



Appendix H – Traffic Analysis

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Euclid Avenue Bridge Project

Traffic Analysis

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*Appendices are available by request from the City of Chino



1 Introduction / Methodologies

This report presents the findings of a traffic analysis conducted for the derivation of design volumes and assessing potential transportation and circulation impacts related to the proposed widening of the Euclid Avenue Bridge (Project), which consists of the replacement of the existing bridge over Chino Creek within the Prado Basin.

The Project consists of a segment of Euclid Avenue that is located generally between Pine Avenue and State Route (SR) 71 in the City of Chino (City), California. The Euclid bridge is being reconstructed to improve circulation, mobility, and address frequent seasonal flooding of the existing roadway. This report has been prepared to establish design volumes for the Project and to evaluate the roadways potentially affected by the Project for Opening Year (2030) and a design year based on Long Range (2050) traffic conditions. The analysis takes into account other planned roadway projects in the area, such as the Pine Avenue Extension project¹ and buildout of City land uses consistent with the General Plan. A vehicle miles traveled (VMT) analysis has also been prepared in accordance with the City's TIA guidelines² in support of the Project's environmental documentation under the California Environmental Quality Act (CEQA).

1.1 Project Description

The Project includes replacement of the existing Euclid Avenue bridge within a segment of Euclid Avenue generally between Pine Avenue and SR 71. A Project location map is provided in **Figure 1-1**. This includes replacement of the existing bridge with a longer bridge segment to address recurring flooding issues that require a closure of Euclid Avenue during inclement weather. The replaced bridge would include a median and a shared-use pathway separated from the roadway along the easterly side of the bridge for use by pedestrians and cyclists. The Project would also construct a grade-separated junction at the existing at-grade intersection of Euclid Avenue and Pomona Rincon Road just south of the bridge, as well as construct a traffic signal at the existing intersection of Euclid Avenue and the entrance to Prado Regional Park (McCombs Way).

The preferred alternative consists of replacing the existing 2-lane bridge with a 4-lane bridge, which is consistent with the existing 4-lane roadway segments just north and south of the bridge. Alternative scenarios for a bridge with 2 lanes, 4 lanes, 6 lanes, and 8 lanes are also analyzed for comparison purposes based on Opening Year (2030) cumulative conditions and Long Range (2050) cumulative conditions.

¹ Pine Avenue Extension Traffic Impact Analysis, Urban Crossroads, January 5, 2017.

² Traffic Impact Analysis Guidelines, City of Chino, December 2020.





Figure 1-1
Project Location and Study Area Intersections
1.2

1.2 Study Area

A study area comprised of 22 intersections and 29 roadway segments (28 existing segments and 1 future segment) was selected for analysis through consultation with City engineering staff. The study area intersections and study area roadway segments are listed below in **Table 1-1** and **Table 1-2**, respectively, and are shown in the previously referenced **Figure 1-1**. Additionally, 8 freeway mainline segments and 15 freeway merge/diverge ramp junctions along SR 71 are analyzed. These mainline segment and ramp junction locations are shown in **Table 1-3** and **Table 1-4**, respectively.

1.3 Methodology

This analysis evaluates the Project during the AM and PM peak hour traffic conditions in accordance with City methodology. The scenarios analyzed are as follows:

- Existing (2024) Conditions
- Opening Year (2030) cumulative conditions without Project
- Opening Year (2030) cumulative conditions with Project
- Design Year / Long Range (2050) cumulative conditions without Project
- Design Year / Long Range (2050) cumulative conditions with Project

AM peak hour and PM peak hour turning movement count data for study intersections and 24-hour mid-block average daily traffic (ADT) counts for key study area roadway segments were collected in March 2024 and are used in the analysis to represent existing conditions.

1.3.1 Opening Year (2030)

The analysis addresses the project's Opening Year (2030) cumulative conditions scenario with the application of a compounded annual ambient growth rate derived using forecasts from the San Bernardino Associated Governments (SANBAG) travel demand model. The version of the SANBAG model utilized for this analysis was specially developed by Fehr & Peers specifically for use in the City's current General Plan update.

A comparison of SANBAG model data indicates an average traffic volume growth rate of approximately 1.7% per year within the study area over a 31-year period between 2019 and 2050 (specifically, 53.8% total growth), which equates to approximately 10.2% growth for the period between 2024 and 2030. This near-term growth rate of 10.2% has been applied to the existing condition (2024) traffic counts to derive Opening Year (2030) traffic forecasts. Since the growth rate is based on buildout of the City's General Plan, the Opening Year (2030) traffic forecasts represent a cumulative condition appropriate for near-term analysis.



Euclid Avenue Bridge Project

1 Introduction / Methodologies

Table 1-1 Intersection Study Locations

Intersection	Jurisdiction
1. Euclid Avenue/SR-83 & Kimball Avenue	Chino
2. Euclid Avenue/SR-83 & Pine Avenue	Chino
3. Euclid Avenue/SR-83 & McCombs Way (Prado Regional Park Entrance)	Chino
4. Euclid Avenue/SR-83 & Pomona Rincon Road	Chino
5. SR 71 NB Ramps & Euclid Avenue/SR-83	Caltrans
6. SR 71 SB On-Ramps & Butterfield Ranch Road	Caltrans
7. SR 71 SB Off-Ramp/Shady View Dr & Butterfield Ranch Road	Caltrans
8. Brookwood Lane & Butterfield Ranch Road	Chino Hills
9. Butterfield Ranch Road & Pine Avenue	Chino Hills
10. SR 71 SB Ramps & Pine Avenue	Caltrans
11. SR 71 NB Ramps & Pine Avenue	Caltrans
12. El Prado Road & Pine Avenue	Chino
13. Central Avenue & El Prado Road	Chino
14. Central Avenue & SR 71 NB off-ramp	Caltrans
15. Soquel Canyon Parkway & SR 71 SB off-ramp	Caltrans
16. Soquel Canyon Parkway & Butterfield Ranch Road	Chino Hills
17. El Prado Road & Kimball Avenue	Chino
18. Hellman Avenue & Kimball Avenue	Eastvale
19. Hellman Avenue & Pine Avenue/Schleisman Road	Chino
20. Hellman Avenue & Legacy Park Street/Walters Street	Chino
21. Chino Corona Road & Pine Avenue	Chino
22. Archibald Avenue and Schleisman Road	Eastvale



Euclid Avenue Bridge Project

1 Introduction / Methodologies

Table 1-2 Roadway Segment Study Locations

Roadway Segment	Jurisdiction
1. Central Avenue north of El Prado Road	Chino
2. Central Avenue between El Prado Road & SR 71	Chino
3. Soquel Canyon Parkway between SR 71 & Butterfield Ranch Road	Chino Hills
4. El Prado Road between Central Avenue & Kimball Avenue	Chino
5. El Prado Road between Kimball Avenue & Pine Avenue	Chino
6. Butterfield Ranch Road between Soquel Canyon Parkway & Pine Avenue	Chino Hills
7. Butterfield Ranch Road between Pine Avenue & SR 71	Chino Hills
8. Pine Avenue between Butterfield Ranch Road & SR 71	Chino Hills
9a. Pine Avenue between SR 71 and El Prado Road (future)	Chino
9b. Pine Avenue between El Prado Road & Euclid Avenue	Chino
10. Pine Avenue between Euclid Avenue & Chino Corona Rd	Chino
11. Pine Avenue between Chino Corona Road & Hellman Ave	Chino
12. Schleisman Road between Hellman Avenue & Archibald Avenue	Eastvale
13. Kimball Avenue between El Prado Road & Euclid Avenue	Chino
14. Kimball Avenue between Euclid Avenue & Hellman Avenue	Chino
15. Limonite Avenue east of Hellman Avenue	Eastvale
16. Euclid Avenue north of Kimball Avenue	Chino ¹
17. Euclid Avenue between Kimball Avenue & Pine Avenue	Chino ¹
18. Euclid Avenue between Pine Avenue & Prado Regional Park	Chino ¹
19. Euclid Avenue between Prado Regional Park & Pomona Rincon Road	Chino ¹
20. Euclid Avenue between Pomona Rincon Road & SR 71	Chino ¹
21. Hellman Avenue north of Kimball Avenue	Chino
22. Hellman Avenue between Kimball Avenue & Pine Avenue	Chino
23. Hellman Avenue between Pine Avenue & Legacy Park St	Chino
24. Hellman Avenue between Legacy Park St & Chandler St	Chino
25. Archibald Avenue north of Schleisman Road	Eastvale
26. Archibald Avenue between Schleisman Road & Chandler St	Eastvale
27. River Road south of Archibald Avenue	Eastvale
28. Chino Corona Road south of Pine Avenue	Chino
¹ Planned for relinquishment from Caltrans to the City of Chino	



Euclid Avenue Bridge Project

1 Introduction / Methodologies

Table 1-3 SR 71 Freeway Mainline Segment Study Locations

SR 71 Freeway Mainline Segments
1. Southbound, North of Central Avenue
2. Southbound, Central Avenue to Pine Avenue
3. Southbound, Pine Avenue to Euclid Avenue (SR-83)
4. Southbound, South of Euclid Avenue (SR-83)
5. Northbound, North of Central Avenue
6. Northbound, Central Avenue to Pine Avenue
7. Northbound, Pine Avenue to Euclid Avenue (SR-83)
8. Northbound, South of Euclid Avenue (SR-83)

Table 1-4 SR 71 Freeway Merge/Diverge Ramp Junction Study Locations

SR 71 Freeway Merge/Diverge Ramp Junctions
1. Southbound Off-Ramp at Central Avenue (Diverge)
2. Southbound Loop On-Ramp at Central Avenue (Upstream and Downstream) (Merge)
3. Southbound On-Ramp at Central Avenue (Merge)
4. Southbound Off-Ramp at Pine Avenue (Diverge)
5. Southbound On-Ramp at Pine Avenue (Merge)
6. Southbound Off-Ramp at Euclid Avenue (SR-83) (Diverge)
7. Southbound Loop On-Ramp at Euclid Avenue (SR-83) (Upstream and Downstream) (Merge)
8. Southbound On-Ramp at Euclid Avenue (SR-83) (Merge)
9. Northbound On-Ramp at Central Avenue (Merge)
10. Northbound Loop On-Ramp at Central Avenue (Upstream and Downstream) (Merge)
11. Northbound Off-Ramp at Central Avenue (Diverge)
12. Northbound On-Ramp at Pine Avenue (Merge)
13. Northbound Off-Ramp at Pine Avenue (Diverge)
14. Northbound On-Ramp at Euclid Avenue (SR-83) (Merge)
15. Northbound Off-Ramp at Euclid Avenue (SR-83) (Diverge)



1.3.2 Design Year (2050)

For the design year, a Long Range (2050) cumulative conditions analysis was prepared. Traffic volume forecasts were derived by using a special version of the SANBAG travel demand model developed by Fehr & Peers specifically for use in the City's upcoming General Plan update. These baseline 2050 General Plan forecasts are based on an 8-lane Euclid Avenue bridge consistent with the City's General Plan. Additional model runs were prepared by Stantec for scenarios consisting of a 2-lane bridge, a 4-lane bridge, a 6-lane bridge and, for comparison purposes, an 8-lane bridge, which were used to estimate the incremental difference in traffic volume that results from changing the number of lanes provided by the bridge. The network-wide incremental changes in roadway volumes were then applied to the baseline General Plan Long Range (2050) cumulative conditions to derive forecasts for 2-lane, 4-lane, and 6-lane bridge scenarios, respectively.

1.4 Performance Criteria

This analysis is based on specific screening and evaluation criteria from the City's TIA guidelines, which are outlined in the following paragraphs. Where appropriate, potential improvements are recommended if appropriate. Refer to Chapter 5 for a discussion of VMT impact criteria utilized for CEQA analysis.

Defined performance criteria are utilized to evaluate roadway and intersection operations, which are typically described in terms of levels of service (LOS). Performance criteria are primary a function of two measures. The first measure is "capacity", which establishes the vehicle carrying ability of a roadway, and the second measure is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. For arterial roadways in an urban or suburban setting, the intersection of two roadways will typically be the limiting factor in regard to the overall capacity of the roadway network.

Methodology outlined in the *Highway Capacity Manual, Seventh Edition* (HCM 7th Edition) produces estimates of average vehicle delay as a function of intersection capacity and the volume of traffic passing through the intersection. From this, a corresponding LOS is defined. Traffic LOS is designated "A" through "F" with LOS A representing free flow conditions and LOS F representing severe traffic congestion. Traffic flow quality for each LOS is described in **Table 1-5** for roadway segments and in **Table 1-6** for arterial intersections.

1.4.1 City of Chino

For the arterial roadways the peak hour is the accepted time period used for the evaluation of undesirable changes, and a number of techniques are available to define intersection LOS. Certain LOS values are deemed undesirable by the City. These definitions and procedures are established by individual local jurisdictions.



Euclid Avenue Bridge Project

1 Introduction / Methodologies

Table 1-5 Level of Service Descriptions – Roadway Segments

LOS	Traffic Flow Description	Traffic Conditions	Driver Experience	Roadway V/C (volume/capacity)
A	Free-flow	Low volumes, high speeds, minimal delay	Excellent comfort and freedom of maneuver	0 – 0.60
B	Reasonably free-flow	Slightly restricted maneuverability, stable flow	High comfort, minor delays	0.61 – 0.70
C	Stable flow	Noticeable restrictions, moderate density	Acceptable comfort, some delays	0.71 – 0.80
D	Approaching unstable flow	High density, reduced speeds, limited maneuverability	Reduced comfort, frequent delays	0.81 – 0.90
E	Unstable flow (at capacity)	Operating at or near capacity, very high density, minimal gaps	Poor comfort, unpredictable travel times	0.91 – 1.00
F	Breakdown flow	Demand exceeds capacity, stop-and-go conditions, long queues	Very poor comfort, long delays, gridlock	> 1.00
Source: HCM 7th Edition LOS = Level of service V/C = Ratio of volume to capacity				



Table 1-6 Level of Service Descriptions – Arterial Intersections

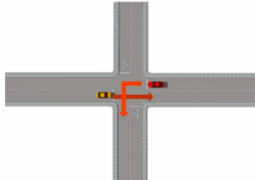
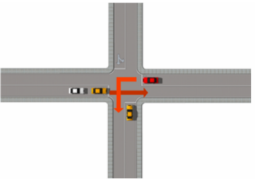
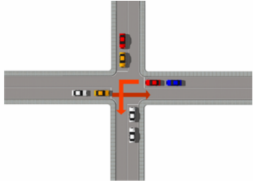
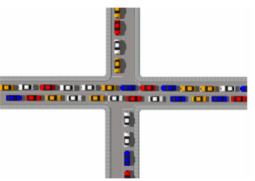
LOS	Traffic Flow Description		Signalized Control Delay (sec/veh)	Stop-Controlled Delay (sec/veh)
A		Minimal or no vehicle delay	0 – 10.0	0 – 10.0
B		Slight delay to vehicles	10.1 – 20.0	10.1 – 15.0
C		Moderate vehicle delays, traffic flow remains stable	20.1 – 35.0	15.1 – 25.0
D		More extensive delays at intersections	35.1 – 55.0	25.1 – 35.0
E		Long queues create lengthy delays	55.1 – 80.0	35.1 – 50.0
F		Severe delays and congestion	Above 80.0	Above 50.0
Source: HCM 7th Edition LOS = Level of service sec/veh = seconds per vehicle				

Table 1-7 summarizes the daily vehicle capacities for the various roadway classifications within the study area as depicted in the City’s General Plan. Capacities for roadways outside of the City represent the capacities used by the applicable jurisdiction. For roadway/lane combinations not addressed in the General Plan, capacities are derived to be consistent with the facility’s classification.

Table 1-7 Roadway ADT Capacities

Classification	City	ADT Capacity			
		2 Lanes	4 Lanes	6 Lanes	8 Lanes
Limited Access Expressway (Bridge Segment)	Chino	28,500	63,900	95,900	127,800
Expressway	Chino	-	40,900	61,300	81,700
Major Arterial	Chino	-	37,400	56,100	74,800
Primary Arterial	Chino	18,000	30,000	48,000	-
Secondary Arterial	Chino	16,000	28,000	-	-
Collector	Chino	15,000	-	-	-
Principal Arterial	Chino Hills	-	-	56,100	-
Minor Arterial	Chino Hills	-	28,000	-	-
Urban Arterial	Eastvale	-	35,900	53,900	-
Major Collector	Eastvale	-	18,000	-	-
Capacities represent the maximum ADT volume at LOS E					
Sources: Chino General Plan Update Technical Background Report, 2023 Chino Hills General Plan, 2015 Eastvale General Plan, 2024 FDOT 2023 Multimodal Quality/Level of Service Handbook					

Euclid Avenue is classified in the General Plan as an Expressway from SR 71 all the way through the City. Euclid Avenue is the only roadway in the City classified as an Expressway, which has a capacity that is approximately 9% greater than the next highest classification of Major Arterial. In the General Plan, an Expressway is described as a “divided high flow arterial”. On an Expressway, traffic signals are generally spaced further apart in comparison to standard arterials and side streets and driveways are typically restricted to right-turn-in/right-turn-out movements only, resulting in the ability to carry a higher volume of traffic.

The roughly 1.5-mile segment of Euclid Avenue between SR 71 and Pine Avenue generally functions as a limited-access highway due to the absence of traffic signals and minimal cross streets. Without traffic signals to interrupt the flow of traffic, this segment operates at a higher capacity than the typical Expressway segments north of Pine Avenue. Because of this, a capacity consistent with a limited-access highway is applied for the purpose of this study for the segment between SR 71 and Pine Avenue, which includes the limits of the Project.



LOS for arterial roadway intersections are determined based on operating conditions during the AM and PM peak hours and the geometric configuration of the intersection. HCM delay methodology was used to analyze both the signalized intersections and the stop-controlled intersections. Cubic's Synchro signal timing and analysis software was used to calculate the intersection delay and LOS. For signalized intersections, this methodology assumes signal timing/phasing for existing and future signal analysis using parameters outlined in the City's TIA guidelines (Exhibit C – Signalizing Intersection Analysis Parameters).

The LOS standards for the City's roadway network are based on the City's General Plan Circulation Element. The City's TIA guidelines specify that signalized intersections be evaluated using HCM methodology and utilize LOS D as the minimum desirable LOS during the peak hours. The HCM 7th Edition LOS calculation methodology and the associated performance standards used in this analysis are summarized in **Table 1-8**.

Table 1-8 Performance Criteria – Arterial intersections

Delay Methodology Calculation Methodology Level of service based on “average vehicle delay” calculated as follows: – Synchro/HCM 7 delay-based intersection methodology for traffic signals – HCM 7 delay-based intersection methodology for stop sign control Performance Standard Level of Service D defined as follows: – stopped delay to not exceed 55 seconds for signalized intersections – stopped delay to not exceed 35 seconds for stop sign control
LOS Thresholds An intersection is considered to be negatively affected if: • LOS worsens from LOS D or better to LOS E or F • Unacceptable or extended queuing defined as spill over from turn pockets into through lanes, and spill over into intersections Note: For intersections under joint jurisdiction of the County and Caltrans or Caltrans, the analysis utilizes the corresponding threshold of the agency with responsibility for the operation of the intersection, which is typically Caltrans.
Abbreviations: LOS – Level of Service

Consistent with Exhibit C from the City's TIA guidelines, the following parameters were utilized in Synchro for the signalized intersections:

Existing Conditions

- 1,800 vehicles per hour of green per lane (vphgpl) for exclusive through and exclusive right-turn lanes
- 1,700 vphgpl for exclusive left-turn lanes
- 1,600 vphgpl for exclusive dual left-turn lanes

Opening Year (2030) and Long Range (2050) Cumulative Conditions

- 1,900 vphgpl for exclusive through and exclusive right-turn lanes
- 1,800 vphgpl for exclusive left turn lanes
- 1,700 vphgpl for exclusive dual left-turn lanes
- Peak hour factor (PHF) of 1.0

For all scenarios, a minimum green time of 7 seconds is utilized for turning movements, and a minimum green time of 10 seconds is utilized for through movements. In addition, traffic signal cycle lengths within the City's jurisdiction were constrained between 60 seconds and 120 seconds.

