



Walmart Kiosk With Fuel Station

**TRAFFIC ANALYSIS
CITY OF BEAUMONT**

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13882-05 TA Report

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
NCHRP	National Cooperative Highway Research Program
PHF	Peak Hour Factor
Project	Walmart Kiosk With Fuel Station
RCTC	Riverside County Transportation Commission
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategies
SHS	State Highway System
TA	Traffic Analysis
TUMF	Transportation Uniform Mitigation Fee
WRCOG	Western Riverside Council of Governments
V/C	Volume to Capacity

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1 INTRODUCTION

This report presents the results of the traffic analysis (TA) for the proposed Walmart Kiosk With Fuel Station development (“Project”), which is located at 1540 East 2nd Street in the City of Beaumont. The Project’s location relative the surrounding area is shown on Exhibit 1-1.

The purpose of this TA is to evaluate the potential deficiencies related to traffic, identify circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to resolve identified deficiencies in order to achieve acceptable operational conditions at study area intersections. This TA has been prepared in accordance with the WRCOG’s Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment January 2020), which is consistent with the City’s adopted transportation analysis methodology. (1) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

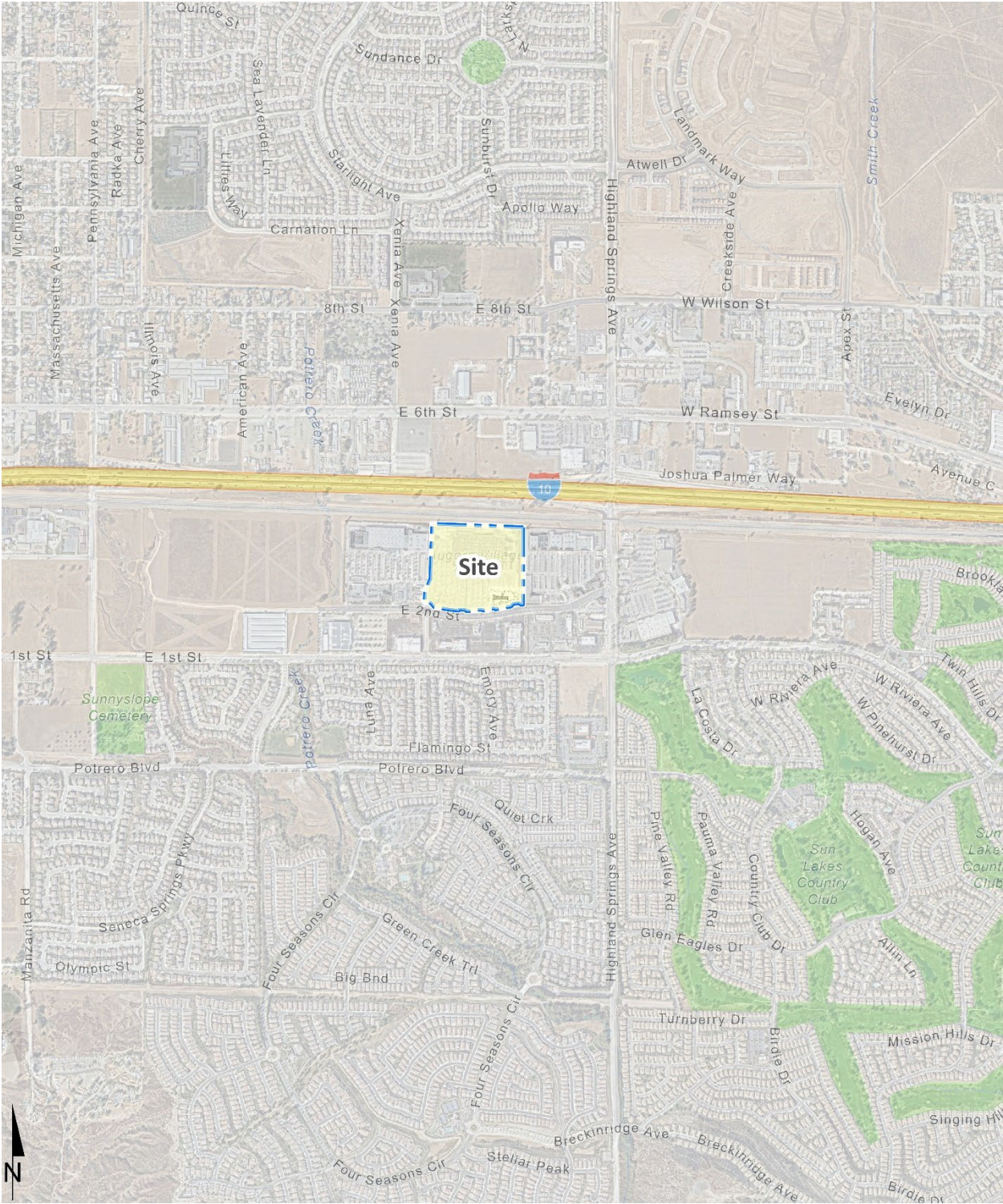
1.1 SUMMARY OF FINDINGS

The Project is to construct the following improvements as design features in conjunction with development of the site:

