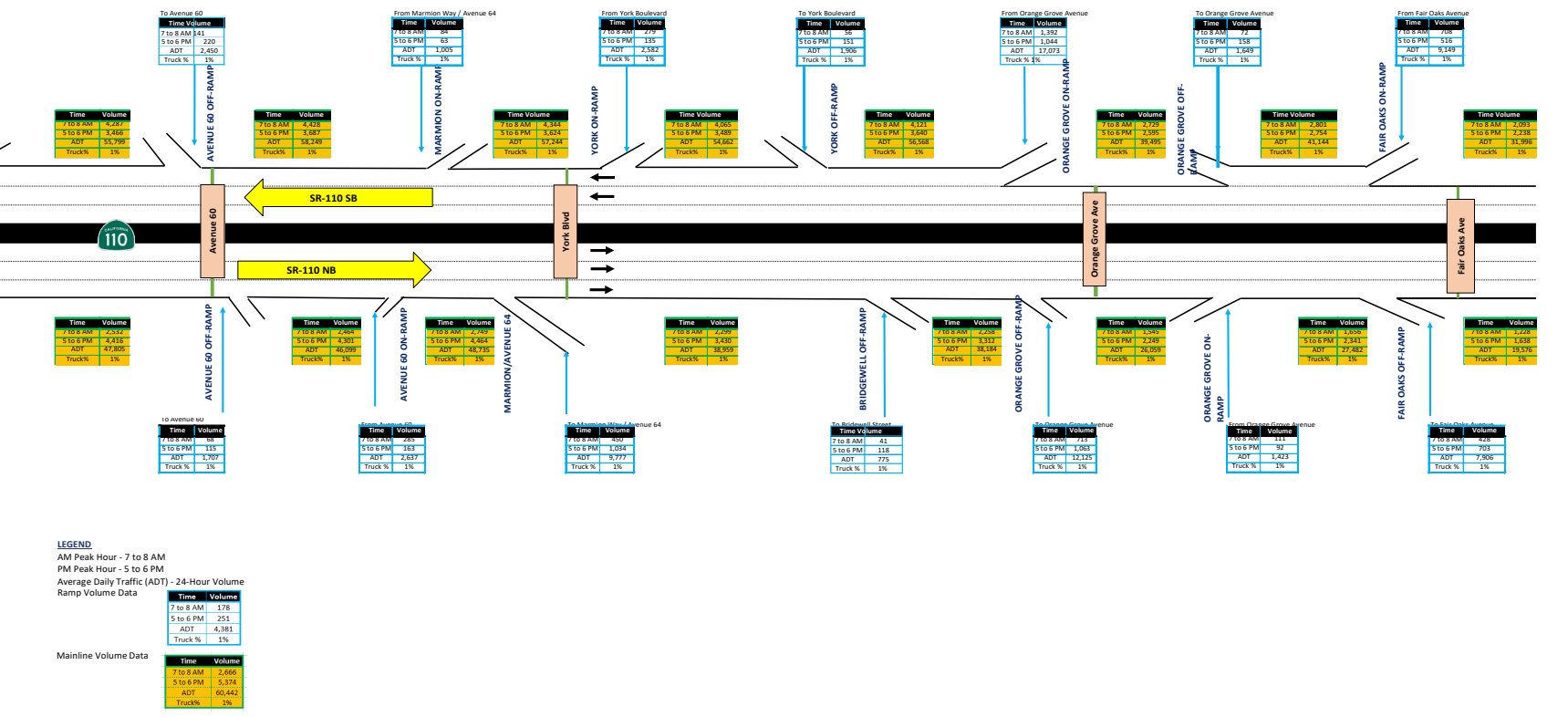


SR-110 Arroyo Seco Safety Operational Enhancements Project PA/ED

Year 2045 Alternative 5 Traffic Volumes



Year 2045 Alternative 5 Traffic Volumes



## **Attachment B**

Alternative 6 – Interchange Improvements

**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	110	26.3/31.2		

REGISTERED CIVIL ENGINEER XX-XX-20  