1.4.2 San Bernardino Congestion Management Program

The San Bernardino County (County) Congestion Management Program (CMP) defines a systematic approach for managing congestion in the County. Goals, methodology, performance standards, and monitored roadways and intersections are set forth in the County's CMP to achieve federal and state congestion management goals and requirements for funding. CMP arterials in Chino include Central Avenue, Mountain Avenue, Edison Avenue, Riverside Drive, and Chino Hills Parkway. There are approximately 18 CMP monitored intersections in the City, with 3 of the 18 located within the study area used in this analysis.

The CMP requires that traffic impact analysis reports must be prepared to satisfy CMP requirements when a proposed change in land use or a development project is forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips generated, based on trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual. Due to the nature of this project as an improvement to an existing roadway, it would not meet the 250 two-way peak hour trip CMP threshold, and therefore, a CMP traffic impact analysis is not required. However, CMP intersections have been identified in this analysis for informational purposes. The County CMP utilizes LOS as the metric for managing congestion. The CMP LOS standards apply to AM and PM weekday peak hours. The CMP maintains a LOS standard of LOS E or better, except for locations identified as LOS F under existing conditions in the CMP.



1.5 Summary of Findings

Following is a summary of the key findings of this traffic study. A discussion of the traffic operational analysis is presented first, followed by a summary of the CEQA analysis.

1.5.1 Operational Analysis

The Project is anticipated to alleviate congestion at the existing Euclid Avenue Bridge bottleneck, end temporary road closures due to seasonal flooding, and increase access for bicyclists and pedestrians within the City. Four bridge cross sections were considered, including 2-lane, 4-lane, 6-lane, and 8-lane bridge scenarios. Based on quantitative analysis results, an assessment of the Chino area circulation system, and coordination with the City, the 4-lane bridge alternative is recommended as the preferred alternative. Along with the bridge itself, the Project would construct a grade-separated intersection at Pomona Rincon Road. The Project would also construct a traffic signal at the intersection of Euclid Avenue and McCombs Way (entrance to Prado Regional Park).

Overall, the 4-lane bridge is expected to meet the near-term and long-range capacity needs of Euclid Avenue without increasing vehicular delay outside of the Project area.

Under Opening Year (2030) cumulative conditions, several study locations are forecast to function at unacceptable LOS E or LOS F; however, the forecast increases in traffic are not due to the Project. Rather, the Project will alleviate the existing Euclid Avenue Bridge bottleneck by improving the roadway from 2-lanes to 4-lanes and will provide additional pedestrian and bicycle access within the Project limits. The Project will also be constructing improvements at two existing intersections that are currently operating at LOS F in the PM peak hour, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road.

The Long Range (2050) cumulative condition reflects the buildout of the City's General Plan roadway network and traffic volumes derived from SBTAM forecasts that are consistent with the City's General Plan update. While several intersections are forecast to operate at undesirable LOS E or LOS F in the Long Range (2050) cumulative conditions scenario, no location is forecast to worsen from LOS D to LOS E or to LOS F due to the Project. Furthermore, the amount of delay at each location that is forecast to operate at LOS D or LOS E is shown to be reduced by the Project.

The Project improves LOS in the Long Range (2050) cumulative condition at the following locations that are forecast to be LOS E or LOS F without the Project:

2. Euclid Avenue & Pine Avenue (AM improves from LOS E to LOS D)
3. Euclid Avenue & McCombs Way (PM improves from LOS F to LOS A)
4. Euclid Avenue & Pomona Rincon Road (AM improves from LOS F to LOS A & PM improves from LOS E to LOS A)
7. Butterfield Ranch Road & SR 71 SB Off-Ramps (PM improves from LOS F to LOS E)



10. SR 71 SB Ramps & Pine Avenue (PM improves from LOS F to LOS E)

22. Archibald Avenue & Schleisman Road (PM improves from LOS E to LOS D)

The Project will be constructing improvements at two existing intersections that are currently operating at LOS F in the PM peak hour, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road, as well as construct pedestrian and bicycle facilities as follows:

Euclid Avenue and McCombs Way (Prado Regional Park Entrance)

The unsignalized intersection on Euclid Ave at the entrance to Prado Regional Park (McCombs Way), which is just north of the bridge area, currently operates at LOS F during the PM peak hour. While the location is not forecast to meet the minimum peak hour volume criteria for installation of a traffic signal in the near-term, a traffic signal would improve safety for vehicles entering and exiting the park. As such, a traffic signal is recommended to be constructed in conjunction with the bridge widening project. With the installation of a traffic signal, the intersection is forecast to operate at LOS A (see Table 3-1).

Euclid Avenue and Pomona Rincon Road

The unsignalized intersection on Euclid Ave at Pomona Rincon Road, which is just south of the bridge area, currently operates at LOS F during the PM peak hour. Because of the close proximity to the bridge location, this intersection is recommended to be reconstructed with grade-separation such that access to Pomona Rincon Road is provided via two ramp junctions. With this grade-separation, the resulting two intersections are forecast to operate at LOS A (see Table 3-1).

Pedestrian and Bicycle Facilities

As discussed in Section 2.1.4, the City's General Plan identifies placement of a Class I off-street bike path along Euclid Avenue in the vicinity of the Project. The Project will be constructing a barrier protected multi-use trail along the easterly side of the bridge structure and it is recommended that the multi-use trail be extended northerly to the entrance of Prado Regional Park (McCombs Way) as a part of the Project. At the southerly end of the Project, the multi-use trail is recommended to connect to Pomona Rincon Road until such time that bicycle facilities are provided through the SR 71 interchange area.

1.5.2 CEQA Analysis

In accordance with current CEQA practice, the Project's effect on induced travel demand has been assessed (see analysis in Chapter 5). As noted by State guidelines, not all transportation projects would lead to a measurable and substantial increase in vehicle travel, which includes projects that do not add capacity to the overall transportation system. As demonstrated, the Project would improve the safety of the existing bridge and roadway but would not increase the overall vehicle capacity to the system as a whole because roadway capacity is constrained by the existing 4-lane segments of Euclid Avenue just



Euclid Avenue Bridge Project

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north and south of the Project limits. The Project would also construct a traffic signal at the entrance to Prado Regional Park, which will reduce the capacity of Euclid Avenue in comparison to the existing free-flowing conditions. Furthermore, with four lanes, the Project segment would have substantially less capacity than the ultimate 8-lane segments specified by the City's General Plan for Euclid Avenue for each of the segments leading to the Project. Therefore, the Project would not likely lead to a substantial or measurable increase in vehicle travel and would have a less-than-significant impact on transportation based on VMT.



2 Transportation Setting

This chapter describes the transportation setting for the traffic analysis. Existing conditions are first discussed, followed by a discussion of the derivation of future traffic volumes. Planned roadway improvements within the vicinity of the Project are also discussed.

2.1 Existing Conditions

The following section describes existing traffic conditions in the study area. It includes a description of the study area roadway system, existing traffic volumes, and the corresponding LOS as defined by the performance criteria outlined in the previous chapter.

2.1.1 Existing Roadway System

The study area intersections are under the jurisdiction of the City as well as the nearby Cities of Chino Hills and Eastvale, or jointly with Caltrans. The study area is illustrated in the previously referenced **Figure 1-1** and consists of 22 intersections and 29 roadway segments.

The Master Plan of Highways for the portion of the City near the Project is shown in **Figure 2-1**. It illustrates all the existing and planned future roadways in the City. The existing roadway network in the study area is illustrated in **Figure 2-2** in the form of intersection lane configurations for the intersections being evaluated.

Euclid Avenue is classified in the City's General Plan as an Expressway from SR 71 through the City. However, the roughly 1.5-mile segment of Euclid Avenue between SR 71 and Pine Avenue generally functions as a limited-access highway due to the absence of traffic signals and minimal cross streets.

2.1.2 Existing (2024) Traffic Volumes

Existing ADT volumes for arterials in the study area are provided in **Figure 2-3** together with the percent of trucks at key locations. Illustrations of existing peak hour turning movement volumes at each study area intersection can be found in **Figure 2-4** for the AM peak hour and **Figure 2-5** for the PM peak hour. As mentioned in Section 1.3, the traffic counts were collected in March 2024. Traffic count data sheets are provided in **Appendix A**.

2.1.3 Intersection LOS Analysis

A summary of the existing (2024) intersection delay and the corresponding LOS of the study area intersections are provided in **Table 2-1**. The control type of each intersection, whether stop controlled or signalized, is also shown in the table. Synchro software was used to calculate intersection delay and LOS using the methodology described in the previous Chapter. Detailed delay and LOS calculation worksheets are provided in **Appendix B**.



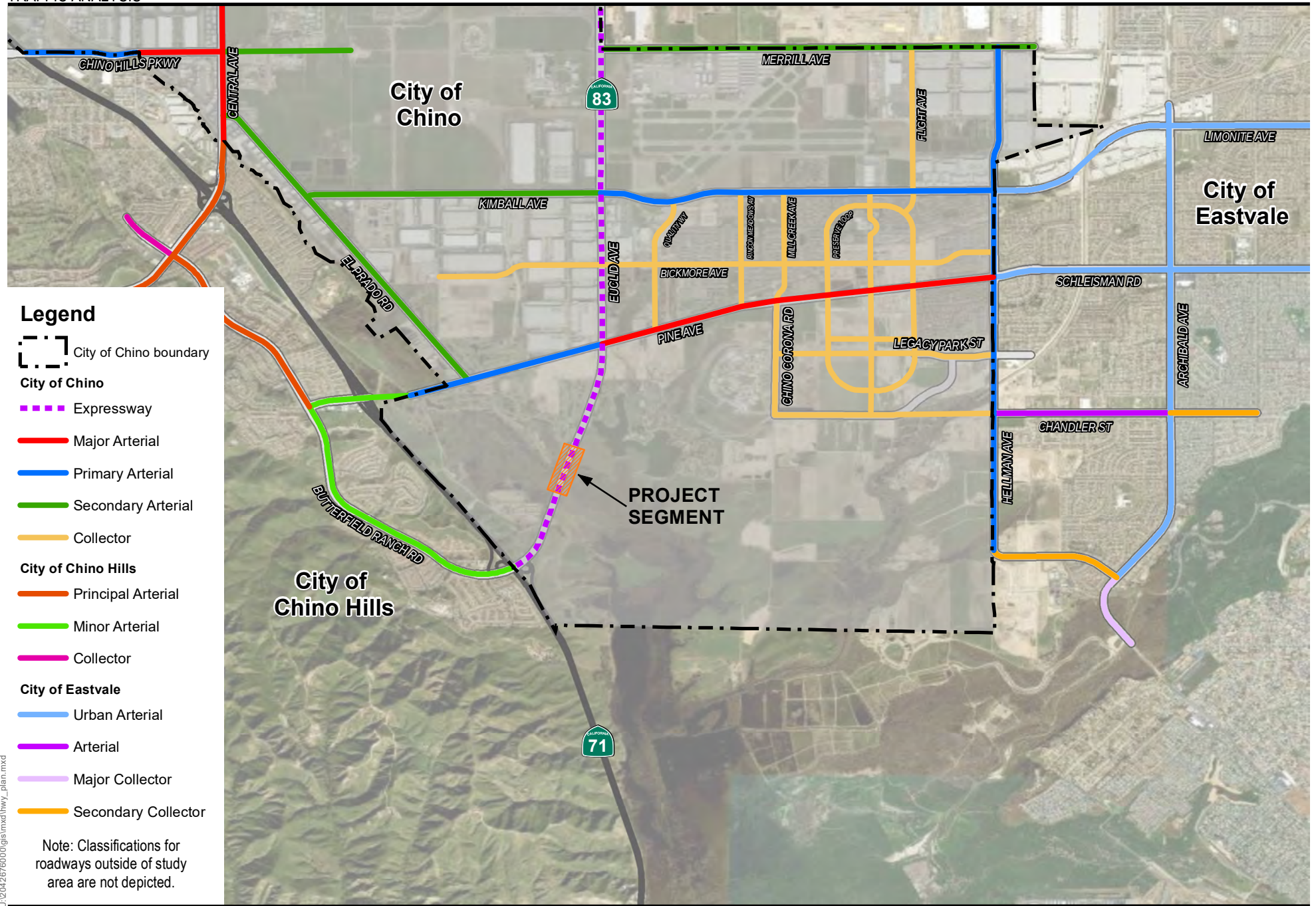


Figure 2-1
Master Plan of Highways
2.2

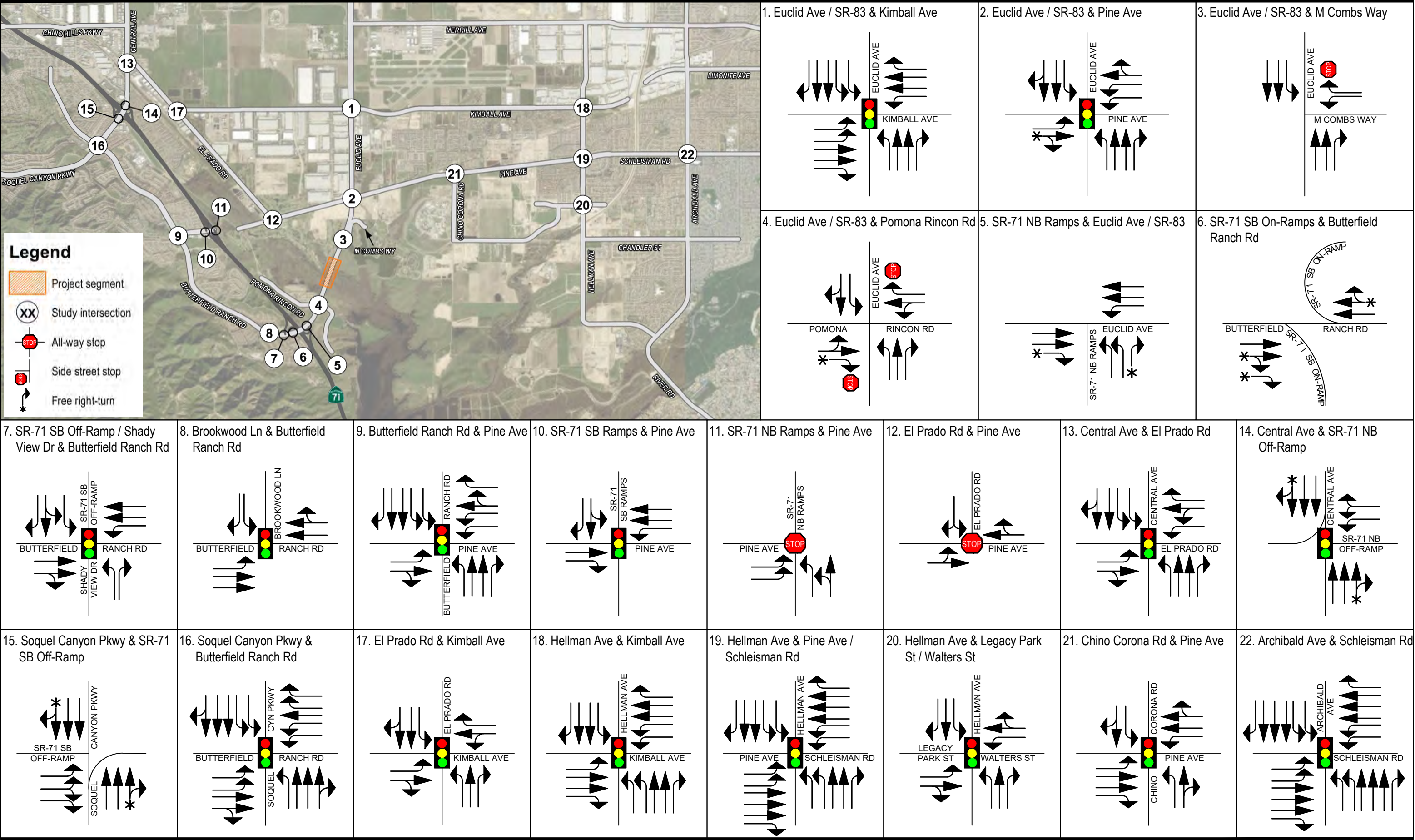
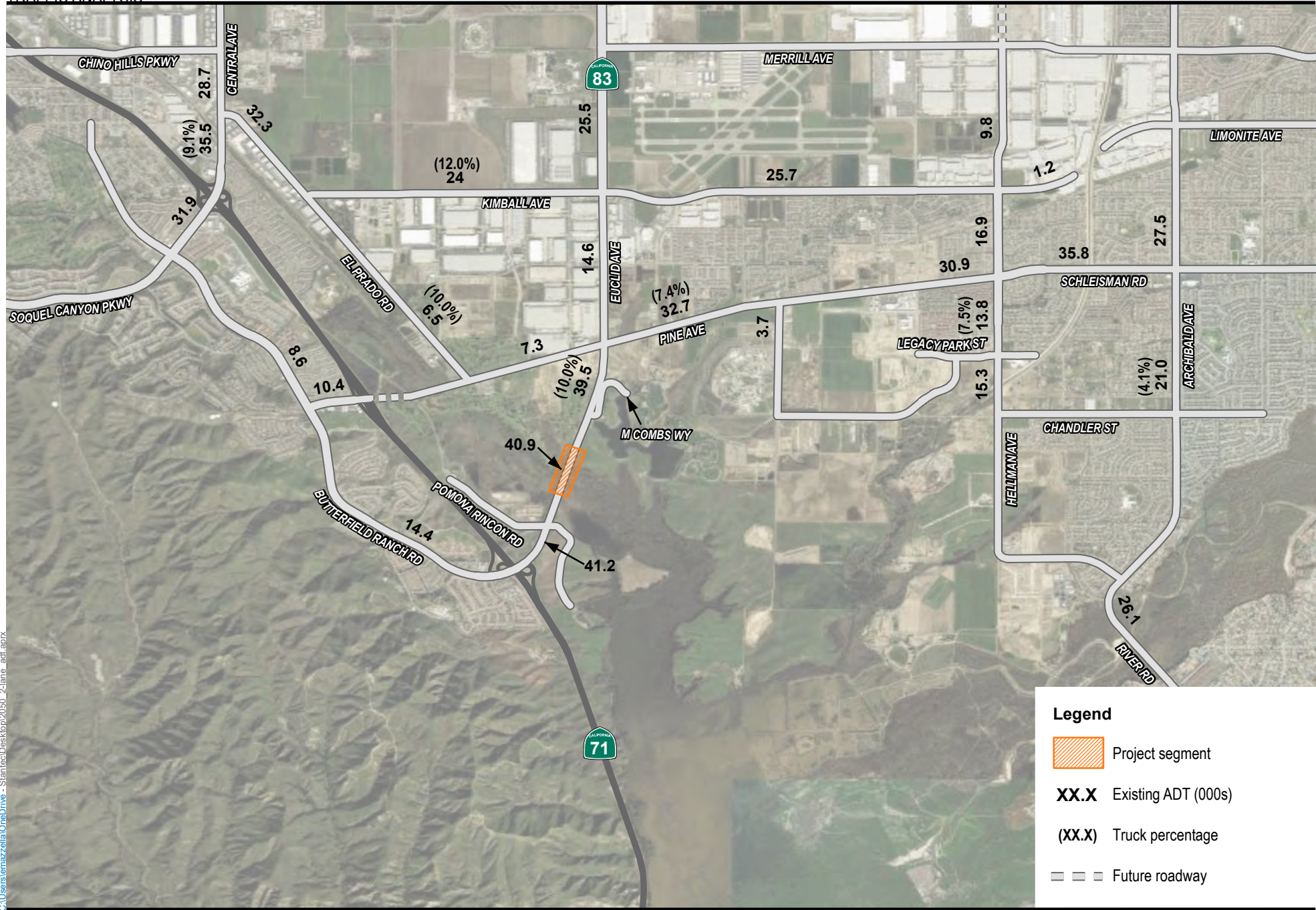