- Project to maintain existing traffic control and lane geometrics at the intersection of 2nd Street at Commerce Way (#1), 2nd Street at Driveway 1 (#2), and 2nd Street at Driveway 2 (#3).
- According to the City of Beaumont Circulation Element, 2nd Street is currently built out to its ultimate full roadway cross-section. As such, there are no roadway improvement recommendations. However, curb, gutter, and sidewalk improvements are recommended, as needed for site access along the Project’s frontage, consistent with the City’s standards.
- The existing bus turnout can accommodate average and 95th percentile queues. With the proposed secondary bus turnout, the maximum queue may be accommodated within the two bus turnouts. See Section 1.8.2 *Bus Stop Queuing Analysis* of this report for additional details.

Additional details and intersection lane geometrics are provided in Section 1.7 *Recommendations* of this report. The addition of Project traffic is not anticipated to result in or contribute to any operational deficiencies at the study area intersections under any of the future traffic conditions. The proposed Project is not anticipated to require the construction of any off-site improvements.

EXHIBIT 1-1: LOCATION MAP



1.2 PROJECT OVERVIEW

The Project is to consist of the development of a 16-vehicle fueling position Gasoline/Service Station on an existing Walmart site as indicated on Exhibit 1-2. Vehicular access will be provided via the following driveways (currently existing driveways):

- 2nd Street via Commerce Way – Full access
- 2nd Street via Driveway 1 – Right-in/Right-out access
- 2nd Street via Driveway 2 – Left-in/Right-in/Right-out access

Regional access to the Project site is available from the I-10 Freeway via the Highland Springs Avenue interchange.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (2) The proposed Project is anticipated to generate a total of 1,210 trip-ends per day on a typical weekday with 62 trips during the weekday AM peak hour and 98 trips during the weekday PM peak hour. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

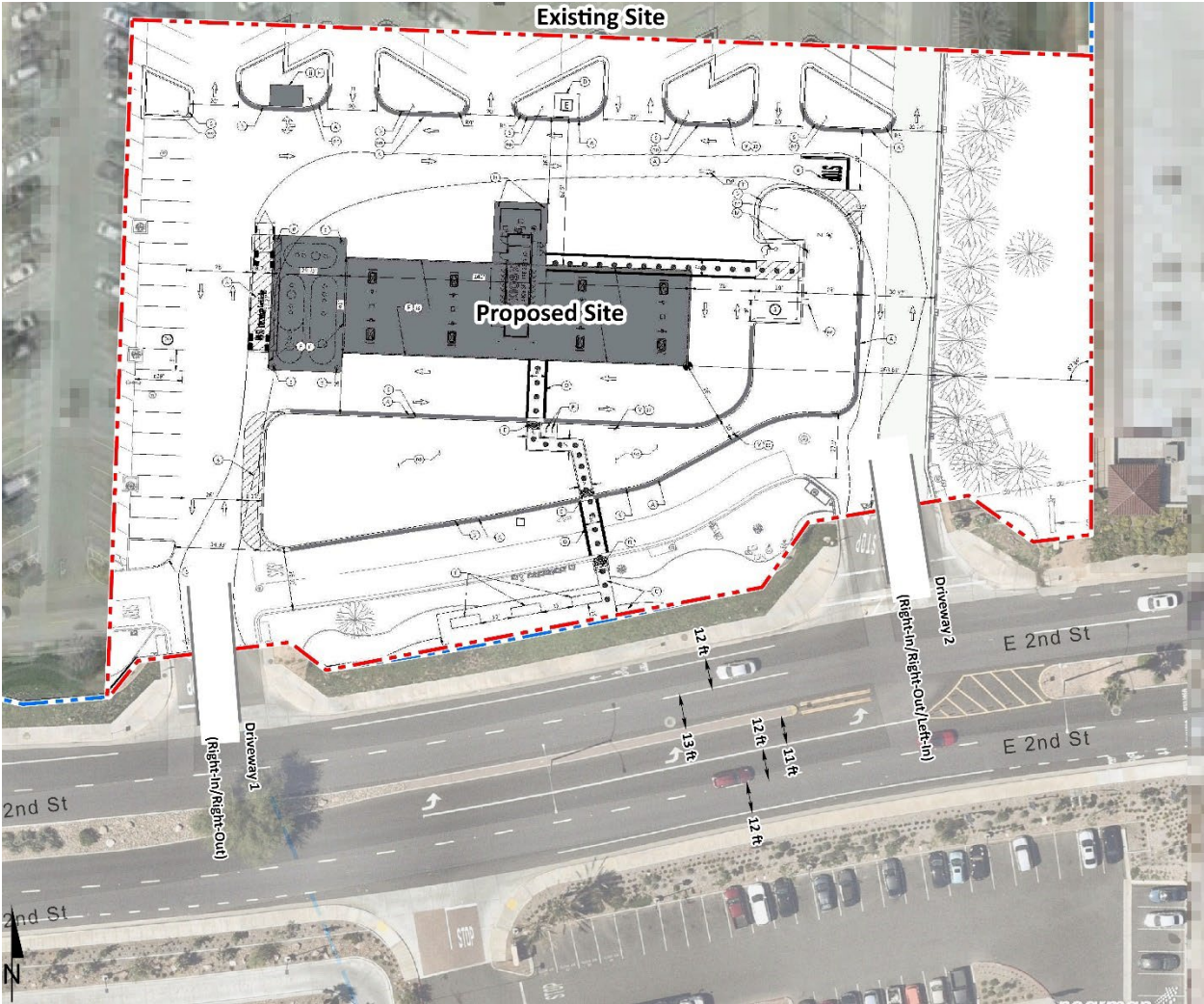
For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2021) Conditions
- Opening Year Cumulative (2024) Without Project Conditions
- Opening Year Cumulative (2024) With Project Conditions