DATE

PLANS APPROVAL DATE

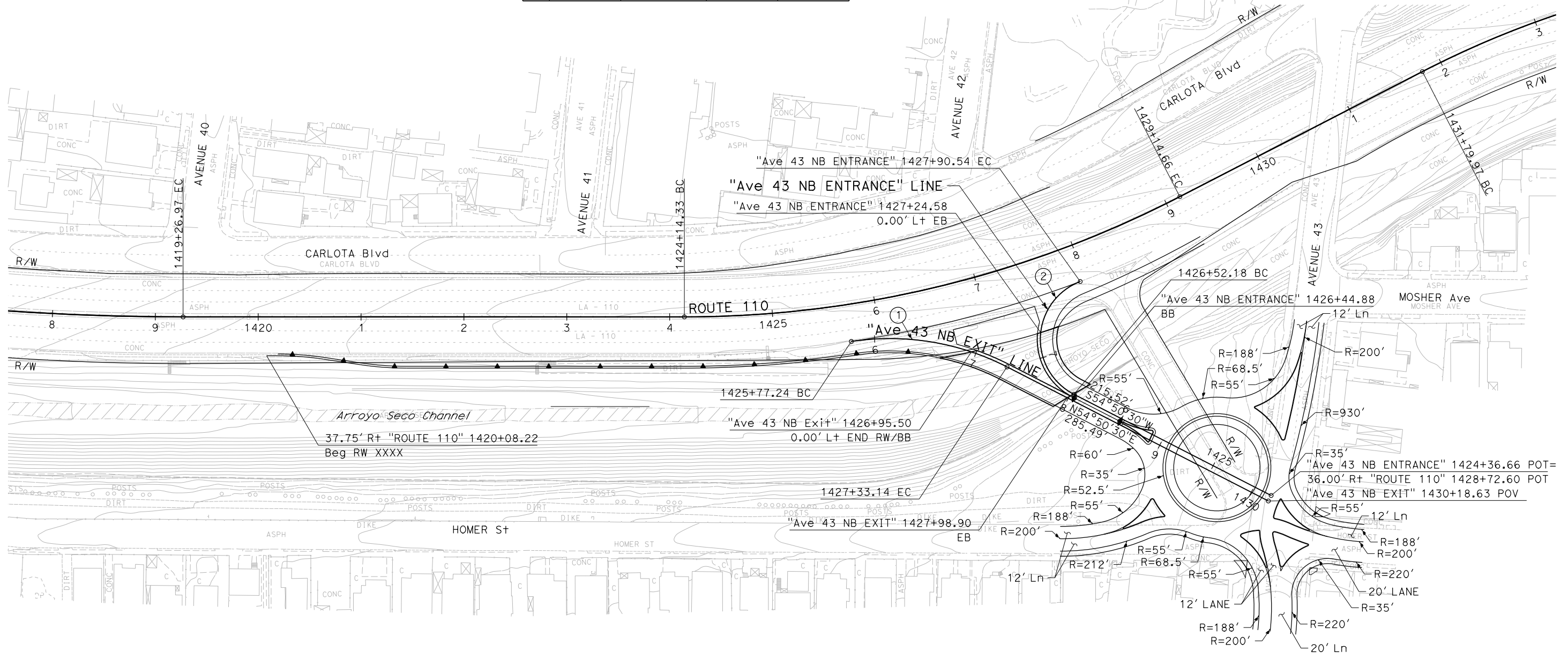
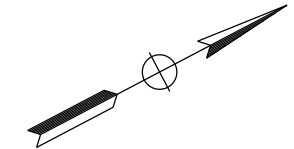
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1000 WILSHIRE BLVD  
SUITE 2100  
LOS ANGELES, CA 90017

**LOS ANGELES**

**CURVE DATA**

No.	R	Δ	T	L
①	250.00'	35°43'47.74"	80.58'	155.90'
②	60.00'	132°07'46.46"	135.17'	138.37'