Figure 2-2
Existing (2024) Intersection Lane Configurations
2.3



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Figure 2-3
Existing (2024) Average Daily Traffic Volumes

2.4

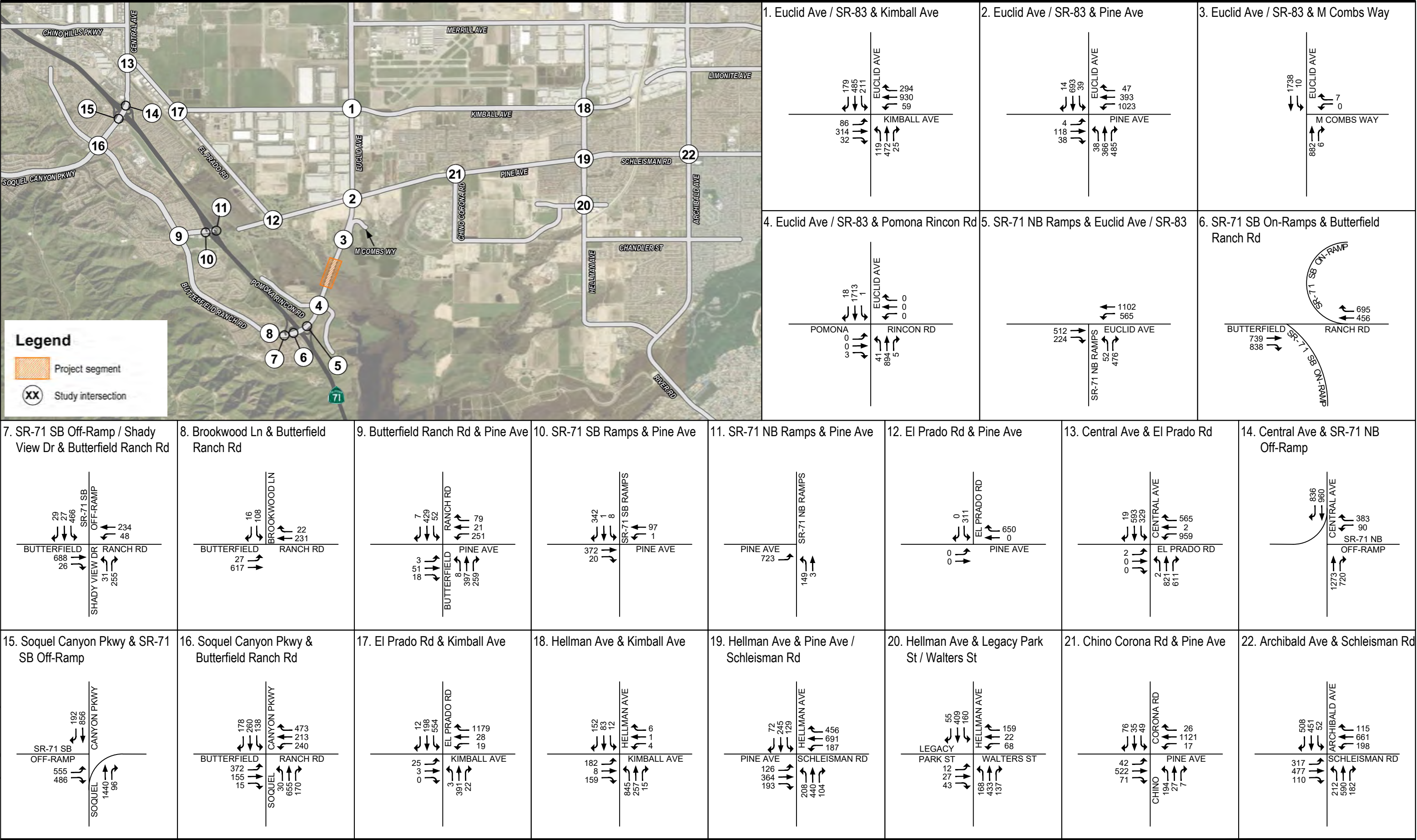
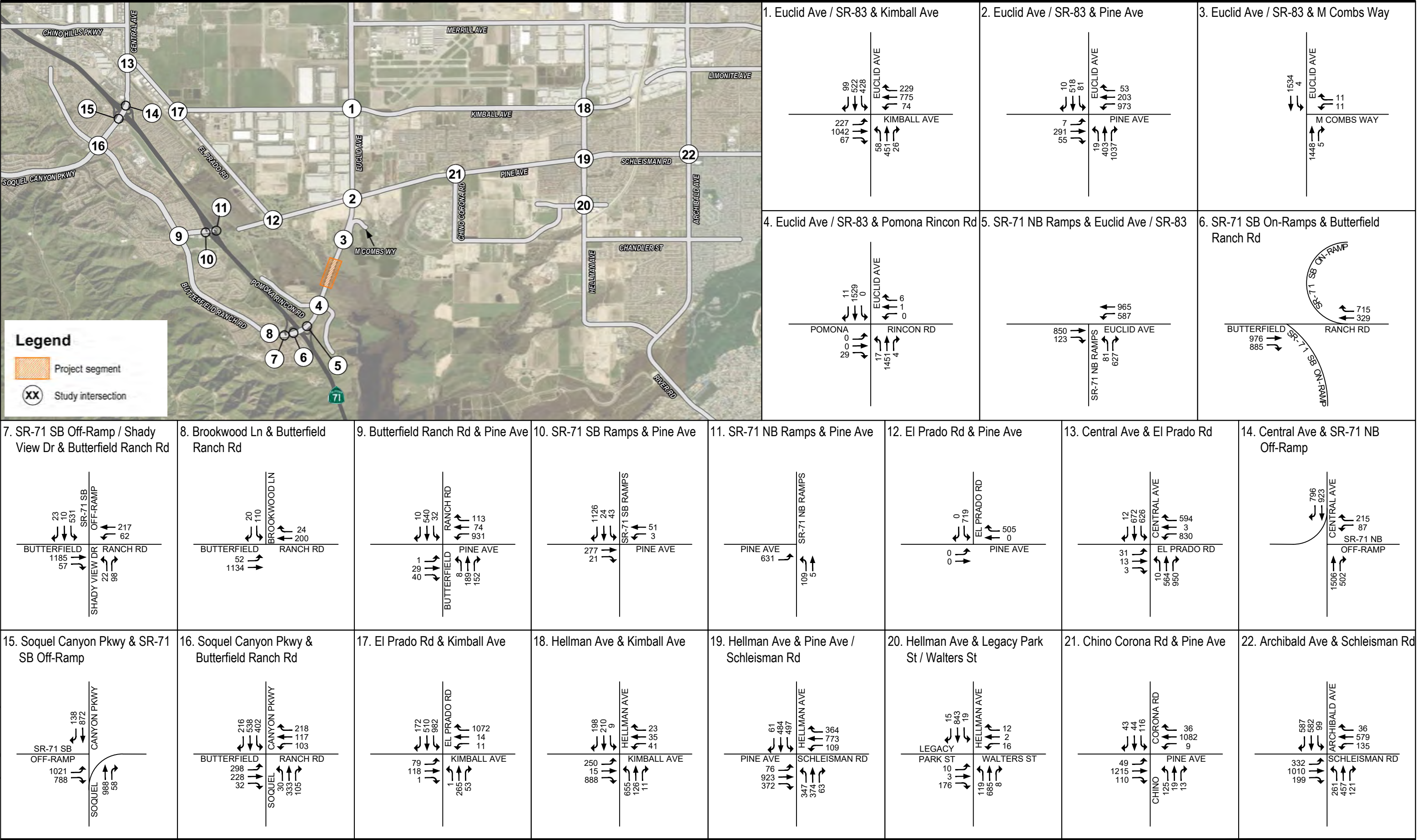


Figure 2-4
Existing (2024) AM Peak Hour Intersection Volumes
2.5



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Figure 2-5
Existing (2024) PM Peak Hour Intersection Volumes
2.6

Euclid Avenue Bridge Project
2 Transportation Setting

Table 2-1 Intersection LOS Analysis – Existing (2024) Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Euclid Avenue & Kimball Avenue	Signal	29.5	C	56.0	E
2. Euclid Avenue & Pine Avenue	Signal	35.0	D	63.9	E
3. Euclid Avenue & McCombs Way (Prado Regional Park Entrance)	TWSC	11.8	B	95.1	F
4. Euclid Avenue & Pomona Rincon Road	TWSC	0.8	A	78.3	F
5. Euclid Avenue & SR 71 NB Ramps	Signal	12.6	B	18.2	B
6. Euclid Avenue & SR 71 SB On-Ramps	Free	0.0	A	0.0	A
7. Butterfield Ranch Road & SR 71 SB Off-Ramps	Signal	29.8	C	38.7	D
8. Butterfield Ranch Road & Brookwood Lane	Signal	8.1	A	9.1	A
9. Butterfield Ranch Road & Pine Avenue	Signal	16.4	B	46.6	D
10. Pine Avenue & SR 71 SB Ramps	Signal	8.9	A	20.8	C
11. Pine Avenue & SR 71 NB Ramps	AWSC	12.8	B	11.4	B
12. El Prado Road & Pine Avenue	AWSC	25.0	C	147.6	F
13. Central Avenue & El Prado Road	Signal	36.2	D	91.6	F
14. Central Avenue & SR 71 NB Ramps	Signal	9.9	A	7.6	A
15. Central Avenue & SR 71 SB Ramps	Signal	15.7	B	20.1	C
16. Soquel Canyon Parkway & Los Serranos Country Club Drive	Signal	68.0	E	29.5	C
17. El Prado Road & Kimball Avenue	Signal	78.8	E	81.0	F
18. Hellman Avenue & Kimball Avenue	Signal	51.0	D	37.8	D
19. Hellman Avenue & Schleisman Road	Signal	23.1	C	72.4	E
20. Hellman Avenue & Legacy Park Street/Walters Street	Signal	26.4	C	22.6	C
21. Mill Creek/Chino Corona Road & Pine Avenue	Signal	14.4	B	14.1	B
22. Archibald Avenue & Schleisman Road	Signal	55.8	E	70.3	E
LOS – Level of service TWSC – Two-way stop-control AWSC – All-way stop-control Note: Delay and LOS for stop-control intersections represents the single approach with the highest delay					



The following intersections are shown to operate at an undesirable LOS E or LOS F in existing (2024) conditions:

1. Euclid Avenue & Kimball Avenue (PM peak hour)
2. Euclid Avenue & Pine Avenue (PM peak hour)
3. Euclid Avenue & McCombs Way (Prado Regional Park Entrance) (PM peak hour)
4. Euclid Avenue & Pomona Rincon Road (PM peak hour)
12. El Prado Road & Pine Avenue (PM peak hour)
13. Central Avenue & El Prado Road (PM peak hour)
16. Soquel Canyon Parkway & Los Serranos Country Club Drive (AM peak hour)
17. El Prado Road & Kimball Avenue (AM and PM peak hours)
19. Hellman Avenue & Schleisman Road (PM peak hour)
22. Archibald Avenue & Schleisman Road (AM and PM peak hours)

2.1.4 Active Transportation

Active transportation refers to non-motorized means of travel such as walking or biking. Pedestrian facilities in the City generally consist of sidewalks and crosswalks with notable exceptions in the Project area as discussed below.

The City adopted the Chino Bicycle and Pedestrian Master Plan (BPMP) in January 2016. The BPMP provides a comprehensive overview of the state of bicycling and walking in the City as well as direction for future investments in bicycle and pedestrian facilities programs. There are currently no existing pedestrian or bicycle facilities in the immediate vicinity of the Project.

Figure 2-6 illustrates the City's Existing Bicycle and Pedestrian Facilities and Planned Future Bicycle Facilities. Along Euclid Avenue within the Project limits, the City's General Plan identifies a future Class I off-street bike path, as does the Specific Plan for The Preserve³.

The nearest pedestrian infrastructure to the Project area is at the intersection of Euclid Avenue and Pine Avenue and at the Euclid Avenue and SR 71 Northbound Ramp intersection.

³ The Preserve Specific Plan, City of Chino, Amended December 2021



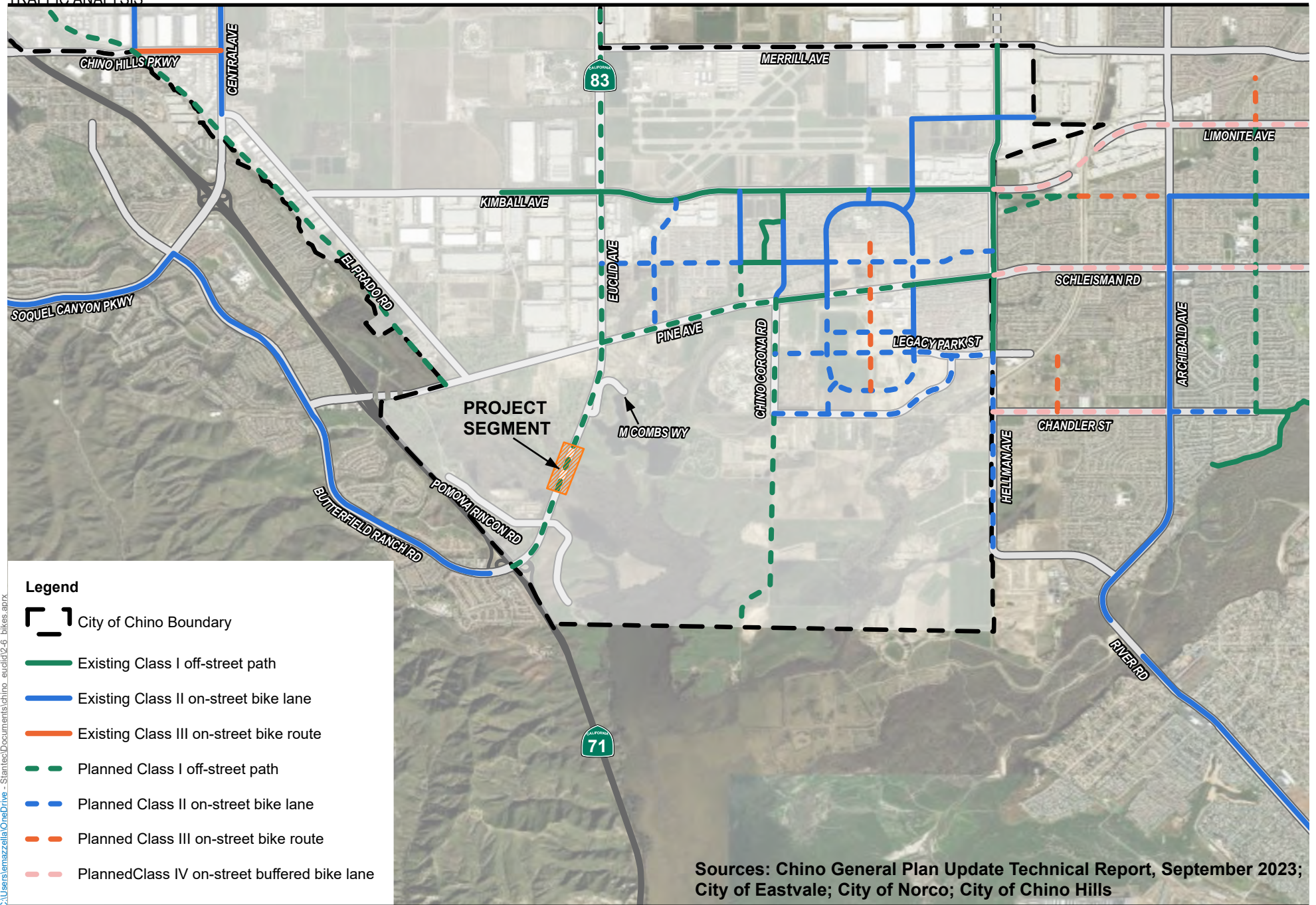


Figure 2-6
Existing Bicycle and Pedestrian Facilities and Planned Future Bicycle Facilities

2.1.5 Public Transportation

Omnitrans provides bus service throughout the San Bernardino valley region, including services in the City of Chino. **Figure 2-7** illustrates the existing transit routes. The Chino Transit Center is located near the intersection of Central Avenue and Chino Avenue, approximately seven miles north of the Project site. Currently, there is no transit service operating in the vicinity of the Project.

2.1.6 Truck Routes

Figure 2-8 illustrates the existing truck routes in the Project area. As shown, Euclid Avenue is a designated truck route for Large (38/40) trucks.

2.1.7 Traffic Signal Warrant Analysis

A traffic signal warrant analysis was conducted for the four unsignalized intersections within the study area. The results indicate that none of the unsignalized study intersections currently warrant a traffic signal in existing (2024) conditions. The traffic signal warrant worksheets are provided in **Appendix C**.

2.1.8 Roadway Segment Analysis

The roadway segment study area utilized for this analysis is based on a review of the key roadway segments in the Project area. The study area includes a total of 28 existing roadway segments that generally consist of each study intersection approach. Existing conditions ADT volume-to-capacity (V/C) ratios and LOS are listed in **Table 2-2**. As shown in the table, the following roadway segments currently operate at undesirable LOS E or LOS F:

4. El Prado Rd between Central Ave & Kimball Ave (LOS F)
10. Pine Ave between Euclid Ave & Chino Corona Rd (LOS F)
18. Euclid Ave between Pine Ave & Prado Regional Park (LOS E)
19. Euclid Ave between Prado Regional Park & Pomona Rincon Rd (LOS F)
20. Euclid Ave between Pomona Rincon Rd & SR 71 (LOS F)
21. River Rd south of Archibald Ave (LOS F)

The Project segment of Euclid Ave between Pine Ave & Prado Regional Park currently carries approximately 41,000 ADT, which exceeds the capacity of a typical 2-lane Limited Access Expressway. As shown in the previously referenced **Table 2-2**, improving the roadway to a 4-lane segment would improve existing (2024) conditions to LOS C.