1.3.1 EXISTING (2021) CONDITIONS

Information for Existing (2021) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Due to the COVID-19 pandemic, the traffic counts utilized for the purposes of this analysis relied on both historic data and adjusted 2021 count data. Details on adjustments to the existing traffic counts are discussed in Section 3.6 *Existing (2021) Traffic Counts* of this TA.

EXHIBIT 1-2: PRELIMINARY SITE PLAN



1.3.2 OPENING YEAR CUMULATIVE CONDITIONS

The Opening Year Cumulative traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 6.12% (for 2024 conditions – 2.0 percent per year) are included for Opening Year Cumulative traffic conditions. This list was compiled from information provided by the City of Beaumont.

1.4 STUDY AREA

To ensure that this TA satisfies the City of Beaumont’s traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by City staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology (se Appendix 1.1).

1.4.1 INTERSECTIONS

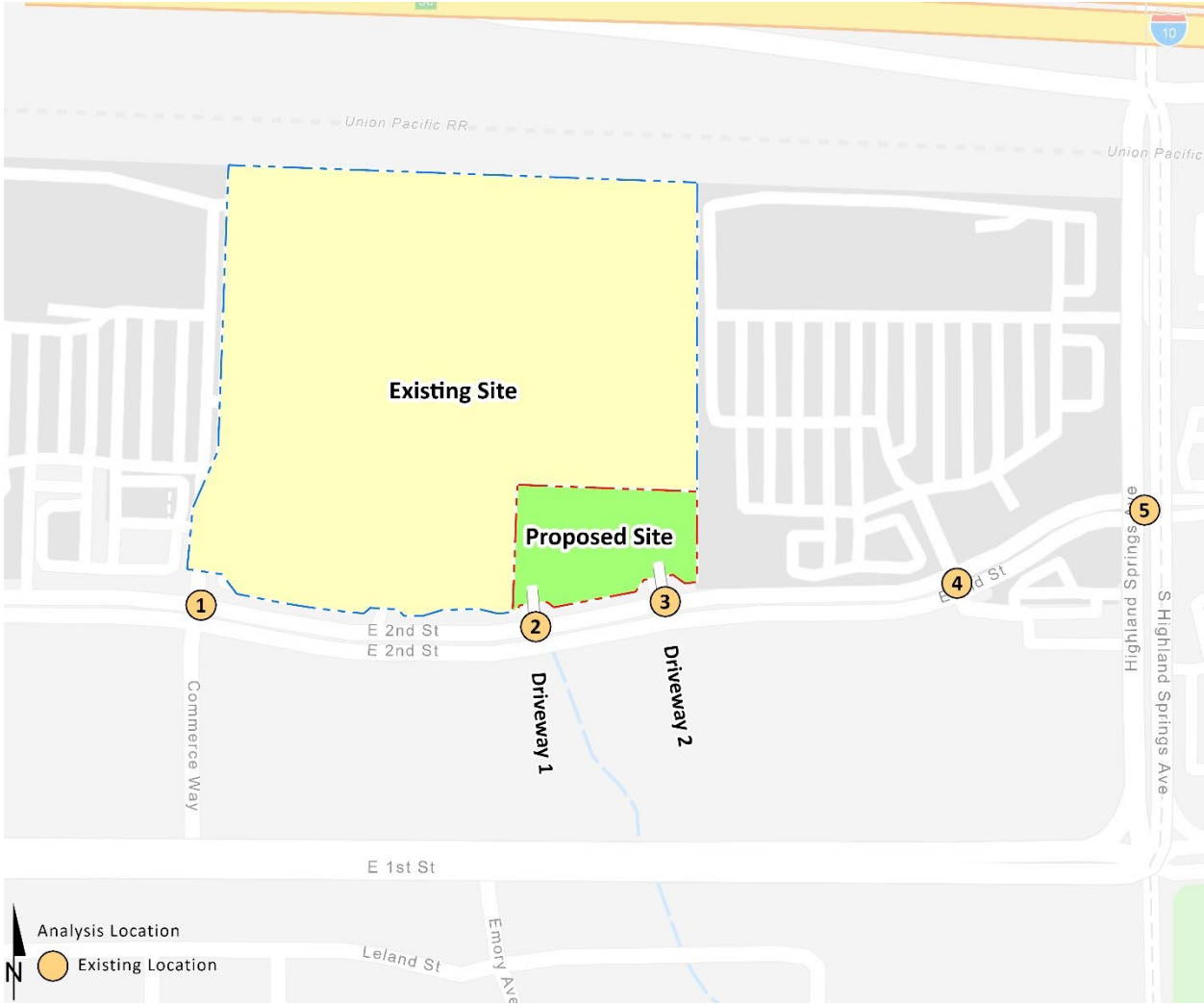
The following 5 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for this TA based on consultation with City of Beaumont staff. The “50 peak hour trip” criterion utilized by the City of Beaumont is consistent with the methodology employed by the WRCOG, and generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively deficient by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of analysis (i.e., study area).