**LOS ANGELES**

**LAYOUT  
ALTERNATIVE 6  
INTERCHANGE IMPROVEMENTS  
AVENUE 43**  
SCALE: 1" = 50'

**DRAFT**

**L-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
Caltrans

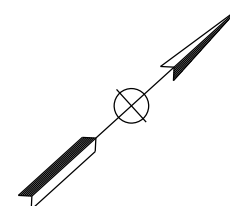
CONSULTANT FUNCTIONAL SUPERVISOR: HANY HAROUN  
CALCULATED/DESIGNED BY: NICHOLAS KRULA  
CHECKED BY: RENE LOYA

REVISOR: NICHOLAS KRULA  
DATE: 7/2/2010

**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**LOS ANGELES**

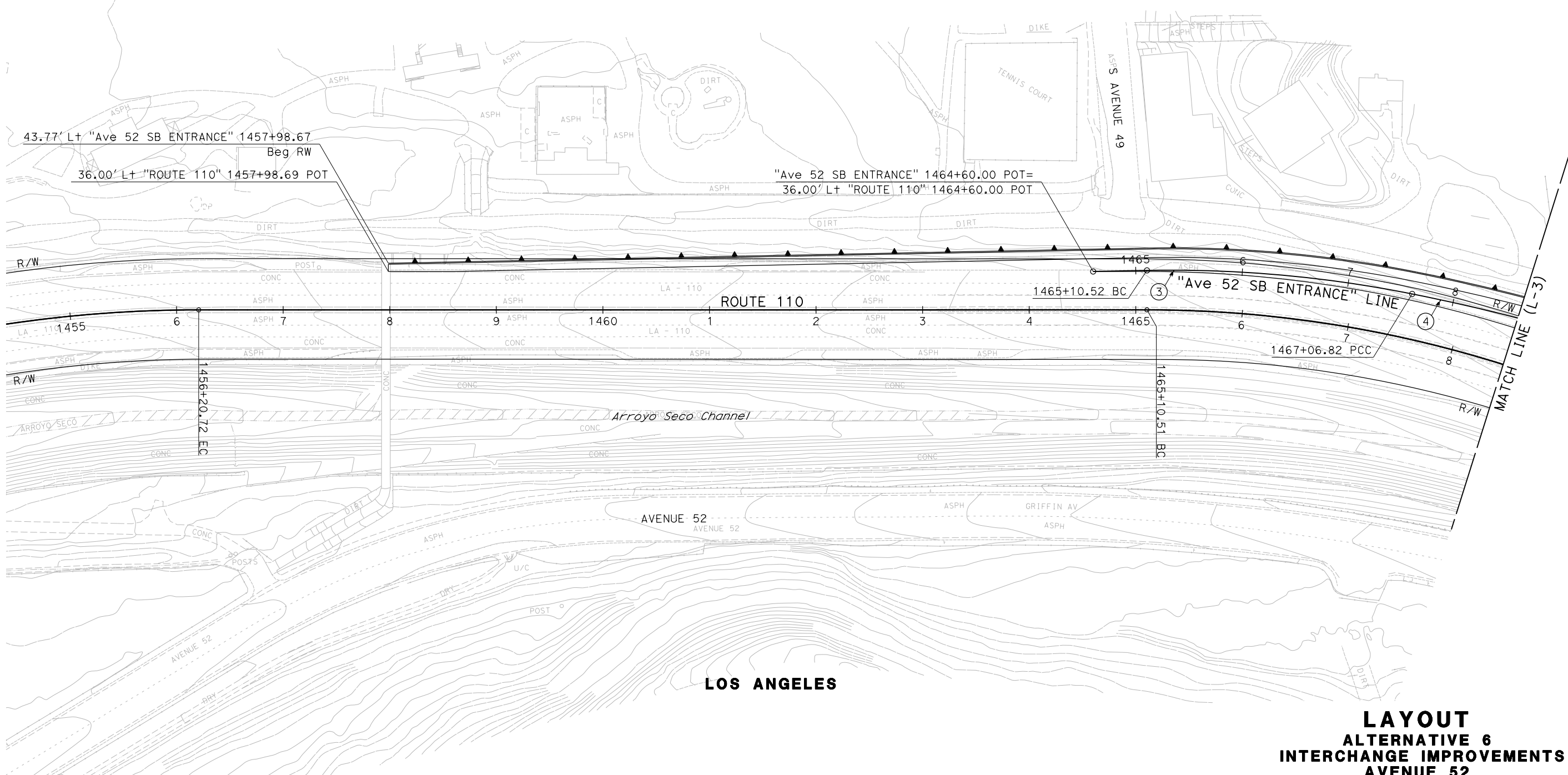