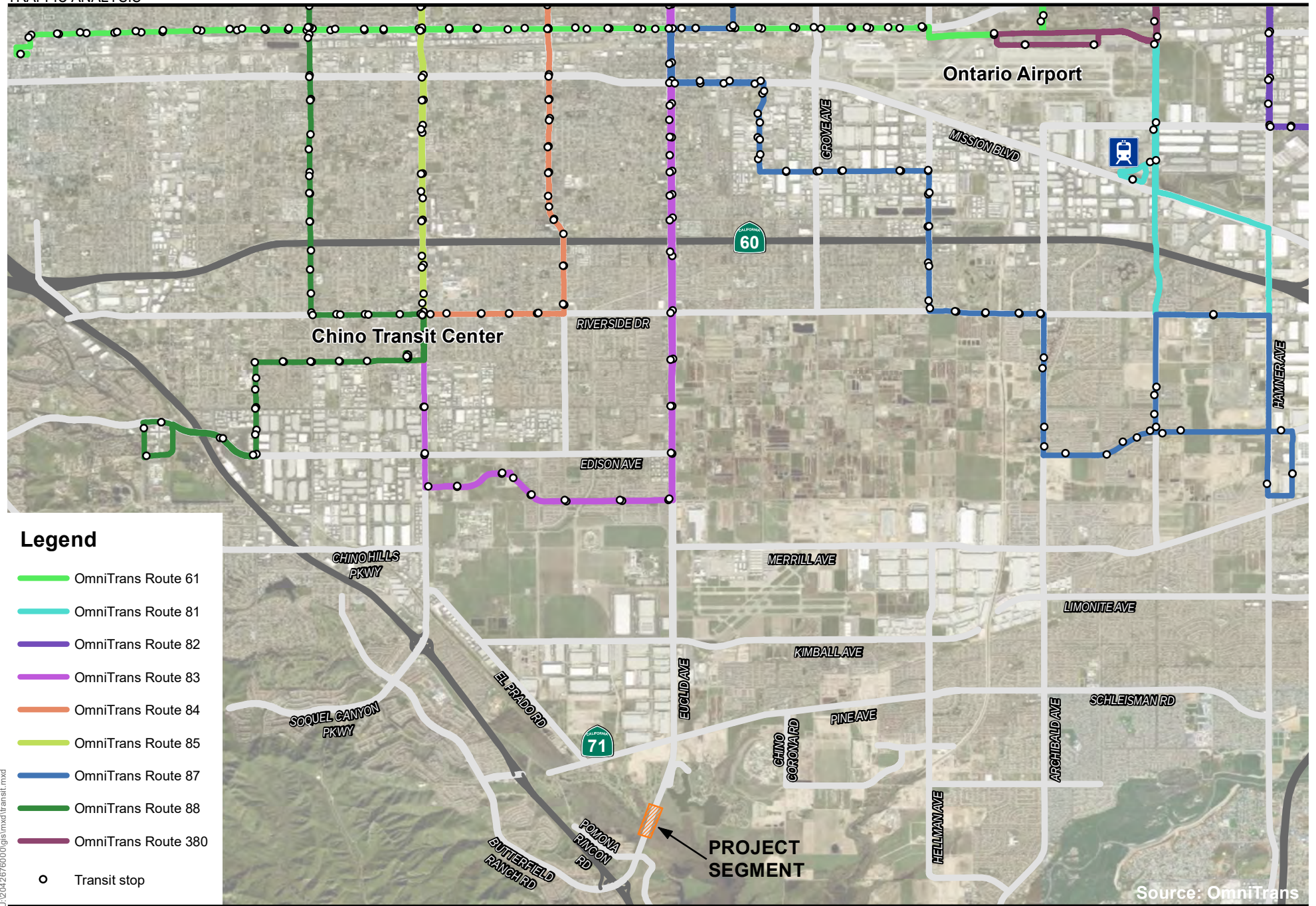


Figure 2-7
Existing Transit Routes
2.11

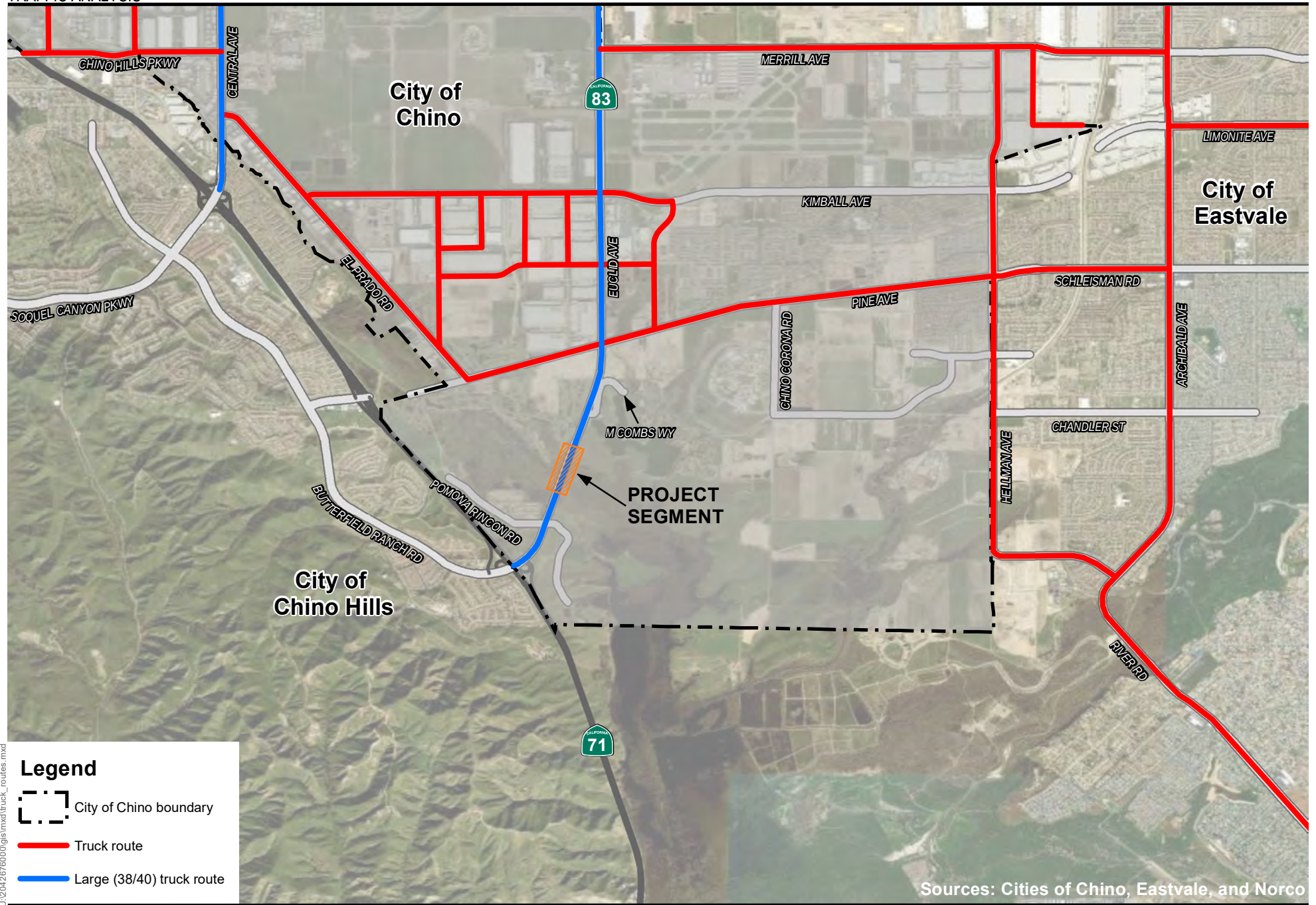


Figure 2-8
Existing Truck Routes
2.12

Euclid Avenue Bridge Project
2 Transportation Setting

Table 2-2 Roadway Segment Analysis – Existing (2024) Conditions

Segment	Facility Type	Lanes	Capacity	Volume	V/C	LOS
1. Central Ave north of El Prado Rd	Major Arterial	4	37,400	28,700	0.77	C
2. Central Ave between El Prado Rd & SR 71	Major Arterial	6	56,100	35,500	0.63	B
3. Soquel Canyon Pkwy between SR 71 & Butterfield Ranch Rd	Principal Arterial ¹	6	56,100	31,900	0.57	A
4. El Prado Rd between Central Ave & Kimball Ave	Secondary Arterial	4	28,000	32,300	1.15	F
5. El Prado Rd between Kimball Ave & Pine Ave	Secondary Arterial	2	16,000	6,500	0.41	A
6. Butterfield Ranch Rd between Soquel Cyn Pkwy & Pine Ave	Principal Arterial ¹	6	56,100	8,600	0.15	A
7. Butterfield Ranch Rd between Pine Ave & SR 71	Minor Arterial ¹	4	28,000	14,400	0.51	A
8. Pine Ave between Butterfield Ranch Rd & SR 71	Minor Arterial ¹	4	28,000	10,400	0.37	A
9. Pine Ave between El Prado Rd & Euclid Ave	Primary Arterial	2	18,000	7,300	0.41	A
10. Pine Ave between Euclid Ave & Chino Corona Rd	Major Arterial	2	18,000	32,700	1.82	F
11. Pine Ave between Chino Corona Rd & Hellman Ave	Major Arterial	4	37,400	30,900	0.83	D
12. Schleisman Rd between Hellman Ave & Archibald Ave	Urban Arterial ²	6	53,900	35,800	0.66	B
13. Kimball Ave between El Prado Rd & Euclid Ave	Secondary Arterial	4	28,000	24,000	0.86	D
14. Kimball Ave between Euclid Ave & Hellman Ave	Primary Arterial	4	30,000	25,700	0.86	D
15. Limonite Ave east of Hellman Ave	Urban Arterial ²	2	18,000	1,200	0.07	A
16. Euclid Ave north of Kimball Ave	Expressway	4	40,900	25,500	0.62	B
17. Euclid Ave between Kimball Ave & Pine Ave	Expressway	4	40,900	14,600	0.36	A
18. Euclid Ave between Pine Ave & Prado Regional Park	Expressway	4	40,900	39,500	0.97	E
19. Euclid Ave between Prado Regional Park & Pomona Rincon Rd	Expressway (Limited Access)	2*	28,500	40,900	1.44	F
		4**	63,900	40,900	0.64	C
20. Euclid Ave between Pomona Rincon Rd & SR 71	Expressway	4	40,900	41,200	1.01	F
21. Hellman Ave north of Kimball Ave	Primary Arterial	4	30,000	9,800	0.33	A
22. Hellman Ave between Kimball Ave & Pine Ave	Primary Arterial	4	30,000	16,900	0.56	A
23. Hellman Ave between Pine Ave & Legacy Park St	Primary Arterial	4	30,000	13,800	0.46	A
24. Hellman Ave between Legacy Park St & Chandler St	Primary Arterial	2	18,000	15,300	0.85	D
25. Archibald Ave north of Schleisman Rd	Urban Arterial ²	6	53,900	27,500	0.51	A
26. Archibald Ave between Schleisman Rd & Chandler St	Urban Arterial ²	6	53,900	21,000	0.39	A
27. River Rd south of Archibald Ave	Major Collector ²	4	18,000	26,100	1.45	F
28. Chino Corona Rd south of Pine Ave	Collector	2	15,000	3,700	0.25	A
*with existing 2-lane bridge **with proposed 4-lane bridge ¹ City of Chino Hills location ² City of Eastvale location						



2.1.9 Basic Freeway Segment Analysis

Study area freeway mainline analysis locations were selected based on Caltrans traffic study guidelines, which specify the analysis of State highway facilities.

As such, this study evaluates the eight freeway segments adjacent to the nearest points of entry to the state highway system for existing conditions, as shown in **Table 2-3**. As shown, all study freeway mainline segments operate at an acceptable LOS D or better with the exception of the following:

- 6. Central Ave to Pine Ave (northbound) – AM and PM peak hours
- 7. Pine Ave to Euclid Ave (northbound) – AM and PM peak hours

Basic Freeway Segment worksheets are provided in **Appendix E**. Freeway mainline peak hour volumes were derived from 2023 Caltrans Traffic Census Program peak hour volumes (latest available) and were factored to 2024 utilizing growth rates derived from SBTAM forecasts.

Table 2-3 Basic Freeway Segment Analysis – Existing (2024) Conditions

Segment	Lanes	AM Peak Hour				PM Peak Hour			
		Truck %	Volume	Density	LOS	Truck %	Volume	Density	LOS
SR 71 Freeway - Southbound									
1. North of Central	3	3	2,420	13.9	B	3	2,632	15.1	B
2. Central to Pine	2	3	2,653	22.9	C	3	2,976	26.1	D
3. Pine to Euclid	2	3	2,430	20.9	C	3	2,629	22.7	C
4. South of Euclid	2	3	2,530	23.8	C	3	2,917	18.3	C
SR 71 Freeway - Northbound									
5. North of Central	3	12	3,451	23.3	C	9	3,359	21.5	C
6. Central to Pine	2	13	3,572	>43.0	F	9	3,480	38.7	E
7. Pine to Euclid	2	14	3,478	>43.0	F	9	3,378	36.6	E
8. South of Euclid	3	15	3,423	25.1	C	10	3,327	23.2	C
LOS - Level of Service Note: Density in passenger cars per mile per lane (pc/mi/ln)									

2.1.10 Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for existing conditions. The freeway merge/diverge worksheets are provided in **Appendix F**. The results of the analysis are presented in **Table 2-4**.



Table 2-4 Freeway Merge/Diverge Analysis – Existing (2024) Conditions

Freeway Merge/Diverge Ramp Junctions	Freeway Lanes	AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS
SR 71 Freeway – Southbound					
1. Off-Ramp at Central Ave (Diverge)	3	>35.0	F	>35.0	F
2. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	26.7	D	29.4	D
3. On-Ramp at Central Ave (Merge)	3	24.7	C	27.4	D
4. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
5. On-Ramp at Pine Ave (Merge)	2	21.2	C	23.0	C
6. Off-Ramp at Euclid Ave (SR-83) (Diverge)	2	>35.0	F	>35.0	F
7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge)	2	>35.0	F	>35.0	F
8. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
SR 71 Freeway – Northbound					
9. On-Ramp at Central Ave (Merge)	3	>35.0	F	>35.0	F
10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	>35.0	F	31.8	E
11. Off-Ramp at Central Ave (Diverge)	2	>35.0	F	>35.0	F
12. On-Ramp at Pine Ave (Merge)	2	>35.0	F	>35.0	F
13. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
14. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
15. Off-Ramp at Euclid Ave (SR-83) (Diverge)	3	27.3	D	24.5	C

As shown, the following merge and diverge areas currently operate at an undesirable LOS E or LOS F:

SR 71 Southbound:

1. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
4. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
6. Off-Ramp at Euclid Ave (SR-83) (Diverge) – AM and PM peak hours
7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge) – AM and PM peak hours
8. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hour



SR 71 Northbound:

9. On Ramp at Central Ave (Merge) – AM and PM peak hours
10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge) – AM and PM peak hours
11. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
12. On-Ramp at Pine Ave (Merge) – AM and PM peak hours
13. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
14. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hours

2.2 Future Conditions

As previously discussed in Section 1.3, the SANBAG travel demand model, developed by Fehr & Peers specifically for use in the City's upcoming General Plan update, was used to derive forecasts for analysis of future conditions.

2.2.1 Opening Year (2030)

The project's Opening Year (2030) cumulative conditions scenario is estimated with the application of a compounded annual ambient growth rate derived using forecasts from the SANBAG travel demand model developed by Fehr & Peers specifically for use in the City's upcoming General Plan update. A comparison of SANBAG model data indicates an average growth rate of approximately 1.7% per year over a 31-year period between 2019 and 2050 (approximately 54% total growth), which equates to 10.2% of growth for the period between 2024 and 2030. Since the growth rate is based on buildout of the City's General Plan, it represents a cumulative condition appropriate for near-term analysis.

2.2.2 Design Year (2050)

For the design year, a Long Range (2050) cumulative conditions setting is utilized. Traffic volume forecasts were derived by using a special version of the SANBAG travel demand model developed by Fehr & Peers specifically for use in the City's upcoming General Plan update. These baseline 2050 General Plan forecasts include an 8-lane Euclid Avenue bridge consistent with the City's General Plan. Additional model runs were prepared by Stantec for scenarios consisting of a 2-lane bridge, a 4-lane bridge, and a 6-lane bridge, and an 8-lane bridge, which were used to estimate the incremental difference in traffic volume that results from changing the number of lanes provided by the bridge. The network-wide incremental changes in roadway volumes were then applied to the baseline General Plan Long Range (2050) cumulative conditions to derive forecasts for 2-lane, 4-lane, and 6-lane bridge scenarios, respectively.



3 Traffic Analysis

The following sections summarize the results of the future-year LOS analyses specified by the City's TIA guidelines.

3.1 Opening Year (2030) Traffic Conditions Analysis

As previously discussed in Section 1.3, the Opening Year (2030) cumulative conditions traffic volumes presented in this analysis are derived by applying a growth rate to represent ambient growth and account for trips generated from cumulative projects.

Opening Year (2030) cumulative conditions ADT volumes (without and with the Project) are shown in **Figure 3-1**. AM peak hour and PM peak hour intersection turning movement volumes under Opening Year (2030) cumulative conditions for without and with Project conditions are shown in **Figure 3-2** and **Figure 3-3**, respectively. Volumes for the Euclid Avenue/Pomona Rincon Road interchange for with-Project conditions are shown in **Figure 3-4**.

3.1.1 Intersection LOS Analysis

For this scenario, existing lanes were assumed except for where the Project would reconfigure Euclid Avenue and Pomona Rincon Road. Synchro software was used to calculate intersection delay and LOS. Peak hour intersection delay and LOS can be found in **Table 3-1**. Detailed delay and LOS calculation worksheets are provided in **Appendix B**.