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP?
1	Commerce Wy. & 2nd St.	Beaumont	No
2	Driveway 1 & 2nd St.	Beaumont	No
3	Driveway 2 & 2nd St.	Beaumont	No
4	Paseo Beaumont & 2nd St.	Beaumont	No
5	Highland Springs Av. & 2nd St.	Beaumont/Banning	No

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and updated most recently updated in 2011. The Riverside County Transportation Commission (RCTC) adopted the 2011 CMP for the County of Riverside in December 2011. (3) There are no study area intersections identified as a Riverside County CMP facility.

EXHIBIT 1-3: STUDY AREA



1.5 SENATE BILL 743 – VEHICLE MILES TRAVELED (VMT)

Senate Bill 743 (SB 743), approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The Office of Planning and Research (OPR) has recommended the use of vehicle miles traveled (VMT) as the replacement for automobile delay-based LOS. In December 2018, the Natural Resources Agency finalized updates to CEQA Guidelines to incorporate SB 743 (i.e., VMT). The VMT thresholds and methodology outlined in the City’s TA guidelines will be utilized to conduct the VMT analysis for the Project. The City’s TA Guidelines provides details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed project level analysis. Based on our review of applicable VMT screening thresholds, the proposed Project meets the screening thresholds and would therefore be assumed to result in a less than significant VMT impact; no additional VMT analysis is required. The VMT screening memo is provided under a separate cover.

1.6 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *Opening Year Cumulative (2024) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

TABLE 1-2: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO

# Intersection	Existing		2024 Without Project		2024 With Project	
	AM	PM	AM	PM	AM	PM
1 Commerce Wy. & 2nd St.	●	●	●	●	●	●
2 Driveway 1 & 2nd St.	●	●	●	●	●	●
3 Driveway 2 & 2nd St.	●	●	●	●	●	●
4 Paseo Beaumont & 2nd St.	●	●	●	●	●	●
5 Highland Springs Av. & 2nd St.	●	●	●	●	●	●

● = A - D ● = E ● = F

1.6.1 EXISTING (2021) CONDITIONS

All study area intersections are anticipated to operate at an acceptable LOS during the peak hours under Existing (2021) traffic conditions.

1.6.2 OPENING YEAR CUMULATIVE (2024) CONDITIONS

All study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours under Opening Year Cumulative (2024) traffic conditions with the addition of Project traffic. Additional details and intersection lane geometrics are provided in Section 1.7 *Recommendations* of this report.

1.7 RECOMMENDATIONS

The following recommendations are based on the improvements needed to accommodate site access. The site adjacent recommendations are shown on Exhibit 1-4.

Project to maintain existing control and lane geometrics at the intersection of 2nd Street at Commerce Way (#1), 2nd Street at Driveway 1 (#2), and 2nd Street at Driveway 2 (#3).