**CURVE DATA**

No.	R	Δ	T	L
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④	1877.23'	24°04'42.50"	390.97'	168.43'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	110	26.3/31.2		
			REGISTERED CIVIL ENGINEER	XX-XX-20	DATE
			PLANS APPROVAL DATE		
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JACOBS 1000 WILSHIRE BLVD SUITE 2100 LOS ANGELES, CA 90017					

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
 HANY HAROUN  
 CONSULTANT FUNCTIONAL SUPERVISOR  
 CALICTRANS



**LOS ANGELES**

**LAYOUT  
 ALTERNATIVE 6  
 INTERCHANGE IMPROVEMENTS  
 AVENUE 52**  
 SCALE: 1" = 50'

**DRAFT**

**L-2**

LAST REVISION DATE PLOTTED => 15-DEC-2020  
 XX-XX-20 TIME PLOTTED => 17:53

**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	110	26.3/31.2		

REGISTERED CIVIL ENGINEER  
 XX-XX-20  
 DATE

PLANS APPROVAL DATE

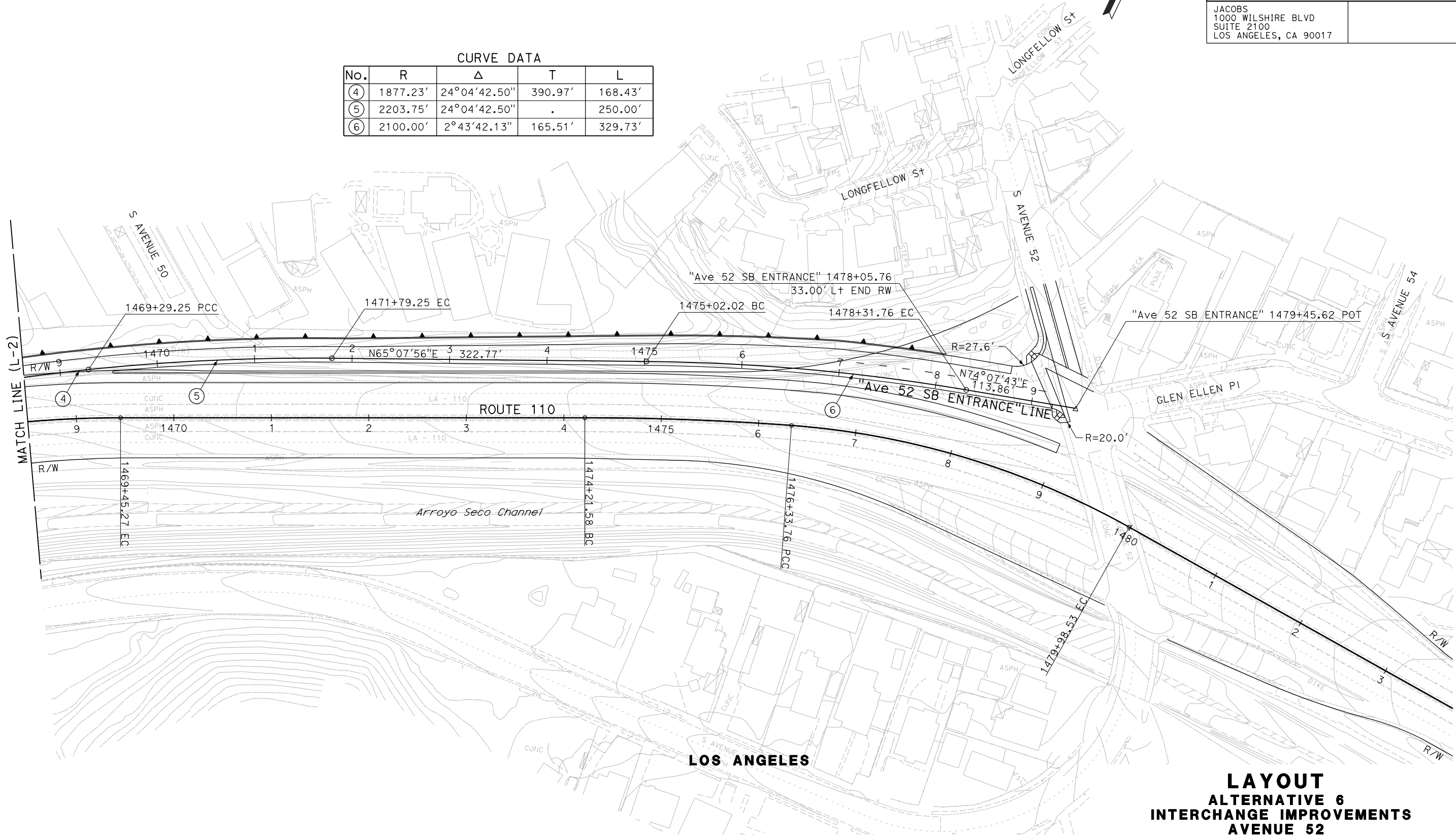
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 LOS ANGELES, CA 90017