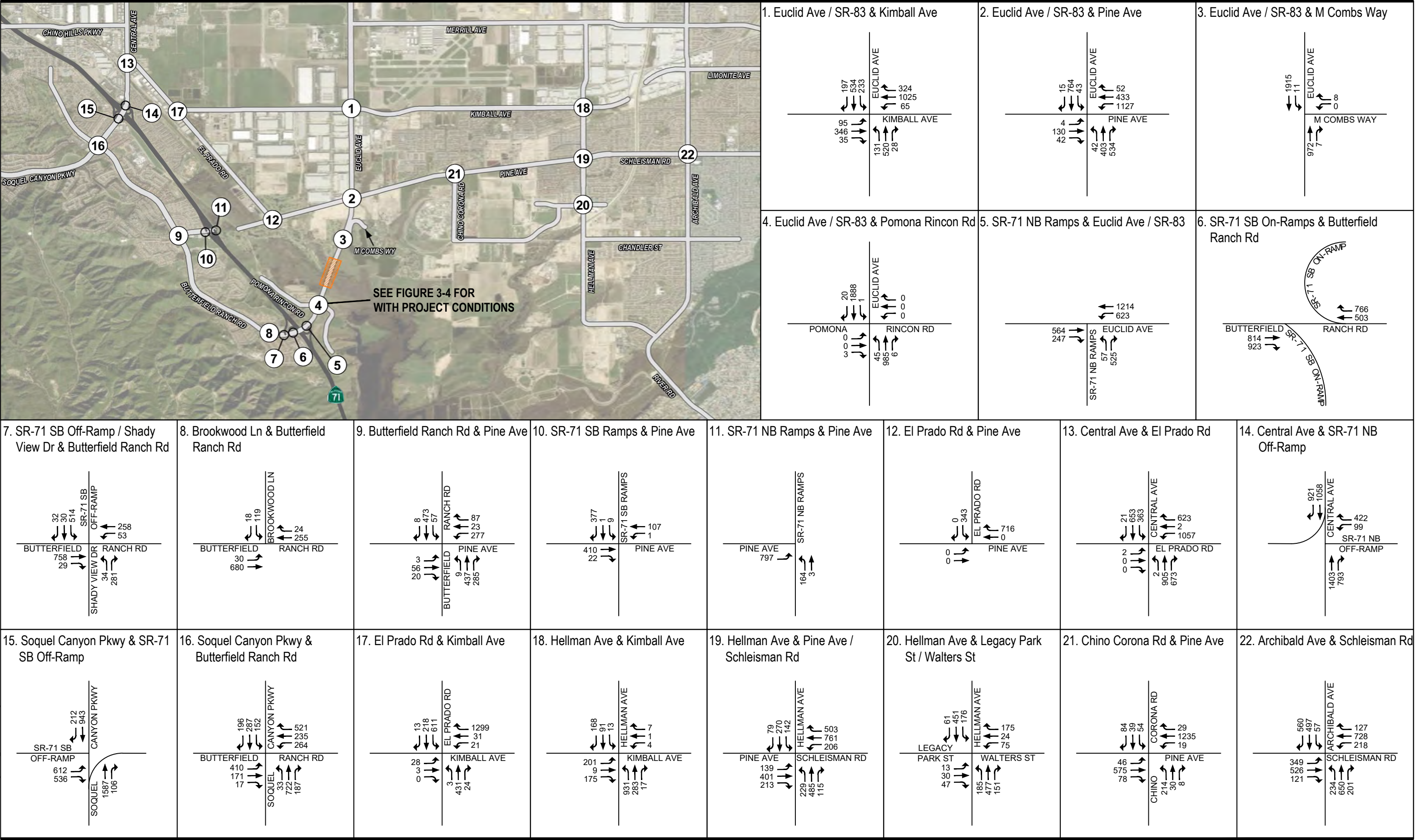
As shown in **Table 3-1**, the following intersections are forecast to operate at an undesirable LOS E or LOS F in Opening Year (2030) cumulative conditions:

1. Euclid Avenue & Kimball Avenue (PM peak hour)
2. Euclid Avenue & Pine Avenue (PM peak hour)
7. Butterfield Ranch Road & SR 71 SB Off-Ramps (PM peak hour)
9. Butterfield Ranch Road & Pine Avenue (PM peak hour)
12. El Prado Road & Pine Avenue (AM and PM peak hours)
13. Central Avenue & El Prado Road (PM peak hour)
16. Soquel Canyon Parkway & Los Serranos Country Club Drive (AM peak hour)
17. El Prado Road & Kimball Avenue (AM and PM peak hours)
18. Hellman Avenue & Kimball Avenue (AM peak hour)
19. Hellman Avenue & Schleisman Road (PM peak hour)
22. Archibald Avenue & Schleisman Road (AM and PM peak hours)





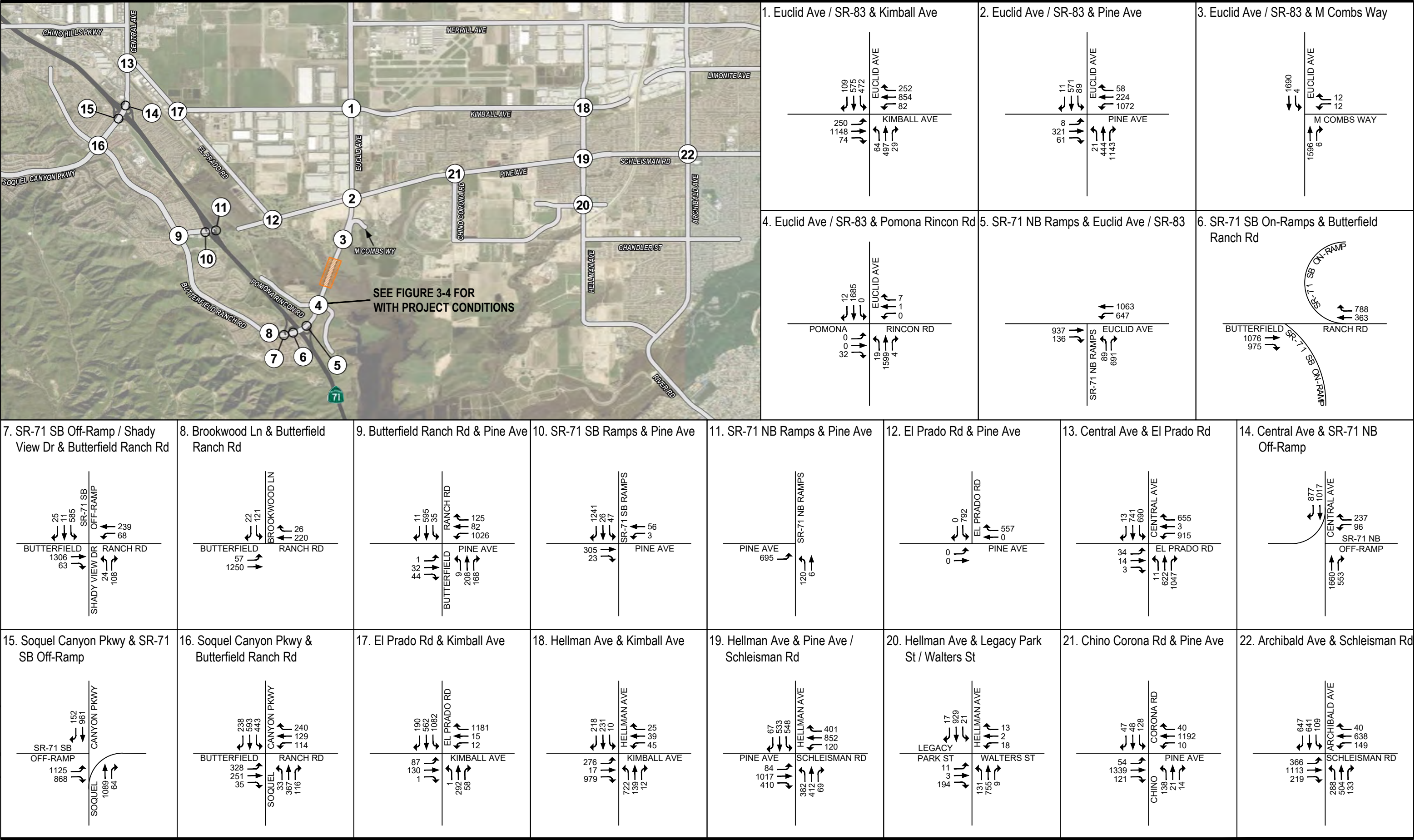
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Figure 3-2
Opening Year (2030) AM Peak Hour Intersection Volumes
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Figure 3-3
Opening Year (2030) PM Peak Hour Intersection Volumes
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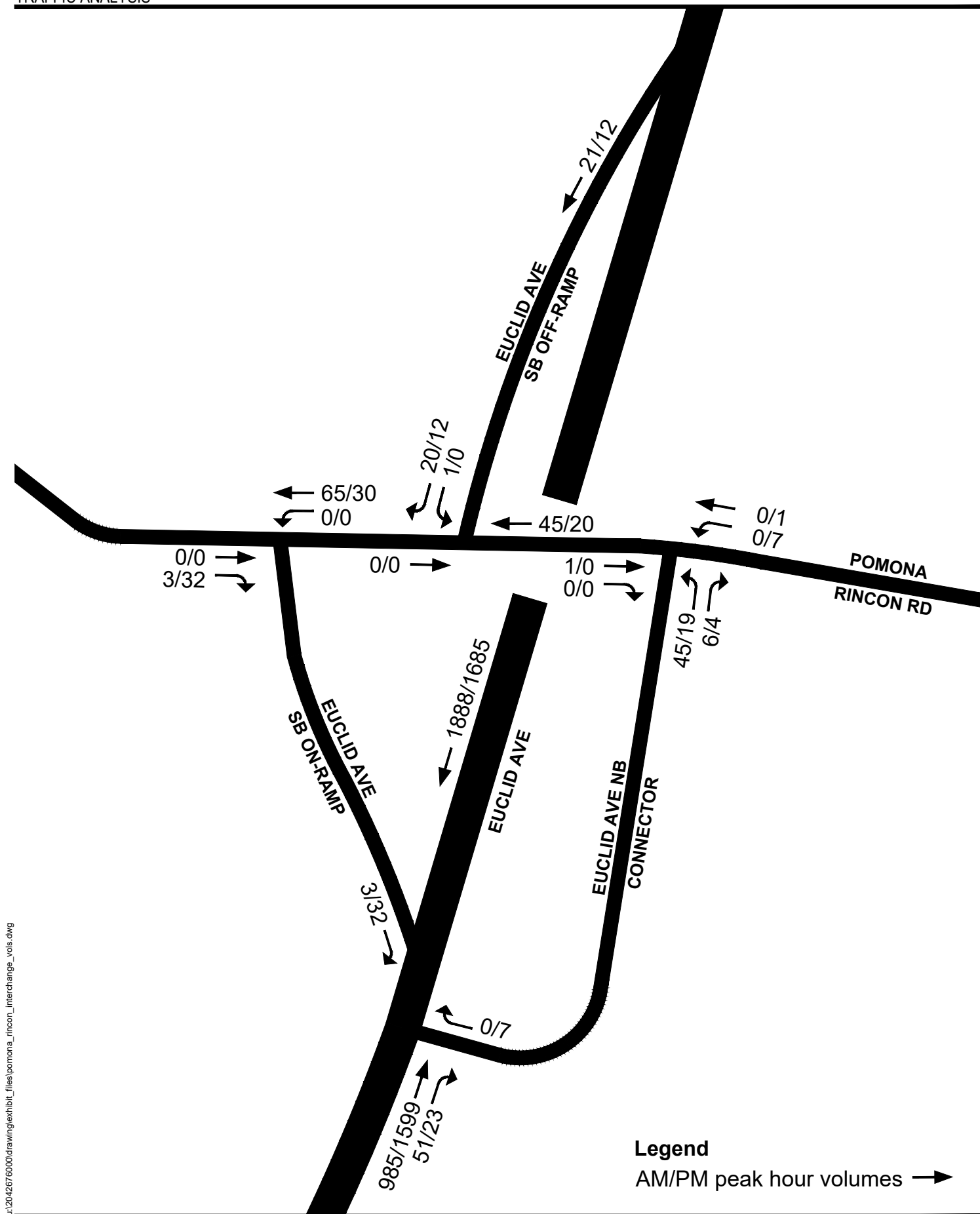


Figure 3-4
Opening Year (2030) with Project - Euclid Avenue/Pomona
Rincon Road Peak Hour Interchange Volumes

Euclid Avenue Bridge Project
3 Traffic Analysis

Table 3-1 Intersection LOS Analysis – Opening Year (2030) Cumulative Conditions

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1. Euclid Avenue & Kimball Avenue	Signal	30.8	C	67.7	E
2. Euclid Avenue & Pine Avenue	Signal	39.0	D	75.1	E
3. Euclid Avenue & McCombs Way (Prado Regional Park Entrance)	Signal	2.1	A	3.8	A
4a. Euclid Avenue (EB Ramps) & Pomona Rincon Road	TWSC	8.6	A	8.7	A
4b. Euclid Avenue (WB Ramps) & Pomona Rincon Road	TWSC	8.7	A	8.5	A
5. Euclid Avenue & SR 71 NB Ramps	Signal	12.7	B	18.4	B
6. Euclid Avenue & SR 71 SB On-Ramps	Free	0.0	A	0.0	A
7. Butterfield Ranch Road & SR 71 SB Off-Ramps	Signal	30.8	C	56.9	E
8. Butterfield Ranch Road & Brookwood Lane	Signal	8.0	A	9.1	A
9. Butterfield Ranch Road & Pine Avenue	Signal	16.8	B	71.4	E
10. Pine Avenue & SR 71 SB Ramps	Signal	8.8	A	23.5	C
11. Pine Avenue & SR 71 NB Ramps	AWSC	13.8	B	12.1	B
12. El Prado Road & Pine Avenue	AWSC	38.0	E	181.4	F
13. Central Avenue & El Prado Road	Signal	43.0	D	138.4	F
14. Central Avenue & SR 71 NB Ramps	Signal	10.1	B	7.6	A
15. Central Avenue & SR 71 SB Ramps	Signal	16.0	B	20.5	C
16. Soquel Canyon Parkway & Los Serranos Country Club Drive	Signal	71.0	E	32.9	C
17. El Prado Road & Kimball Avenue	Signal	96.3	F	97.7	F
18. Hellman Avenue & Kimball Avenue	Signal	58.1	E	47.0	D
19. Hellman Avenue & Schleisman Road	Signal	23.4	C	76.4	E
20. Hellman Avenue & Legacy Park Street/Walters Street	Signal	26.3	C	22.7	C
21. Mill Creek/Chino Corona Road & Pine Avenue	Signal	18.1	B	14.2	B
22. Archibald Avenue & Schleisman Road	Signal	60.4	E	77.1	E
LOS – Level of service TWSC – Two-way stop-control AWSC – All-way stop-control Note: Delay and LOS for stop-control intersections represents the single approach with the highest delay					



Two locations, (#7) Butterfield Ranch Road and SR 71 SB Off-Ramps, and (#18) Hellman Avenue & Kimball Avenue, are forecast to worsen from LOS D in existing (2024) conditions to LOS E in Opening Year (2030) cumulative conditions. The remaining locations listed above are already operating at either LOS E or LOS F in existing (2024) conditions.

Two locations, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road, are within the Project limits and are forecast to improve from LOS F to LOS A with the Project's improvements (see discussion in Section 3.1.6).

3.1.2 Traffic Signal Warrant Analysis

A traffic signal warrant analysis was conducted for the four unsignalized intersections within the study area. Under Opening Year (2030) cumulative conditions, only the El Prado Road and Pine Avenue intersection warrants a traffic signal based on peak hour traffic volumes. However, it should be noted that the high-volume intersection movements (southbound left-turn and westbound right-turn) do not conflict. Nevertheless, the installation of a traffic signal would alleviate excessive delay from the intersection's existing all-way stop-control configuration. The traffic signal warrant worksheets are provided in **Appendix C**.

3.1.3 Roadway Segment Analysis

Similar to existing conditions, the same 28 roadway segments were analyzed under Opening Year (2030) cumulative conditions and the results are summarized below in **Table 3-2**. As shown in the table, the following nine roadway segments would operate at undesirable LOS E or LOS F under Opening Year (2030) cumulative conditions:

- 4. El Prado Rd between Central Ave & Kimball Ave (LOS F)
- 10. Pine Ave between Euclid Ave & Chino Corona Rd (LOS F)
- 11. Pine Ave between Chino Corona Rd & Hellman Ave (LOS E)
- 13. Kimball Ave between El Prado Rd & Euclid Ave (LOS E)
- 14. Kimball Ave between Euclid Ave & Hellman Ave (LOS E)
- 18. Euclid Ave between Pine Ave & Prado Regional Park (LOS F)
- 19. Euclid Ave between Pomona Rincon Rd & SR 71 (LOS F)
- 27. River Rd south of Archibald Ave (LOS F)

The Project segment of Euclid Ave between Pine Ave & Prado Regional Park is forecast to carry approximately 45,000 ADT in Opening Year (2030) cumulative conditions, which exceeds the capacity of a typical 2-lane Limited Access Expressway. As shown in the previously referenced **Table 3-2**, improving the roadway to a 4-lane segment would improve existing (2024) conditions to LOS C.



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3 Traffic Analysis

Table 3-2 Roadway Segment Analysis Locations – Opening Year (2030) Cumulative Conditions

Segment	Facility Type	Lanes	Capacity	Volume	V/C	LOS
1. Central Ave north of El Prado Rd	Major Arterial	4	37,400	31,600	0.84	D
2. Central Ave between El Prado Rd & SR 71	Major Arterial	6	56,100	39,100	0.70	B
3. Soquel Canyon Pkwy between SR 71 & Butterfield Ranch Rd	Principal Arterial ¹	6	56,100	35,200	0.63	B
4. El Prado Rd between Central Ave & Kimball Ave	Secondary Arterial	4	28,000	35,600	1.27	F
5. El Prado Rd between Kimball Ave & Pine Ave	Secondary Arterial	2	16,000	7,200	0.45	A
6. Butterfield Ranch Rd between Soquel Cyn Pkwy & Pine Ave	Principal Arterial ¹	6	56,100	9,500	0.17	A
7. Butterfield Ranch Rd between Pine Ave & SR 71	Minor Arterial ¹	4	28,000	15,900	0.57	A
8. Pine Ave between Butterfield Ranch Rd & SR 71	Minor Arterial ¹	4	28,000	11,500	0.41	A
9. Pine Ave between El Prado Rd & Euclid Ave	Primary Arterial	2	18,000	8,000	0.44	A
10. Pine Ave between Euclid Ave & Chino Corona Rd	Major Arterial	2	18,000	36,000	2.00	F
11. Pine Ave between Chino Corona Rd & Hellman Ave	Major Arterial	4	37,400	34,100	0.91	E
12. Schleisman Rd between Hellman Ave & Archibald Ave	Urban Arterial ²	6	53,900	39,500	0.73	C
13. Kimball Ave between El Prado Rd & Euclid Ave	Secondary Arterial	4	28,000	26,400	0.94	E
14. Kimball Ave between Euclid Ave & Hellman Ave	Primary Arterial	4	30,000	28,300	0.94	E
15. Limonite Ave east of Hellman Ave	Urban Arterial ²	2	18,000	1,300	0.07	A
16. Euclid Ave north of Kimball Ave	Expressway	4	40,900	28,100	0.69	B
17. Euclid Ave between Kimball Ave & Pine Ave	Expressway	4	40,900	16,100	0.39	A
18. Euclid Ave between Pine Ave & Prado Regional Park	Expressway	4	40,900	43,500	1.06	F
19. Euclid Ave between Prado Regional Park & Pomona Rincon Rd	Expressway (Limited Access)	2*	28,500	45,100	1.58	F
		4**	63,900	45,100	0.71	C
20. Euclid Ave between Pomona Rincon Rd & SR 71	Expressway	4	40,900	45,400	1.11	F
21. Hellman Ave north of Kimball Ave	Primary Arterial	4	30,000	10,800	0.36	A
22. Hellman Ave between Kimball Ave & Pine Ave	Primary Arterial	4	30,000	18,600	0.62	B
23. Hellman Ave between Pine Ave & Legacy Park St	Primary Arterial	4	30,000	15,200	0.51	A
24. Hellman Ave between Legacy Park St & Chandler St	Primary Arterial	2	18,000	16,900	0.94	E
25. Archibald Ave north of Schleisman Rd	Urban Arterial ²	6	53,900	30,300	0.56	A
26. Archibald Ave between Schleisman Rd & Chandler St	Urban Arterial ²	6	53,900	23,100	0.43	A
27. River Rd south of Archibald Ave	Major Collector ²	4	18,000	28,800	1.60	F
28. Chino Corona Rd south of Pine Ave	Collector	2	15,000	4,100	0.27	A



3.1.4 Basic Freeway Segment Analysis

Like existing conditions, eight freeway mainline segment study locations along SR 71 in vicinity of the Project were analyzed. Opening Year (2030) cumulative conditions freeway mainline volumes were derived from 2023 Caltrans Traffic Census Program peak hour volumes and were factored to year 2030 with growth rates derived from SBTAM forecasts. Analysis results in the form of density and LOS are shown in **Table 3-3**. Basic Freeway Segment worksheets are provided in **Appendix E**. As shown in the table, each segment operates within acceptable conditions except for the following:

6. Central Ave to Pine Ave (northbound) – AM and PM peak hours
7. Pine Ave to Euclid Ave (northbound) – AM and PM peak hours

Table 3-3 Basic Freeway Segment Analysis – Opening Year (2030) Cumulative Conditions

Segment	Lanes	AM Peak Hour				PM Peak Hour			
		Truck %	Volume	Density	LOS	Truck %	Volume	Density	LOS
SR 71 Freeway - Southbound									
1. North of Central	3	3	2,522	14.5	B	3	2,743	15.7	B
2. Central to Pine	2	3	2,774	24.1	C	3	3,111	27.6	D
3. Pine to Euclid	2	3	2,435	21.0	C	3	2,634	22.8	C
4. South of Euclid	2	3	2,612	24.6	C	3	2,917	18.3	C
SR 71 Freeway - Northbound									
5. North of Central	3	12	3,829	26.2	D	9	3,727	24.0	C
6. Central to Pine	2	13	3,953	>43.0	F	9	3,852	>43.0	F
7. Pine to Euclid	2	14	3,781	>43.0	F	9	3,671	43.0	E
8. South of Euclid	3	15	3,833	28.1	D	10	3,726	26.0	C
LOS - Level of Service Note: Density in passenger cars per mile per lane (pc/mi/ln)									

3.1.5 Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for Opening Year (2030) cumulative conditions. Ramp volumes were obtained from Opening Year (2030) cumulative conditions peak hour intersection volumes, which were ultimately derived from the application of a compounded annual growth rate to existing conditions peak hour traffic volumes. The freeway merge/diverge worksheets are provided in **Appendix F**. The results of the analysis are presented in **Table 3-4**.