Recommendation 1 – 2nd Street is an east-west oriented roadway located on the Project’s southern boundary. According to the City of Beaumont Circulation Element, 2nd Street is currently built out to its ultimate General Plan roadway cross-section. As such, there are no roadway improvement recommendations. However, curb, gutter, and sidewalk improvements are recommended, as needed for site access along the Project’s frontage, consistent with the City’s standards.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Beaumont sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

1.8 QUEUING ANALYSIS

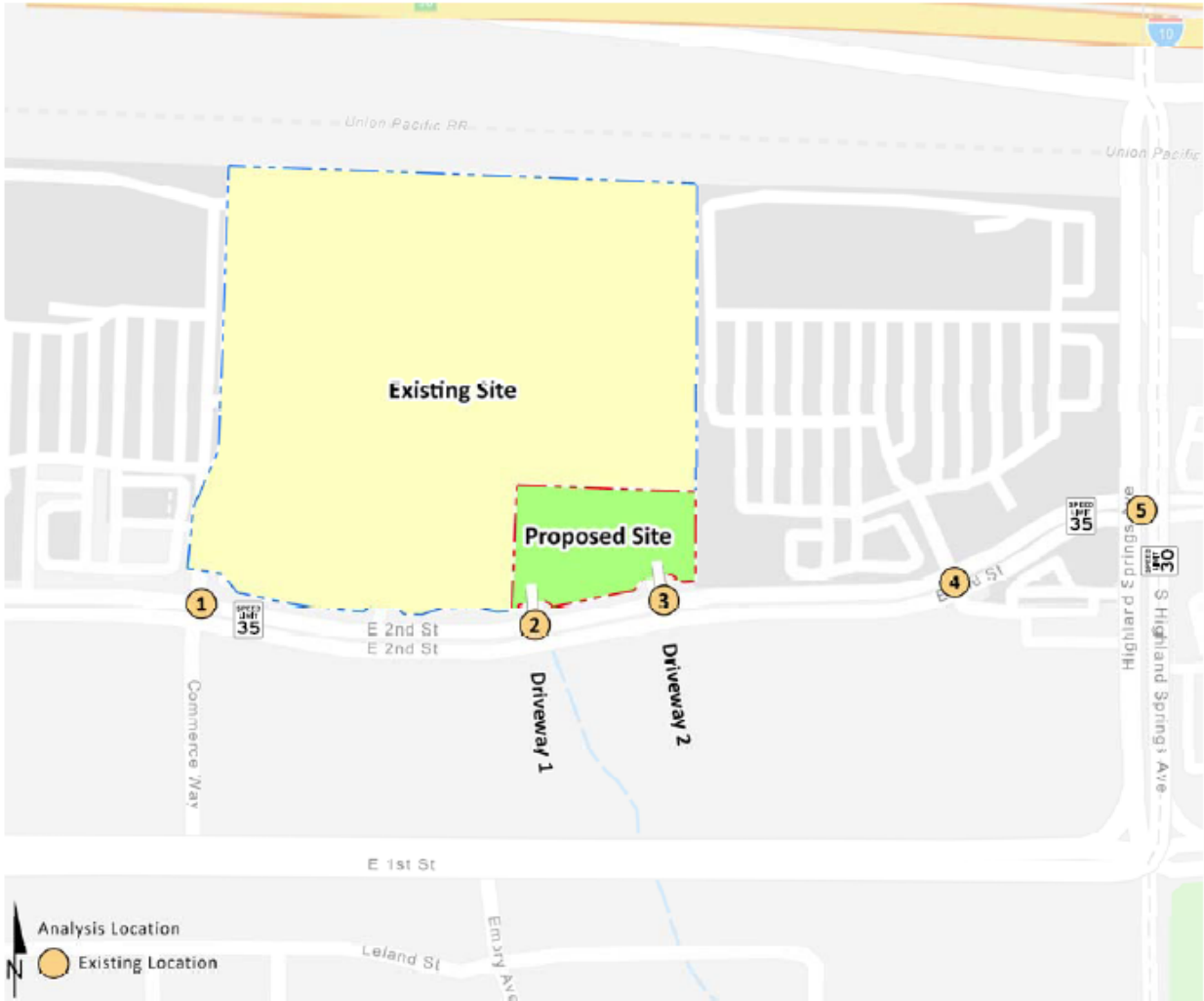
1.8.1 SITE ACCESS QUEUING ANALYSIS

A queuing analysis was conducted along the site adjacent roadway of 2nd Street at the Project driveways for Opening Year Cumulative (2024) With Project traffic conditions to determine the turn pocket storage length recommendations necessary to accommodate near-term 95th percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours using the SimTraffic modeling software. The existing storage length is sufficient to support the 95th percentile queues along the site adjacent roadway of 2nd Street at the Project driveways. The Opening Year Cumulative (2024) With Project queuing results are provided in Appendix 1.2.

1.8.2 BUS STOP QUEUING ANALYSIS

To evaluate the bus queuing, Urban Crossroads, Inc. utilized queuing data at the existing bus turnout located west of the Project frontage. Counts were taken on Wednesday August 11th, 2021, Thursday August 12th, 2021, and Saturday August 14th, 2021, from 6:00am to 10:00am, 11:00am to 1:00pm, and 2:00pm to 6:00pm, respectively. Table 1 presents the existing bus queuing data and data worksheets are provided in Appendix 1.3. For the purposes of this assessment, the 95th percentile queue has been utilized as the 95th percentile queue is generally utilized when determining storage capacity needs.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



2	Dwy. 1 & 2nd St.	3	Dwy. 2 & 2nd St.

Note: No change from existing configuration.