**LOS ANGELES**

**CURVE DATA**

No.	R	Δ	T	L
④	1877.23'	24°04'42.50"	390.97'	168.43'
⑤	2203.75'	24°04'42.50"	.	250.00'
⑥	2100.00'	2°43'42.13"	165.51'	329.73'



**LAYOUT  
 ALTERNATIVE 6  
 INTERCHANGE IMPROVEMENTS  
 AVENUE 52**  
 SCALE: 1" = 50'

**DRAFT**

**L-3**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

**Caltrans**

CONSULTANT SUPERVISOR: HANY HAROUN

FUNCTIONAL SUPERVISOR: NICHOLAS KRULA

DESIGNED BY: RENE LOYA

CHECKED BY:

REVISOR: DATE

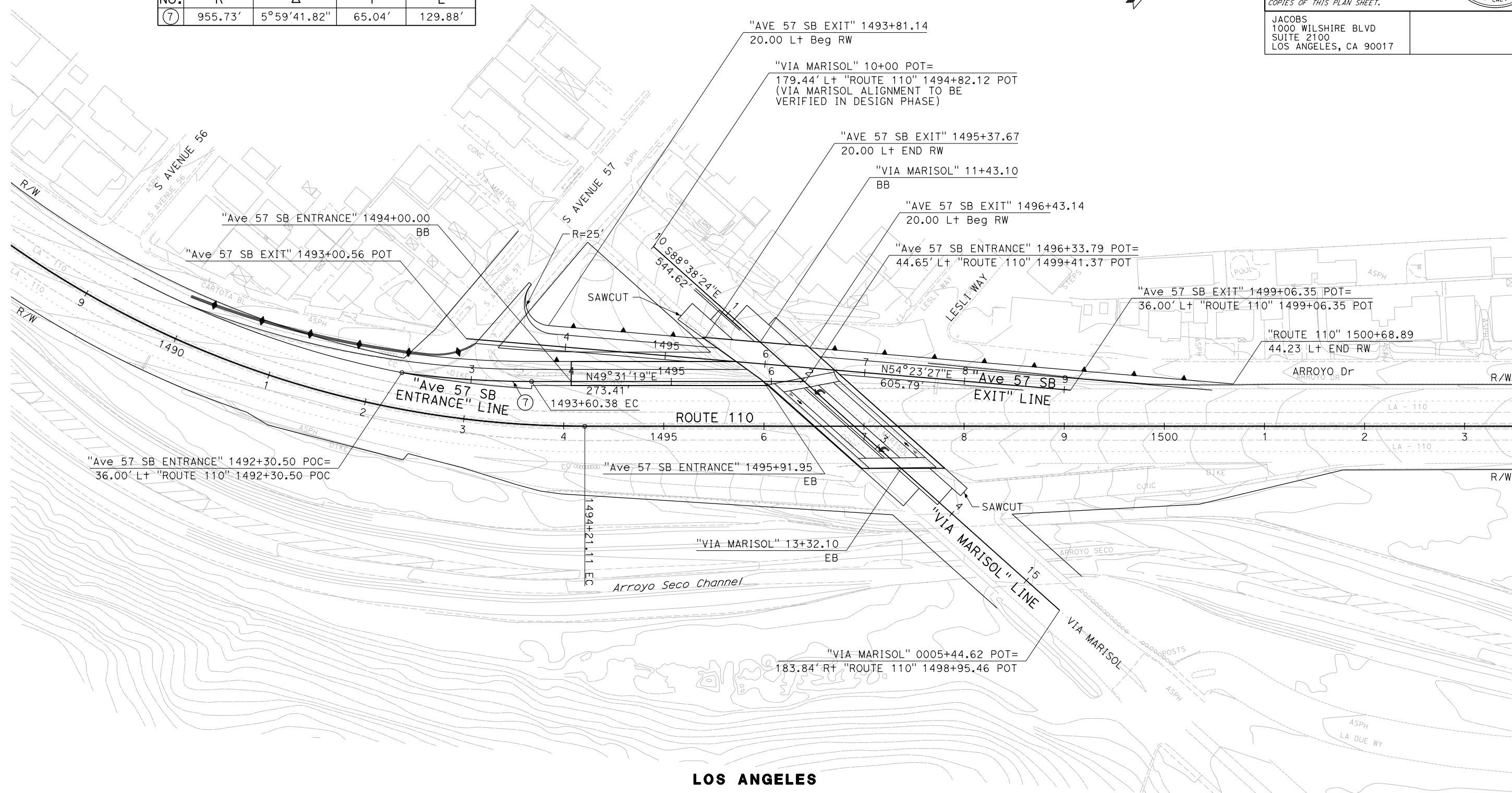
**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

**CURVE DATA**

No.	R	Δ	T	L
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**LOS ANGELES**



**LOS ANGELES**

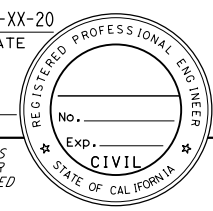
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	110	26.3/31.2		

REGISTERED CIVIL ENGINEER XX-XX-20 DATE

PLANS APPROVAL DATE

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SUITE 2100  
LOS ANGELES, CA 90017



REVISOR: NICHOLAS KRULA  
DATE: RENE LOYA  
DESIGNER: HANY HAROUN  
CHECKER: HANY HAROUN  
SUPERVISOR: HANY HAROUN  
TRANSPORTATION: DEPARTMENT OF TRANSPORTATION  
CALIFORNIA: STATE OF CALIFORNIA