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Table 3-4 Freeway Merge/Diverge Analysis – Opening Year (2030) Cumulative Conditions (4-Lane Bridge)

Freeway Merge/Diverge Ramp Junctions	Freeway Lanes	AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS
SR 71 Freeway – Southbound					
1. Off-Ramp at Central Ave (Diverge)	3	>35.0	F	>35.0	F
2. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	28.7	D	31.7	E
3. On-Ramp at Central Ave (Merge)	3	26.2	D	29.2	D
4. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
5. On-Ramp at Pine Ave (Merge)	2	21.3	C	23.5	C
6. Off-Ramp at Euclid Ave (SR-83) (Diverge)	2	>35.0	F	>35.0	F
7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge)	2	>35.0	F	>35.0	F
8. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
SR 71 Freeway – Northbound					
9. On-Ramp at Central Ave (Merge)	3	>35.0	F	>35.0	F
10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	>35.0	F	>35.0	F
11. Off-Ramp at Central Ave (Diverge)	2	>35.0	F	>35.0	F
12. On-Ramp at Pine Ave (Merge)	2	>35.0	F	>35.0	F
13. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
14. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
15. Off-Ramp at Euclid Ave (SR-83) (Diverge)	3	31.2	E	27.8	D

As shown, the following 13 of 15 total merge and diverge ramp junctions would operate at undesirable LOS E or LOS F during one or both peak hours in Opening Year (2030) cumulative conditions:

SR 71 Southbound:

1. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
2. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge) – PM peak hour
4. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
6. Off-Ramp at Euclid Ave (SR-83) (Diverge) – AM and PM peak hours
7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge) – AM and PM peak hours



8. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hours

SR 71 Northbound:

9. On-Ramp at Central Ave (Merge) – AM and PM peak hours
10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge) – AM and PM peak hours
11. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
12. On-Ramp at Pine Ave (Merge) – AM and PM peak hours
13. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
14. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hours
15. Off-Ramp at Euclid Ave (SR-83) (Diverge) – AM peak hour

3.1.6 Recommended Improvements

While several study locations are forecast to function at unacceptable LOS E or LOS F in Opening Year (2030) cumulative conditions, the forecast increases in traffic are not due to the Project. Rather, the Project will alleviate the existing Euclid Avenue Bridge bottleneck by improving the roadway from 2-lanes to 4-lanes and will provide additional pedestrian and bicycle access within the Project limits. The Project will also be constructing improvements at two existing intersections that are currently operating at LOS F in the PM peak hour, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road.

Euclid Avenue and McCombs Way (Prado Regional Park Entrance)

The unsignalized intersection on Euclid Ave at the entrance to Prado Regional Park (McCombs Way), which is just north of the bridge area, currently operates at LOS F during the PM peak hour. While the location is not forecast to meet the minimum peak hour volume criteria for installation of a traffic signal in the near-term, a traffic signal would improve safety for vehicles entering and exiting the park. As such, a traffic signal is recommended to be constructed in conjunction with the bridge widening project. With the installation of a traffic signal, the intersection is forecast to operate at LOS A (see Table 3-1).

Euclid Avenue and Pomona Rincon Road

The unsignalized intersection on Euclid Ave at Pomona Rincon Road, which is just south of the bridge area, currently operates at LOS F during the PM peak hour. Because of the close proximity to the bridge location, this intersection is recommended to be reconstructed with grade-separation such that access to Pomona Rincon Road is provided via two ramp junctions. With this grade-separation, the resulting two intersections are forecast to operate at LOS A (see Table 3-1).



Pedestrian and Bicycle Facilities

As discussed in Section 2.1.4, the City's General Plan identifies placement of a Class I off-street bike path along Euclid Avenue in the vicinity of the Project. The Project will be constructing a barrier protected multi-use trail along the easterly side of the bridge structure and it is recommended that the multi-use trail be extended northerly to the entrance of Prado Regional Park (McCombs Way) as a part of the Project. At the southerly end of the Project, the multi-use trail is recommended to connect to Pomona Rincon Road until such time that bicycle facilities are provided through the SR 71 interchange area.

3.2 Design Year (2050) Traffic Conditions Analysis

For the design year, a Long Range (2050) cumulative conditions analysis was prepared. The Long Range (2050) cumulative traffic condition includes multiple roadway network changes from the existing condition and Opening Year (2030) cumulative condition. These changes include the completion of the Pine Avenue Extension project, which would close the existing gap along Pine Avenue between the SR 71 ramps and El Prado Road. With the Pine Avenue Extension project, traffic signals would be installed at the SR 71 NB Ramps and Pine Avenue intersection, and at the El Prado Road and Pine Avenue intersection. The Long Range (2050) cumulative condition also includes all General Plan roadway network improvements, as previously mentioned in Section 2.2.2.

Long Range (2050) traffic volume forecasts based on General Plan buildout conditions were estimated using the SBTAM as discussed in Section 1.3. The SBTAM was used for forecasting volumes without the Project and with the Project as the proposed 2-lane bridge, and alternatively with the Project as a 4-lane bridge, a 6-lane bridge, and an 8-lane bridge. Each alternative results in minor differences to roadway network circulation, which ultimately leads to minor differences in traffic volume for each alternative. These incremental differences were applied to the baseline General Plan Long Range (2050) cumulative conditions to derive forecasts for each of the bridge alternatives.

A technical memorandum entitled *ADT Forecasts for Euclid Avenue Bridge Study Area* memorandum (ADT Memo) was prepared by Stantec to document the forecasted roadway segment ADT, V/C ratios, and LOS for each of the bridge alternatives. A copy of the ADT Memo is provided in **Appendix D** for reference. Based on a review of the ADT Memo, the 4-lane Euclid Avenue Bridge alternative was selected as the preferred alternative. As such, tables and figures presented in this section that describe Long Range (2050) cumulative conditions are representative of the preferred 4-lane bridge alternative, unless otherwise noted.

Long Range (2050) cumulative conditions ADT volumes without the Project are shown in **Figure 3-5**. ADT volumes for all bridge alternatives can be found in **Appendix D**. AM peak hour and PM peak hour intersection turning movement volumes under Long Range (2050) cumulative conditions for without Project conditions (4-lane bridge) are shown in **Figure 3-6** and **Figure 3-7**, respectively.





Figure 3-5

Long Range (2050) without Project Average Daily Traffic (ADT) Volumes

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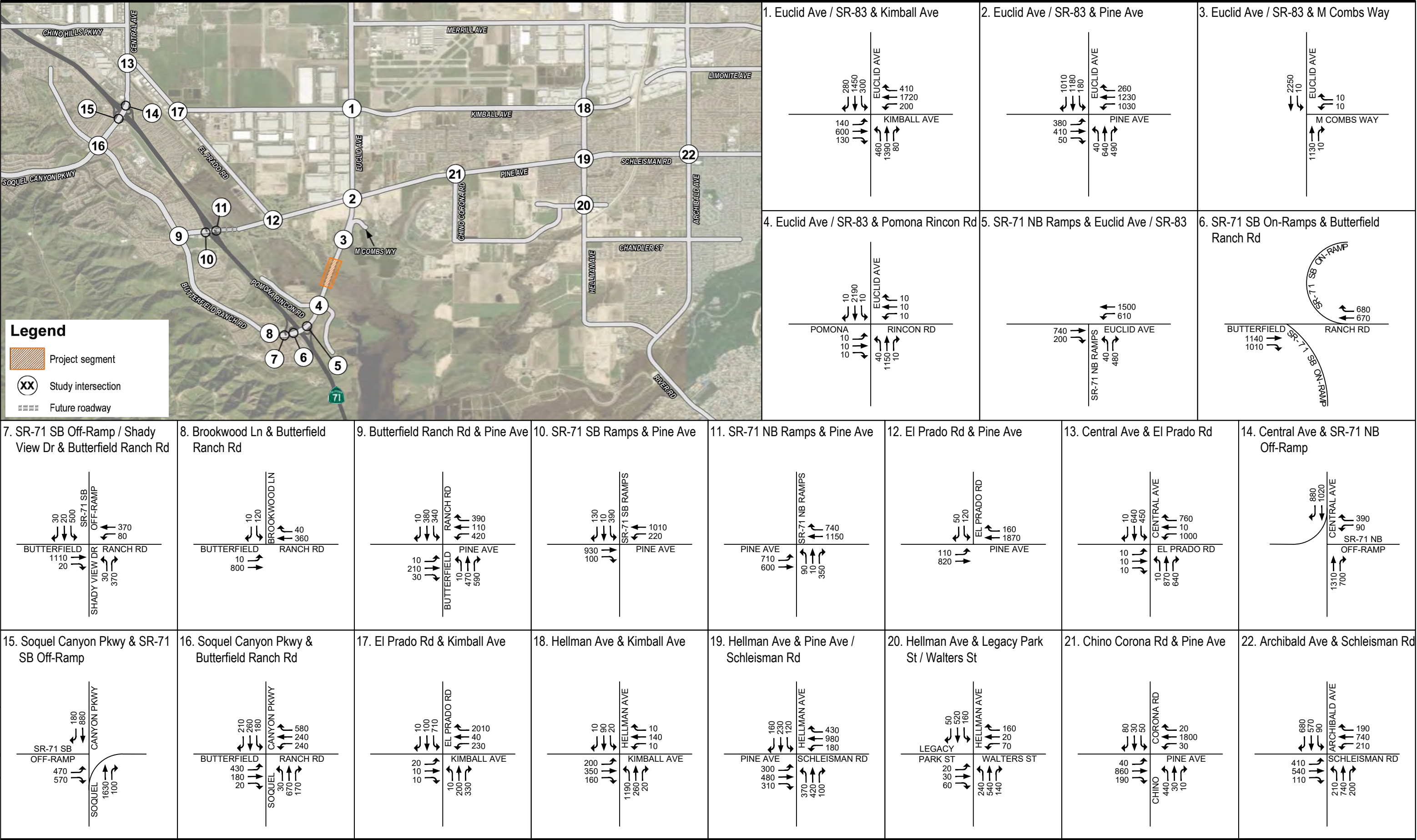
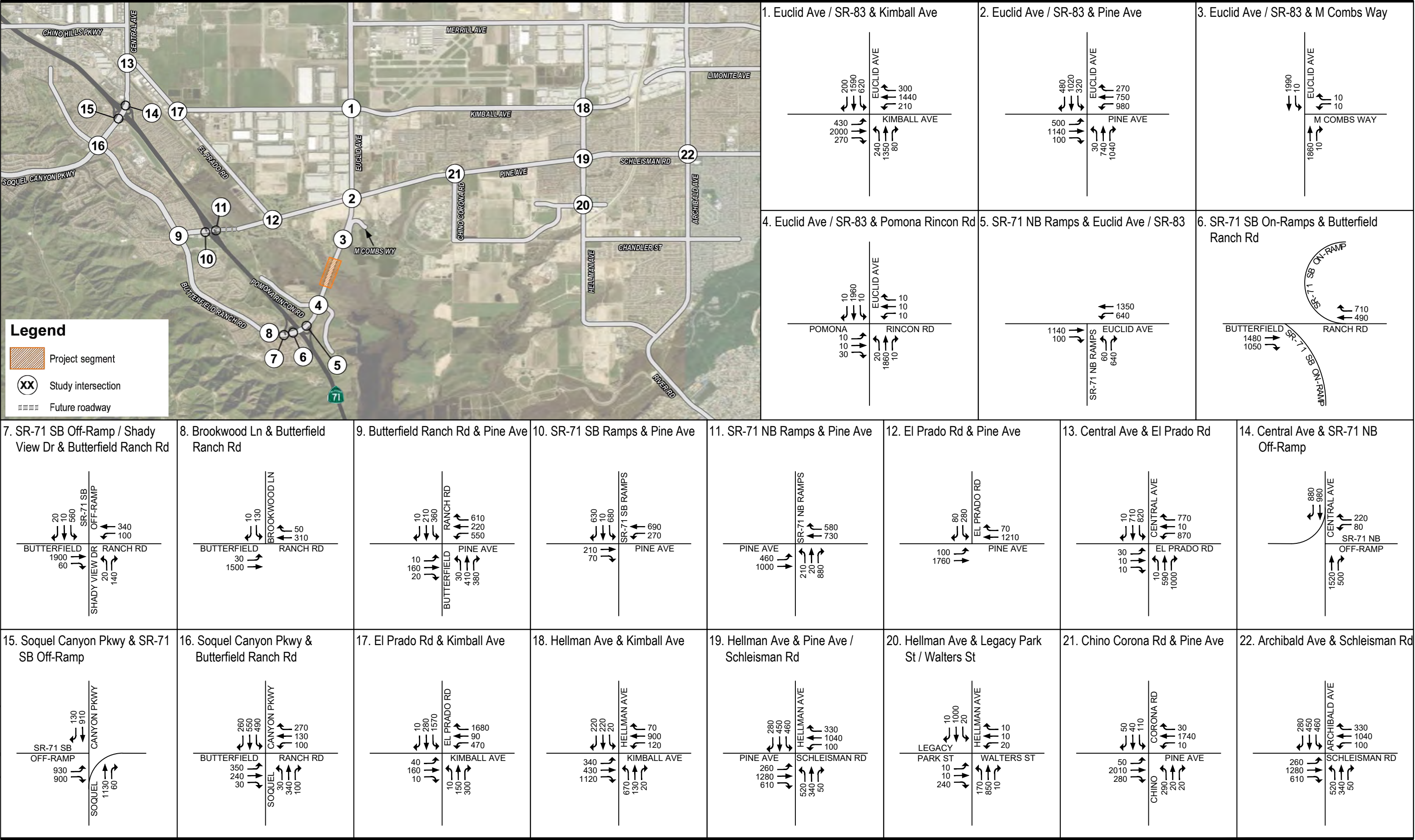


Figure 3-6

Long Range (2050) without Project AM Peak Hour Intersection Volumes

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TRAFFIC ANALYSIS



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Figure 3-7
Long Range (2050) without Project PM Peak Hour Intersection Volumes
3.15

Long Range (2050) cumulative conditions ADT volumes with the Project (4-lane bridge) are shown in **Figure 3-8**. AM peak hour and PM peak hour intersection turning movement volumes under Long Range (2050) cumulative conditions for with Project conditions (4-lane bridge) are shown in **Figure 3-9** and **Figure 3-10**, respectively. Peak hour volumes for the Pomona Rincon Road interchange (4-lane bridge) are shown in **Figure 3-11**. Long Range (2050) cumulative conditions ADT volumes for the other bridge alternatives can be found in **Appendix D**. Likewise, peak hour intersection volumes for the other bridge alternatives can be found in **Appendix G**.

3.2.1 Intersection LOS Analysis

Peak hour intersection LOS and delay based on the Long Range (2050) cumulative conditions traffic forecasts can be found in **Table 3-5**, which provides a comparison between the no-Project and the with-Project scenarios for each bridge cross section alternative. LOS and delay for other bridge alternatives in the Long Range (2050) cumulative condition are shown in **Appendix H**. Synchro software was used to calculate intersection delay and LOS. Detailed delay and LOS calculation worksheets are provided in **Appendix B**.

As shown in **Table 3-5**, several intersections would operate at undesirable LOS E or LOS F in the Long Range (2050) cumulative conditions scenario. However, no location is forecast to worsen from LOS D to LOS E or to LOS F due to the Project and the amount of delay at each location that is forecast to operate at LOS D or LOS E is shown to be reduced by the Project.