Table 1-3 shows that the observed 95th percentile bus queue lengths ranged between 2 and 3 buses within the bus turnout, with 0 buses in the street. The average bus queue was approximately 1 bus, and 0 buses in the street. The existing bus turnout can accommodate both the average and 95th percentile queues. However, it was observed that the maximum buses queued in the bus turnout was 3 buses and the maximum buses queued in the street was 1 bus within the timeframe observed. With the proposed second bus turnout along the Project frontage (see Exhibit 1-5), the existing maximum queue observed may be accommodated between the two bus turnouts.

TABLE 1-3: REFERENCE DRIVE-THRU QUEUEING DATA SUMMARY

Location ¹	Average Weekday Queue ²		95 th Percentile Queue ²	
	In Bus Turnout	In Street	In Bus Turnout	In Street
Wednesday August 11 th , 2021	1	0	2	0
Thursday August 12 th , 2021	1	0	3	0
Saturday August 14 th , 2021	1	0	2	0

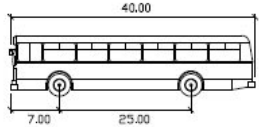
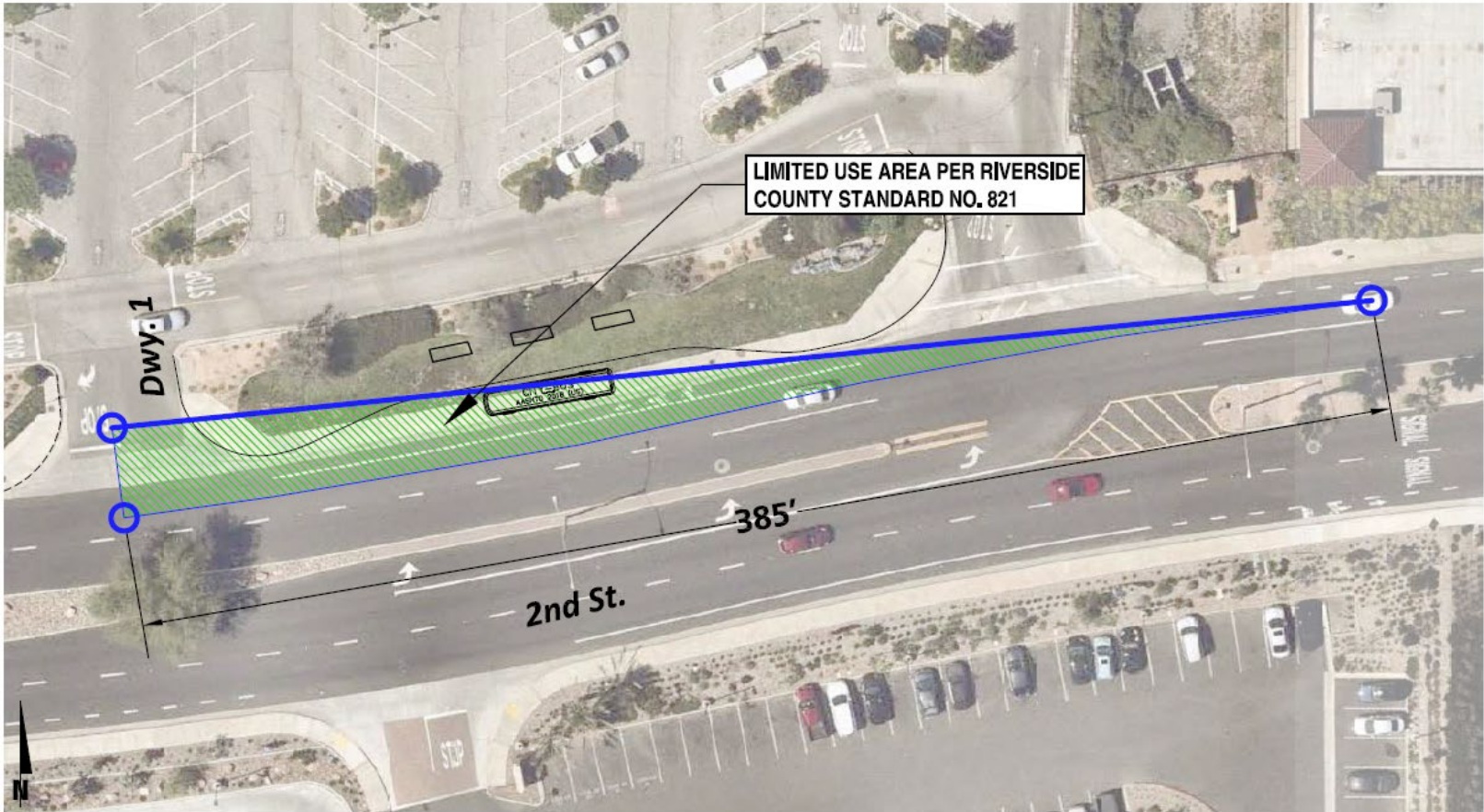
¹ Based on counts collected in August 2021. The data was collected from 6:00am to 10:00am, 11:00am to 1:00pm, and 2:00pm to 6:00pm

² Average queue and 95th percentile queue has been calculated based on the total hours of the provided data for each site.