**LAYOUT**  
**ALTERNATIVE 6**  
**INTERCHANGE IMPROVEMENTS**  
**VIA MARISOL/ AVENUE 57**  
SCALE: 1" = 50'

**DRAFT**

**L-4**

LAST REVISION DATE PLOTTED => 09-DEC-2020 XX-XX-20 TIME PLOTTED => 10:32



**NOTE:**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.


DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	110	26.3/31.2		

REGISTERED CIVIL ENGINEER  
 XX-XX-20  
 DATE

PLANS APPROVAL DATE

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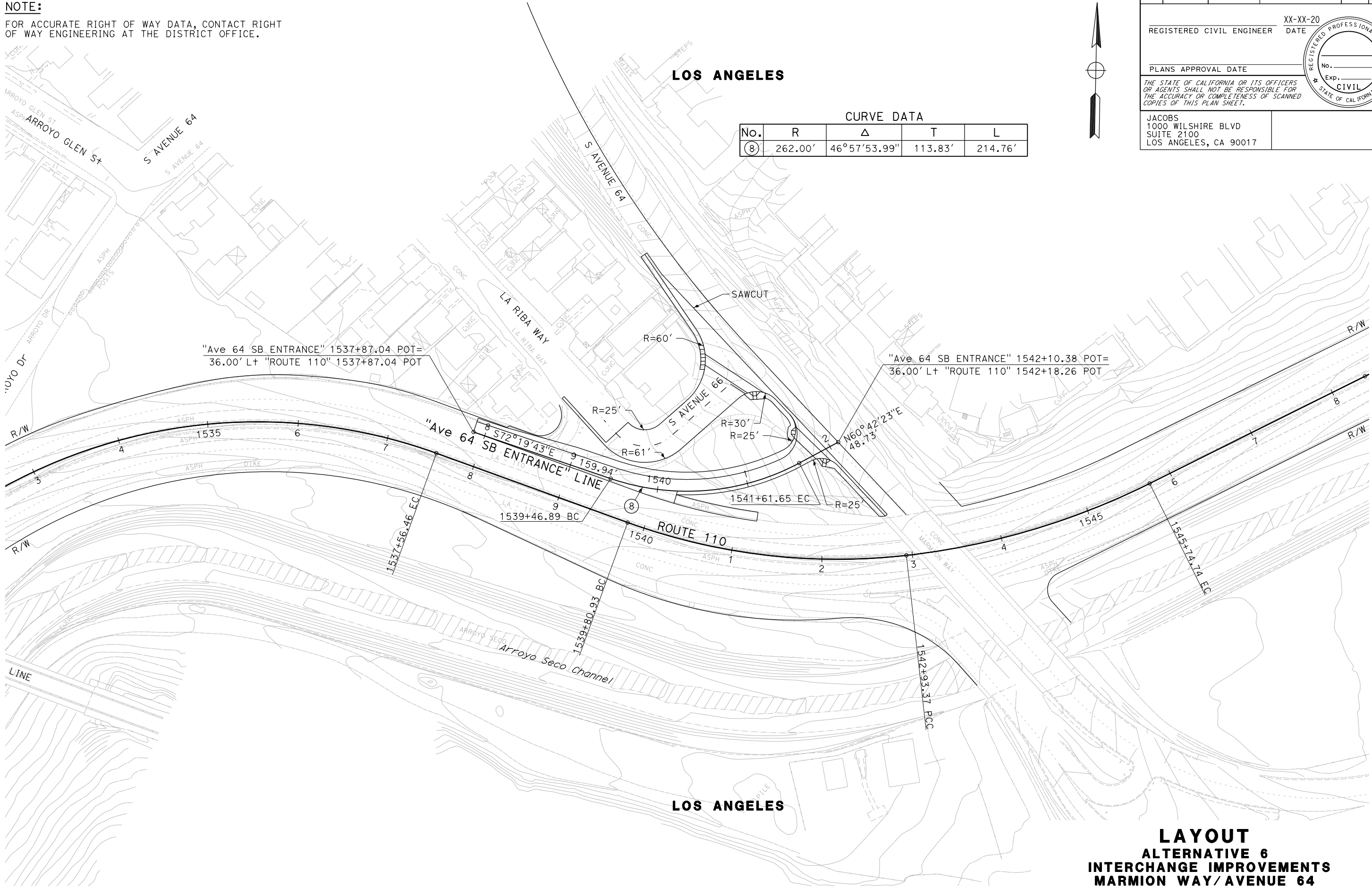
JACOBS  
 1000 WILSHIRE BLVD  
 SUITE 2100  
 LOS ANGELES, CA 90017




LOS ANGELES

**CURVE DATA**

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LOS ANGELES

**LAYOUT**  
**ALTERNATIVE 6**  
**INTERCHANGE IMPROVEMENTS**  
**MARMION WAY/ AVENUE 64**  
 SCALE: 1" = 50'

**DRAFT**

**L-5**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	CONSULTANT FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISOR
<b>Caltrans</b>	HANY HAROUN	NICHOLAS KRULA	RENE LOYA
			DATE REVISED

LAST REVISION DATE PLOTTED => 09-DEC-2020  
 XX-XX-20 TIME PLOTTED => 10:32