The Project improves LOS at the following locations that are forecast to be LOS E or LOS F without the Project:

2. Euclid Avenue & Pine Avenue (AM improves from LOS E to LOS D)
3. Euclid Avenue & McCombs Way (PM improves from LOS F to LOS A)
4. Euclid Avenue & Pomona Rincon Road (AM improves from LOS F to LOS A & PM improves from LOS E to LOS A)
7. Butterfield Ranch Road & SR 71 SB Off-Ramps (PM improves from LOS F to LOS E)
10. SR 71 SB Ramps & Pine Avenue (PM improves from LOS F to LOS E)
22. Archibald Avenue & Schleisman Road (PM improves from LOS E to LOS D)

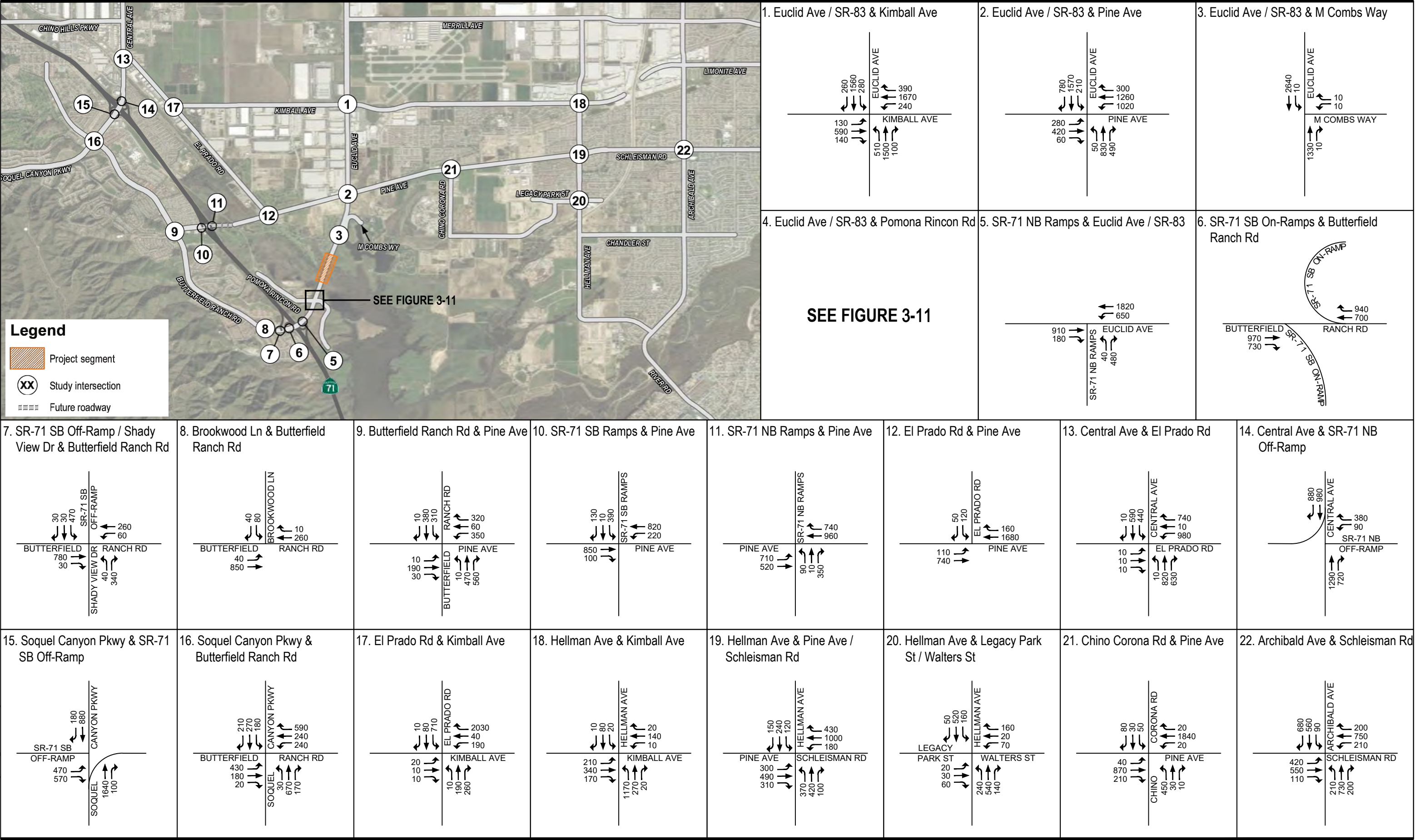
3.2.2 Traffic Signal Warrant Analysis

The Project is proposing to construct a traffic signal at the existing intersection of Euclid Avenue and McCombs Way (entrance to Prado Regional Park) and to construct a grade separated intersection at the intersection of Euclid Avenue and Pomona Rincon Road (see discussion in Section 3.1.6). With these improvements, there would be no remaining unsignalized intersections within the Project limits.





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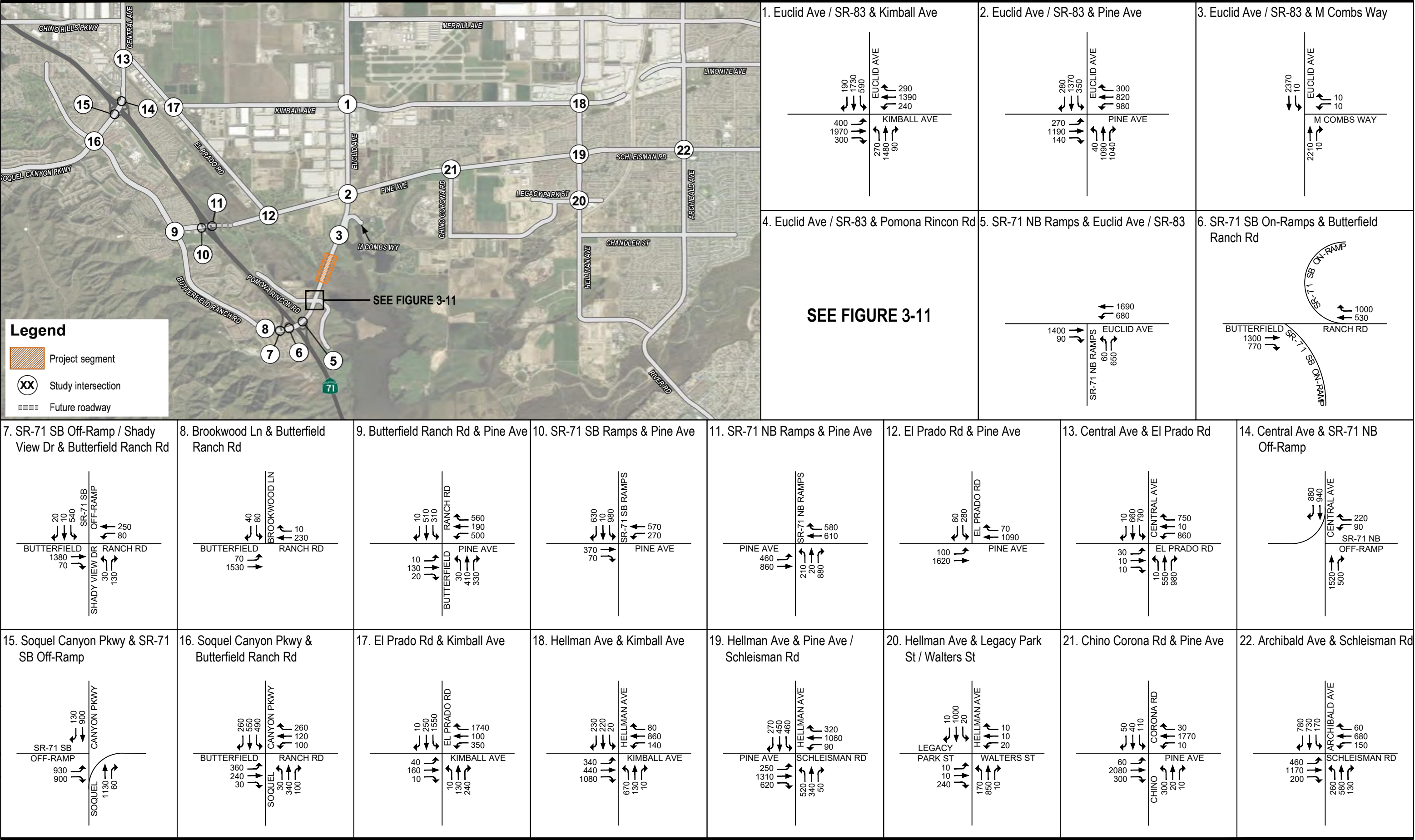


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Figure 3-9
Long Range (2050) with Project AM Peak Hour Intersection Volumes
3.18

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TRAFFIC ANALYSIS



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Figure 3-10
Long Range (2050) with Project PM Peak Hour Intersection Volumes
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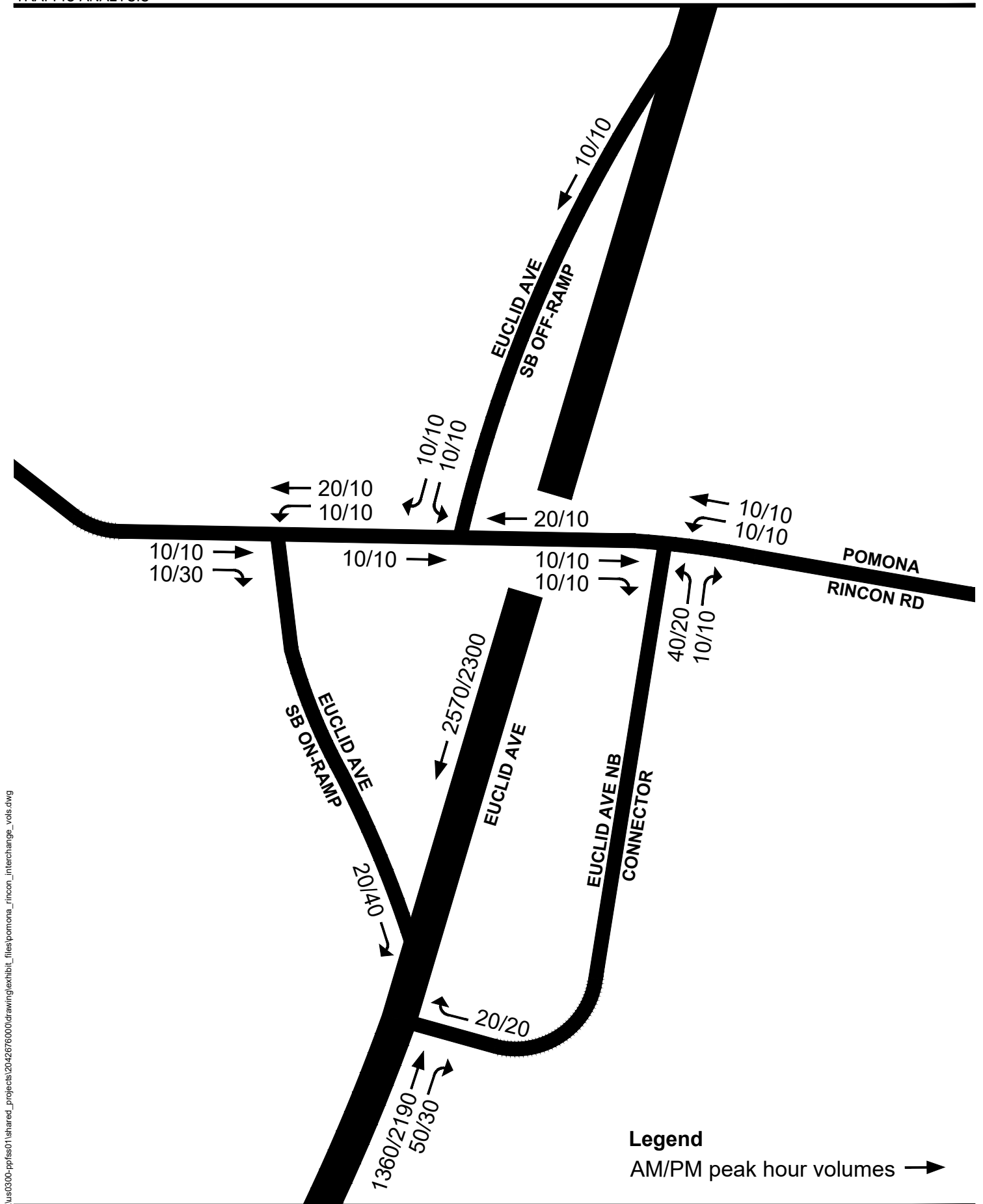


Figure 3-11

Long Range (2050) with Project - Euclid Avenue/Pomona
Rincon Road Peak Hour Interchange Volumes

Euclid Avenue Bridge Project
3 Traffic Analysis

Table 3-5 Intersection LOS Summary – Long Range (2050) Cumulative Conditions Comparison

Intersection	Traffic Control	Long Range (2050) Without Project				Long Range (2050) 4-Lane Bridge				Difference	
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	Delay (sec/veh)
1. Euclid Ave & Kimball Ave	Signal	140.0	F	169.4	F	139.9	F	164.0	F	-0.1	-5.4
2. Euclid Ave & Pine Ave	Signal	59.7	E	101.1	F	48.0	D	98.6	F	-11.7	-2.5
3. Euclid Ave & McCombs Wy	Signal ¹	33.4 ¹	D ¹	>500 ¹	F ¹	2.1	A	2.5	A	-31.3	-500
4a. Euclid Ave (EB Ramps) & Pomona Rincon Rd	TWSC	64.2 ²	F ²	37.8 ²	E ²	8.8	A	8.9	A	-55.4	-28.9
4b. Euclid Ave (WB Ramps) & Pomona Rincon Rd	TWSC	64.2 ²	F ²	37.8 ²	E ²	8.6	A	8.7	A	-55.6	-29.1
5. SR 71 NB Ramps & Euclid Ave	Signal	12.9	B	18.8	B	14.9	B	36.0	C	2.0	17.2
6. SR 71 SB On-Ramps & Euclid Ave	Free	0.0	A	0.0	A	0.0	A	0.0	A	0.0	0.0
7. SR 71 SB Off-Ramps & Butterfield Ranch Rd	Signal	43.5	D	116.1	F	31.9	C	64.5	E	-11.6	-51.6
8. Brookwood Ln & Butterfield Ranch Rd	Signal	8.1	A	9.2	A	7.6	A	8.1	A	-0.5	-1.1
9. Butterfield Ranch Rd & Pine Ave	Signal	23.8	C	29.3	C	21.2	C	24.3	C	-2.6	-5.0
10. SR 71 SB Ramps & Pine Ave	Signal	32.5	C	101.2	F	31.5	C	71.6	E	-1.0	-29.6
11. SR 71 NB Ramps & Pine Ave	Signal	20.4	C	24.5	C	19.5	B	22.4	C	-0.9	-2.1
12. El Prado Ave & Pine Ave	Signal	14.6	B	14.6	B	13.3	B	13.9	B	-1.3	-0.7
13. Central Ave & El Prado Rd	Signal	124.3	F	262.0	F	121.7	F	242.2	F	-2.6	-19.8
14. Central Ave & SR 71 NB Ramps	Signal	8.5	A	6.9	A	8.2	A	7.0	A	-0.3	0.1
15. Central Ave & SR 71 SB Ramps	Signal	13.0	B	18.7	B	13.0	B	18.7	B	0.0	0.0
16. Soquel Cyn Rd & Los Serranos Country Club Dr	Signal	48.7	D	49.6	D	48.5	D	50.0	D	-0.2	0.4
17. El Prado Rd & Kimball Ave	Signal	187.2	F	492.2	F	182.8	F	473.5	F	-4.4	-18.7
18. Hellman Ave & Kimball Ave	Signal	114.2	F	80.1	E	107.7	F	76.3	E	-6.5	-3.8
19. Hellman Ave & Schleisman Rd	Signal	24.4	C	75.5	E	24.7	C	67.0	E	0.0	-8.5
20. Hellman Ave & Legacy Park St / Walters St	Signal	25.2	C	22.0	C	25.2	C	22.0	C	0.0	0.0
21. Mill Creek / Chino Corona Rd & Pine Ave	Signal	27.0	C	17.7	B	28.3	C	18.5	B	1.3	0.8
22. Archibald Ave & Schleisman Rd	Signal	37.6	D	55.4	E	38.3	D	48.1	D	0.7	-7.3
¹ Under No Project conditions, McCombs Way intersects with Euclid Avenue with side street stop control ² Under No Project conditions, Pomona Rincon Road intersects with Euclid Avenue as a single intersection with side street stop control LOS – Level of service; TWSC – Two-way stop-control											



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Table 3-6 Roadway Segment Analysis – Long Range (2050) Cumulative Conditions Comparison

Segment	Facility Type	Long Range (2050) Without Project					Long Range (2050) With Project 4-Lane Bridge				
		Lanes	Capacity	Volume	V/C	LOS	Lanes	Capacity	Volume	V/C	LOS
1. Central Ave north of El Prado Rd	Major Arterial	6	56,100	33,600	0.60	A	6	56,100	32,100	0.57	A
2. Central Ave between El Prado Rd & SR 71	Major Arterial	6	56,100	37,300	0.66	B	6	56,100	35,900	0.64	B
3. Soquel Canyon Pkwy between SR 71 & Butterfield Ranch Road	Principal Arterial ¹	6	56,100	36,000	0.64	B	6	56,100	36,100	0.64	B
4. El Prado Rd between Central Ave & Kimball Ave	Secondary Arterial	4	28,000	37,200	1.33	F	4	28,000	36,500	1.30	F
5. El Prado Rd between Kimball Ave & Pine Ave	Secondary Arterial	4	28,000	9,000	0.32	A	4	28,000	7,500	0.27	A
6. Butterfield Ranch Rd between Soquel Cyn Pkwy & Pine Ave	Principal Arterial ¹	6	56,100	9,800	0.17	A	6	56,100	9,900	0.18	A
7. Butterfield Ranch Rd between Pine Ave & SR 71	Minor Arterial ¹	4	28,000	17,100	0.61	B	4	28,000	20,800	0.74	C
8. Pine Ave between Butterfield Ranch Rd & SR 71	Minor Arterial ¹	4	28,000	15,600	0.56	A	4	28,000	11,800	0.42	A
9a. Pine Ave between SR 71 and El Prado Road (future)	Primary Arterial	4	30,000	42,000	1.40	F	4	30,000	37,400	1.25	F
9b. Pine Ave between El Prado Rd & Euclid Ave	Primary Arterial	4	30,000	37,700	1.26	F	4	30,000	34,500	1.15	F
10. Pine Ave between Euclid Ave & Chino Corona Rd	Major Arterial	6	56,100	55,500	0.99	E	6	56,100	57,300	1.02	F
11. Pine Ave between Chino Corona Rd & Hellman Ave	Major Arterial	6	56,100	48,800	0.87	D	6	56,100	49,100	0.88	D
12. Schleisman Rd between Hellman Ave & Archibald Ave	Urban Arterial ²	6	53,900	42,200	0.78	C	6	53,900	42,600	0.79	C
13. Kimball Ave between El Prado Rd & Euclid Ave	Secondary Arterial	4	28,000	48,500	1.73	F	4	28,000	47,900	1.71	F
14. Kimball Ave between Euclid Ave & Hellman Ave	Primary Arterial	4	30,000	46,400	1.55	F	4	30,000	45,800	1.53	F
15. Limonite Ave east of Hellman Ave	Urban Arterial ²	4	35,900	14,500	0.40	A	4	35,900	14,500	0.40	A
16. Euclid Ave north of Kimball Ave	Expressway	8	81,700	58,600	0.72	C	8	81,700	60,700	0.74	C
17. Euclid Ave between Kimball Ave & Pine Ave	Expressway	8	81,700	45,600	0.56	A	8	81,700	49,600	0.61	B
18. Euclid Ave between Pine Ave & Prado Regional Park	Expressway	8	81,700	51,300	0.63	B	8	81,700	60,100	0.74	C
19. Euclid Ave between Prado Regional Park & Pomona Rincon Rd	Expressway (Limited Access)	2	28,500	52,400	1.84	F	4	63,900	61,500	0.96	E
20. Euclid Ave between Pomona Rincon Rd & SR 71	Expressway	8	81,700	52,700	0.65	B	8	81,700	61,800	0.76	C
21. Hellman Ave north of Kimball Ave	Primary Arterial	4	30,000	11,800	0.39	A	4	30,000	12,100	0.40	A
22. Hellman Ave between Kimball Ave & Pine Ave	Primary Arterial	4	30,000	19,400	0.65	B	4	30,000	19,200	0.64	B



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23. Hellman Ave betwene Pine Ave & Legacy Park St	Primary Arterial	4	30,000	16,100	0.54	A	4	30,000	16,100	0.54	A
24. Hellman Ave between Legacy Park St & Chandler St	Primary Arterial	4	30,000	19,300	0.64	B	4	30,000	19,300	0.64	B
25. Archibald Ave north of Schleisman Rd	Urban Arterial ²	6	53,900	36,400	0.68	B	6	53,900	36,500	0.68	B
26. Archibald Ave between Schleisman Rd & Chandler St	Urban Arterial ²	6	53,900	24,700	0.46	A	6	53,900	24,400	0.45	A
27. River Rd south of Archibald Ave	Major Collector ²	4	18,000	29,100	1.62	F	4	18,000	28,900	1.61	F
28. Chino Corona Rd south of Pine Ave	Collector	2	15,000	7,600	0.51	A	2	15,000	7,800	0.52	A



3.2.3 Roadway Segment Analysis

For Long Range (2050) cumulative conditions, 29 roadway segments are analyzed. These include the 28 existing segments, along with the future segment along Pine Avenue between SR 71 and El Prado Road. **Table 3-6** on the preceding pages summarizes the roadway analysis under Long Range (2050) cumulative condition. As shown in the table, the following eight roadway segments would operate at undesirable LOS E or LOS F under Long Range (2050) cumulative conditions:

- 4. El Prado Rd between Central Ave & Kimball Ave (LOS F)
- 9a. Pine Ave between SR 71 and El Prado Road (LOS F)
- 9b. Pine Ave between El Prado Road & Euclid Ave (LOS F)
- 10. Pine Ave between Euclid Ave & Chino Corona Rd (LOS F)
- 13. Kimball Ave between El Prado Rd & Euclid Ave (LOS E)
- 14. Kimball Ave between Euclid Ave & Hellman Ave (LOS E)
- 19. Euclid Ave between Pomona Rincon Rd & SR 71 (LOS F)
- 27. River Rd south of Archibald Ave (LOS F)

Table 3-7 summarizes the ADT volumes and V/C ratios under Long Range (2050) cumulative conditions for Euclid Avenue within the Project area with configurations of the Euclid Bridge with 2-lanes, 4-lanes, 6-lanes, and 8-lanes. For this Long Range (2050) cumulative conditions scenario, the segments of Euclid Avenue north and south of the bridge segment are assumed to be improved to 8-lanes consistent with their General Plan designation.