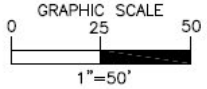
1.9 CORNER SIGHT DISTANCE

At unsignalized intersections, intersection sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (driveway) and the driver of an approaching vehicle. For the purposes of this analysis, a corner sight distance analysis has been used consistent with the Riverside County Standard No. 821. The intersection of Driveway 1 at 2nd Street may experience limited visibility due to stopped buses at the adjacent bus stop. Exhibit 1-5 shows the sight distance requirements for the intersection of Driveway 1 at 2nd Street. A vehicle on Driveway 1 turning on to 2nd Street needs to be able to see a vehicle approaching 385 feet in each direction. As can be seen in Exhibit 1-5, the required 385 feet of sight distance is available as long as the sight line is clear. The line of sight determines the limits and locations of the limited use area as shown in Exhibit 1-5. The limited use area must be kept clear of tall landscaping, trees or large obstructions. Plants and shrubs within the limited use area must be maintained to a maximum height of 12 inches. The stopping sight distance was also reviewed for a 35 MPH speed and was determined to be 250 feet in length. Since the corner sight distance was 385 feet, this was used for the sight distance analysis.

EXHIBIT 1-5: CORNER SIGHT DISTANCE



CITY-BUS
feet
Width : 8.50
Track : 8.50
Lock to Lock Time: 6.0
Steering Angle : 41.4



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2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. Since the City of Beaumont does not have their own traffic study guidelines, the methodologies described are generally consistent with the WRCOG traffic study guidelines. (1)

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Beaumont and City of Banning require signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

A saturation flow rate of 1900 has been utilized for all study area intersections located within the City of Beaumont and City of Banning. The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections within the City of Beaumont and City of Banning.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM (6th Edition)

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., $PHF = \frac{[Hourly Volume]}{[4 \times Peak\ 15\text{-minute\ Flow\ Rate}]}$). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. New intersections utilize a PHF of 0.92. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (4)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Beaumont and City of Banning require the operations of unsignalized intersections be evaluated using the methodology described the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM (6th Edition)

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. The worst delay and associated LOS for a controlled movement is utilized for the overall intersection delay and LOS for two-way stop-controlled intersections. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA update uses the signal warrant criteria presented in the latest edition of the Caltrans' California Manual on Uniform Traffic Control Devices (CA MUTCD), for all applicable study area intersections. (5)

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The Caltrans CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (6) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics (e.g., located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An

intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

Although unsignalized, traffic signal warrants have not been performed for the intersection of Driveway 1 at 2nd Street and Driveway 2 at 2nd Street since this intersection will be restricted to right-in/right-out access only or left-in/right-in/right-out access only and installation of a traffic signal at these intersections is not feasible. The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *Opening Year Cumulative (2024) Traffic Conditions* of this report. Based on the aforementioned criteria, traffic signal warrant analyses have not been conducted for the purposes of this TA.

2.4 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions.

2.4.1 CITY OF BEAUMONT

The City of Beaumont has established LOS D as the minimum level of service for all roadways/intersections within the City (Policy 10 of the General Plan Circulation Element). Therefore, any intersection operating at LOS E or F will be considered deficient for the purposes of this analysis.

2.4.2 CITY OF BANNING

The City of Banning has established LOS C as the minimum level of service for all roadways/intersections within the City. Therefore, any City of Banning intersection operating at LOS D, E, or F will be considered deficient for the purposes of this analysis. LOS D is considered acceptable for intersections along Ramsey Street and the I-10 interchange intersections.

2.5 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. To determine whether the addition of project traffic at a study intersection result in a direct project-related deficiency, the following thresholds will be utilized:

- A project-related traffic deficiency occurs at a study intersection if the addition of project-generated trips reduces the peak hour level of service of the study intersection to change from acceptable level of service (LOS A, B, C or D or LOS A, B, and C for City of Banning) to an unacceptable level of service (LOS E or F or LOS D, E, or F for City of Banning);
- A cumulative traffic deficiency occurs at a study intersection if the Project contributes peak hour trips to an intersection that is anticipated to operate at a deficient LOS without the Project (LOS E or F or LOS D, E, or F for City of Banning).

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Beaumont General Plan Circulation Network, and a review of existing peak hour intersection operations analysis.