Table 3-7 - Volume, V/C & LOS Comparison for Project Limits - Long Range (2050) Cumulative Conditions with 2-Lane, 4-Lane, 6-Lane & 8-Lane Alternatives

Segment	Lanes	Capacity	Volume	V/C	LOS
2050 with 2-Lane Bridge Alternative					
Between Pine Ave & Prado Regional Park	8	81,700	51,300	0.63	B
Bridge Segment - between Prado Regional Park & Pomona Rincon Rd	2	28,500	52,400	1.84	F
Between Pomona Rincon Rd & SR 71	8	81,700	52,700	0.65	B
2050 with 4-Lane Bridge (Preferred) Alternative					
Between Pine Ave & Prado Regional Park	8	81,700	60,100	0.74	C
Bridge Segment - between Prado Regional Park & Pomona Rincon Rd	4	63,900	61,500	0.96	E
Between Pomona Rincon Rd & SR 71	8	81,700	61,800	0.76	C



2050 with 6-Lane Bridge Alternative					
Between Pine Ave & Prado Regional Park	8	81,700	61,000	0.75	C
Bridge Segment - between Prado Regional Park & Pomona Rincon Rd	6	95,900	62,400	0.65	B
Between Pomona Rincon Rd & SR 71	8	81,700	62,800	0.77	C
2050 with 8-Lane Bridge Alternative					
Between Pine Ave & Prado Regional Park	8	81,700	61,100	0.75	C
Bridge Segment - between Prado Regional Park & Pomona Rincon Rd	8	127,800	62,500	0.49	A
Between Pomona Rincon Rd & SR 71	8	81,700	62,800	0.77	C
Note: Shaded cells indicate the preferred 4-lane bridge alternative.					

As shown in **Table 3-7**, a 2-lane bridge is forecast to be substantially over capacity with a V/C ratio of 1.84 (LOS F). With additional lanes, the bridge segment is forecast to operate near capacity (LOS E) with a 4-lane bridge and is forecast to operate at LOS A or LOS B with an 8-lane or 6-lane bridge, respectively.

Notably, since the bridge is not over capacity with 4-lanes, traffic volumes do not change substantially if the bridge is increased from 4-lanes to 6-lanes or to 8-lanes. As discussed in Appendix D, a distinct variation in traffic volumes throughout the study area exists between the 2-lane and multi-lane scenarios. This is due to a 2-lane bridge operating significantly over capacity, which results in traffic redistributing to other roadways. With four or more lanes the bridge operates under capacity, and traffic volumes are relatively consistent throughout the study area for the multi-lane scenarios.

As noted above, the Project segment of Euclid Ave between Pine Ave & Prado Regional Park is forecast to carry approximately 52,000 ADT in Long Range (2050) cumulative conditions without the Project, which greatly exceeds the capacity of a typical 2-lane Limited Access Expressway. As shown in the previously referenced **Table 3-6** and **Table 3-7**, improving the roadway to a 4-lane segment would allow more traffic to utilize the roadway (and thereby reducing traffic volumes on other roadways in the City) and would result in LOS E conditions.

3.2.4 Basic Freeway Segment Analysis

Long Range freeway mainline volumes were derived from 2023 Caltrans Traffic Census Program peak hour volumes and were factored to year 2050 with growth rates from the SBTAM. Analysis results in the form of density and LOS are shown below in **Table 3-8**. Basic Freeway Segment worksheets are provided in **Appendix E**. The results apply to without Project and with Project conditions, and all bridge alternatives.



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Table 3-8 Basic Freeway Segment Analysis – Long Range (2050) Cumulative Conditions (4-Lane Bridge)

Segment	Lanes	AM Peak Hour				PM Peak Hour			
		Truck %	Volume	Density	LOS	Truck %	Volume	Density	LOS
SR 71 Freeway - Southbound									
1. North of Central	3	3	2,975	17.1	B	3	3,236	18.6	C
2. Central to Pine	2	3	3,311	30.0	D	3	3,714	35.9	E
3. Pine to Euclid	2	3	2,454	21.1	C	3	2,655	22.9	C
4. South of Euclid	2	3	2,968	28.0	D	3	3,313	20.7	C
SR 71 Freeway - Northbound									
5. North of Central	3	12	5,802	>43.0	F	9	5,648	>43.0	F
6. Central to Pine	2	13	5,932	>43.0	F	9	5,780	>43.0	F
7. Pine to Euclid	2	14	5,276	>43.0	F	9	5,123	>43.0	F
8. South of Euclid	3	15	6,028	>43.0	F	10	5,861	>43.0	F
LOS - Level of Service Note: Density in passenger cars per mile per lane (pc/mi/ln)									

As listed below, the following five freeway mainline segments would operate at undesirable LOS E or LOS F in the Long Range (2050) cumulative condition:

SR 71 Southbound:

- 2. Central Ave to Pine Ave – PM peak hour

SR 71 Northbound:

- 5. North of Central Ave – AM and PM peak hours
- 6. Central Ave to Pine Ave – AM and PM peak hours
- 7. Pine Ave to Euclid Ave – AM and PM peak hours
- 8. South of Euclid Ave – AM and PM peak hours



3.2.5 Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were also evaluated for the Long Range (2050) cumulative condition. Freeway merge/diverge worksheets are provided in **Appendix F**. The results of the analysis are presented in **Table 3-9**. The results apply to without Project and with Project conditions, and all bridge alternatives.

Table 3-9 Freeway Merge/Diverge Analysis – Long Range (2050) Cumulative Conditions (4-Lane Bridge)

Freeway Merge/Diverge Ramp Junctions	Freeway Lanes	AM Peak Hour		PM Peak Hour	
		Density	LOS	Density	LOS
SR 71 Freeway – Southbound					
1. Off-Ramp at Central Ave (Diverge)	3	>35.0	F	>35.0	F
2. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	>35.0	F	>35.0	F
3. On-Ramp at Central Ave (Merge)	3	33.0	E	35.0	F
4. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
5. On-Ramp at Pine Ave (Merge)	2	26.3	D	29.4	D
6. Off-Ramp at Euclid Ave (SR-83) (Diverge)	2	>35.0	F	>35.0	F
7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge)	2	>35.0	F	>35.0	F
8. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
SR 71 Freeway – Northbound					
9. On-Ramp at Central Ave (Merge)	3	>35.0	F	>35.0	F
10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge)	3	>35.0	F	>35.0	F
11. Off-Ramp at Central Ave (Diverge)	2	>35.0	F	>35.0	F
12. On-Ramp at Pine Ave (Merge)	2	>35.0	F	>35.0	F
13. Off-Ramp at Pine Ave (Diverge)	2	>35.0	F	>35.0	F
14. On-Ramp at Euclid Ave (SR-83) (Merge)	2	>35.0	F	>35.0	F
15. Off-Ramp at Euclid Ave (SR-83) (Diverge)	3	>35.0	F	>35.0	F

As shown above, most of the merge/diverge ramp junctions would operate at an undesirable LOS E or LOS F in Long Range (2050) cumulative conditions. These deficient locations are tabulated below:

SR 71 Southbound:

1. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
2. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge) – AM and PM peak hours



- 3. On-Ramp at Central Ave – AM and PM peak hours
- 4. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
- 6. Off-Ramp at Euclid Ave (SR-83) (Diverge) – AM and PM peak hours
- 7. Loop On-Ramp at Euclid Ave (SR-83) (Upstream and Downstream) (Merge) – AM and PM peak hours
- 8. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hours

SR 71 Northbound:

- 9. On-Ramp at Central Ave (Merge) – AM and PM peak hours
- 10. Loop On-Ramp at Central Ave (Upstream and Downstream) (Merge) – AM and PM peak hours
- 11. Off-Ramp at Central Ave (Diverge) – AM and PM peak hours
- 12. On-Ramp at Pine Ave (Merge) – AM and PM peak hours
- 13. Off-Ramp at Pine Ave (Diverge) – AM and PM peak hours
- 14. On-Ramp at Euclid Ave (SR-83) (Merge) – AM and PM peak hours
- 15. Off-Ramp at Euclid Ave (SR-83) (Diverge) – AM and PM peak hours

3.2.6 Recommended Improvements

Various improvements are recommended at the intersection of Euclid Avenue and McCombs Way (entrance to Prado Regional Park), the intersection of Euclid Avenue and Pomona Rincon Road, and for new pedestrian and bicyclist facilities within the Project area (see discussion in Section 3.1.6). The analysis of Long Range (2050) cumulative conditions presented above indicates that no additional off-site improvements are necessitated due to the Project.



4 Findings and Recommendations

The Project is anticipated to alleviate congestion at the existing Euclid Avenue Bridge bottleneck, end temporary road closures due to seasonal flooding, and increase access for bicyclists and pedestrians within the City. Four bridge cross sections were considered, including 2-lane, 4-lane, 6-lane, and 8-lane bridge scenarios. Based on quantitative analysis results, an assessment of the Chino area circulation system, and coordination with the City, the 4-lane bridge alternative is recommended as the preferred alternative. Along with the bridge itself, the Project would construct a grade-separated intersection at Pomona Rincon Road. The Project would also construct a traffic signal at the intersection of Euclid Avenue and McCombs Way (entrance to Prado Regional Park).

Overall, the 4-lane bridge is expected to meet the near-term and long-range capacity needs of Euclid Avenue without increasing vehicular delay outside of the Project area.

Under Opening Year (2030) cumulative conditions, several study locations are forecast to function at unacceptable LOS E or LOS F; however, the forecast increases in traffic are not due to the Project. Rather, the Project will alleviate the existing Euclid Avenue Bridge bottleneck by improving the roadway from 2-lanes to 4-lanes and will provide additional pedestrian and bicycle access within the Project limits. The Project will also be constructing improvements at two existing intersections that are currently operating at LOS F in the PM peak hour, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road.

The Long Range (2050) cumulative condition reflects the buildout of the City's General Plan roadway network and traffic volumes derived from SBTAM forecasts that are consistent with the City's General Plan update. While several intersections are forecast to operate at undesirable LOS E or LOS F in the Long Range (2050) cumulative conditions scenario, no location is forecast to worsen from LOS D to LOS E or to LOS F due to the Project. Furthermore, the amount of delay at each location that is forecast to operate at LOS D or LOS E is shown to be reduced by the Project.

The Project improves LOS in the Long Range (2050) cumulative condition at the following locations that are forecast to be LOS E or LOS F without the Project:

2. Euclid Avenue & Pine Avenue (AM improves from LOS E to LOS D)
3. Euclid Avenue & McCombs Way (PM improves from LOS F to LOS A)
4. Euclid Avenue & Pomona Rincon Road (AM improves from LOS F to LOS A & PM improves from LOS E to LOS A)
7. Butterfield Ranch Road & SR 71 SB Off-Ramps (PM improves from LOS F to LOS E)
10. SR 71 SB Ramps & Pine Avenue (PM improves from LOS F to LOS E)
22. Archibald Avenue & Schleisman Road (PM improves from LOS E to LOS D)



The Project will be constructing improvements at two existing intersections that are currently operating at LOS F in the PM peak hour, (#3) Euclid Avenue and McCombs Way (Prado Regional Park Entrance), and (#4) Euclid Avenue and Pomona Rincon Road, as well as construct pedestrian and bicycle facilities as follows:

Euclid Avenue and McCombs Way (Prado Regional Park Entrance)

The unsignalized intersection on Euclid Ave at the entrance to Prado Regional Park (McCombs Way), which is just north of the bridge area, currently operates at LOS F during the PM peak hour. While the location is not forecast to meet the minimum peak hour volume criteria for installation of a traffic signal in the near-term, a traffic signal would improve safety for vehicles entering and exiting the park. As such, a traffic signal is recommended to be constructed in conjunction with the bridge widening project. With the installation of a traffic signal, the intersection is forecast to operate at LOS A (see Table 3-1).

Euclid Avenue and Pomona Rincon Road

The unsignalized intersection on Euclid Ave at Pomona Rincon Road, which is just south of the bridge area, currently operates at LOS F during the PM peak hour. Because of the close proximity to the bridge location, this intersection is recommended to be reconstructed with grade-separation such that access to Pomona Rincon Road is provided via two ramp junctions. With this grade-separation, the resulting two intersections are forecast to operate at LOS A (see Table 3-1).

Pedestrian and Bicycle Facilities

As discussed in Section 2.1.4, the City's General Plan identifies placement of a Class I off-street bike path along Euclid Avenue in the vicinity of the Project. The Project will be constructing a barrier protected multi-use trail along the easterly side of the bridge structure and it is recommended that the multi-use trail be extended northerly to the entrance of Prado Regional Park (McCombs Way) as a part of the Project. At the southerly end of the Project, the multi-use trail is recommended to connect to Pomona Rincon Road until such time that bicycle facilities are provided through the SR 71 interchange area.



5 CEQA VMT Analysis

This VMT analysis complies with the updated CEQA guidelines that incorporate the requirements of Senate Bill 743 (SB 743). SB 743 required the Governor's Office of Land Use and Climate Innovation (LCI), formerly the Office of Planning and Research (OPR), to establish guidelines under CEQA for identifying and mitigating VMT transportation impacts. Generally, SB 743 moves away from using delay-based LOS as the metric for identifying a significant impact and instead uses VMT. This analysis has been prepared in accordance with the City's TIA guidelines.

5.1 Methodology

With the passage of Senate Bill (SB) 743 in 2013, the State of California recognized that new methodologies were needed for evaluating transportation impacts to better promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations. In accordance with the new legislation, automobile delay, as described solely by level of service (LOS) or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment.⁴ Instead, other metrics such as VMT were identified by the legislation as appropriate methods of evaluating the transportation impact of a project.

In December 2018, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing SB 743 (Section 15064.3). LCI developed a Technical Advisory on Evaluating Transportation Impacts in CEQA⁵, which contains LCI's technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. The City of Chino adopted guidelines for assessing VMT as part of the City's current TIA guidelines, which are consistent with the LCI Technical Advisory.

LCI's Technical Advisory recommends evaluating a transportation project's "additional vehicle travel on the roadway network, commonly referred to as induced vehicle travel". However, LCI acknowledges that not all transportation projects would lead to a measurable and substantial increase in vehicle travel. The technical advisory provides a list of various types of transportation projects that would not likely lead to a substantial increase in vehicle travel and thus are presumed to have a less than significant impact based on VMT. The following examples of less than significant project types are from LCI's Technical Advisory and are applicable to the Project, as discussed in the subsequent section of this report:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection,

⁴ Modernization of Transportation Analysis for Transit-Oriented Infill Projects, Section 21099, 2013

⁵ Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, State of California, December 2018



or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity

- Addition of new or enhanced bike or pedestrian facilities on exiting streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel

5.2 Project VMT Assessment

North of the Project limits, Euclid Avenue is currently configured as a 4-lane roadway through the Pine Avenue/Euclid Avenue intersection, then narrows down to a 2-lane roadway through the Project limits, then widens to a 4-lane roadway just north of the existing SR 71 ramps.

As described in Section 1.1, the preferred alternative consists of replacing the existing 2-lane bridge with a 4-lane bridge, which is consistent with the existing 4-lane roadway segments just north and south of the bridge location. The Project will include a median to improve safety for motorists and a shared-use pathway separated from the roadway along the easterly side of the bridge for use by pedestrians and bicyclists.

While the Project proposes one additional vehicle lane in each direction within the Project limits, the overall capacity of Euclid Avenue is not increased within the roadway segments just north and south of the Project limits, including at the intersections with the SR 71 northbound ramps (to the south) and the entrance to Prado Regional Park to the north where the number of through lanes do not change.

The Project would improve the condition of the existing bridge (eliminate flooding) and improve the safety of all users by providing a median separating northbound and southbound traffic and by providing a separated shared-use trail for pedestrians and bicyclists. While the bridge would be reconstructed with one additional vehicle lane in each direction (resulting in a four-lane roadway), the Project would not be adding vehicle capacity to the overall system since the capacity of the roadway is constrained by the existing 4-lane roadway segments and the intersections immediately north and south of Project. Additionally, the Project's construction of a traffic signal at the entrance to Prado Regional Park will reduce the capacity of Euclid Avenue in comparison to existing conditions which are free-flowing. Since the Project does not add additional capacity to the roadways or intersections bounding the bridge, the Project is not increased the overall capacity of Euclid Avenue and, therefore, is not anticipated to induce traffic demand.

In addition, active transportation would be substantially improved by the Project by reconstructing the bridge to provide a multi-use path for cyclists and pedestrians. This represents a substantial improvement over existing conditions since there are currently no bicycle facilities in the vicinity of the Project and no sidewalks within the Project limits.

As discussed in Section 3.2.3, traffic volumes along Euclid Avenue are forecast to increase with the Proposed project in comparison to the no-build condition. This increase is due to a redistribution of traffic from other parallel roadways as shown by reductions in traffic volumes along Central Avenue, El Prado



Road, and Pine Avenue. Traffic volumes along Euclid Avenue further removed from the Project area are shown to not change appreciably with the Project, which further demonstrates that the increases within the Project limits are the result of a redistribution of traffic and not due to new induced trips.

5.3 Impact Determination

The Project would elevate the existing roadway to prevent closures during inclement weather, improve safety by providing a median between the northbound and southbound vehicles lanes, and provide safer conditions for pedestrians and bicyclists by providing a multi-use trail that is separated from the roadway.

In accordance with LCI's Technical Advisory, the Project's effect on induced travel demand has been assessed. As noted in the Technical Advisory, not all transportation projects would lead to a measurable and substantial increase in vehicle travel, which includes projects that do not add capacity to the overall transportation system. As demonstrated above, the Project would improve the safety of the existing bridge and roadway but would not increase the overall vehicle capacity to the system as a whole because roadway capacity is constrained by the existing 4-lane segments of Euclid Avenue just north and south of the Project limits. The Project would also construct a traffic signal at the entrance to Prado Regional Park, which will reduce the overall capacity of Euclid Avenue in comparison to the existing free-flowing conditions. Furthermore, with four lanes, the Project segment would have substantially less capacity than the ultimate 8-lane roadway specified by the City's General Plan for Euclid Avenue for each of the segments leading to the Project. Therefore, the Project would not likely lead to a substantial or measurable increase in vehicle travel and would have a less-than-significant impact on transportation based on VMT.





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