3.1 EXISTING CIRCULATION NETWORK

The study area includes a total of 5 existing intersections as shown previously on Exhibit 1-3. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF BEAUMONT GENERAL PLAN CIRCULATION ELEMENTS

As noted previously, the Project site is located within the City of Beaumont. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on City of Beaumont General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the City of Beaumont General Plan Circulation Element and Exhibit 3-3 illustrates the City of Beaumont General Plan roadway cross-sections.

Urban Arterials are six-lane divided roadways (typically divided by a raised median or painted two-way turn-lane) with a 152-foot right-of-way. These roadways serve both regional through-traffic and inter-city traffic and typically direct traffic onto and off-of the freeways. The following study area roadway within the City of Beaumont is classified as an Urban Arterial:

- Highland Springs Avenue

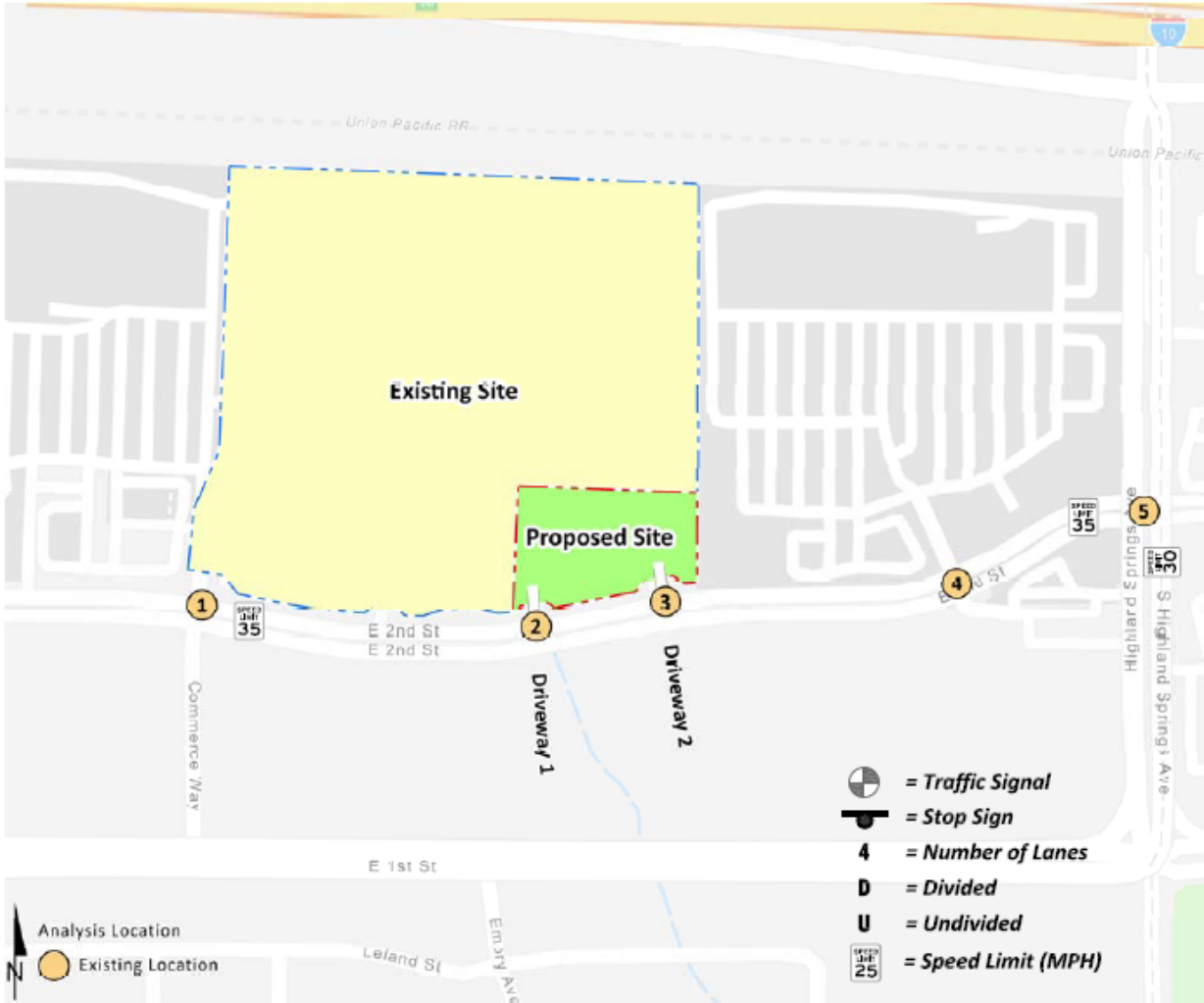
Major Highways are four lane divided roadways (typically divided by a raised median or painted two-way turn-lane) with a 98-foot right-of-way. These roadways typically direct traffic through major development areas and serve to move large volumes of inter-city traffic. The following study area roadway within the City of Beaumont is classified as a Major Highway:

- 2nd Street

3.3 CITY OF BANNING GENERAL PLAN CIRCULATION ELEMENT

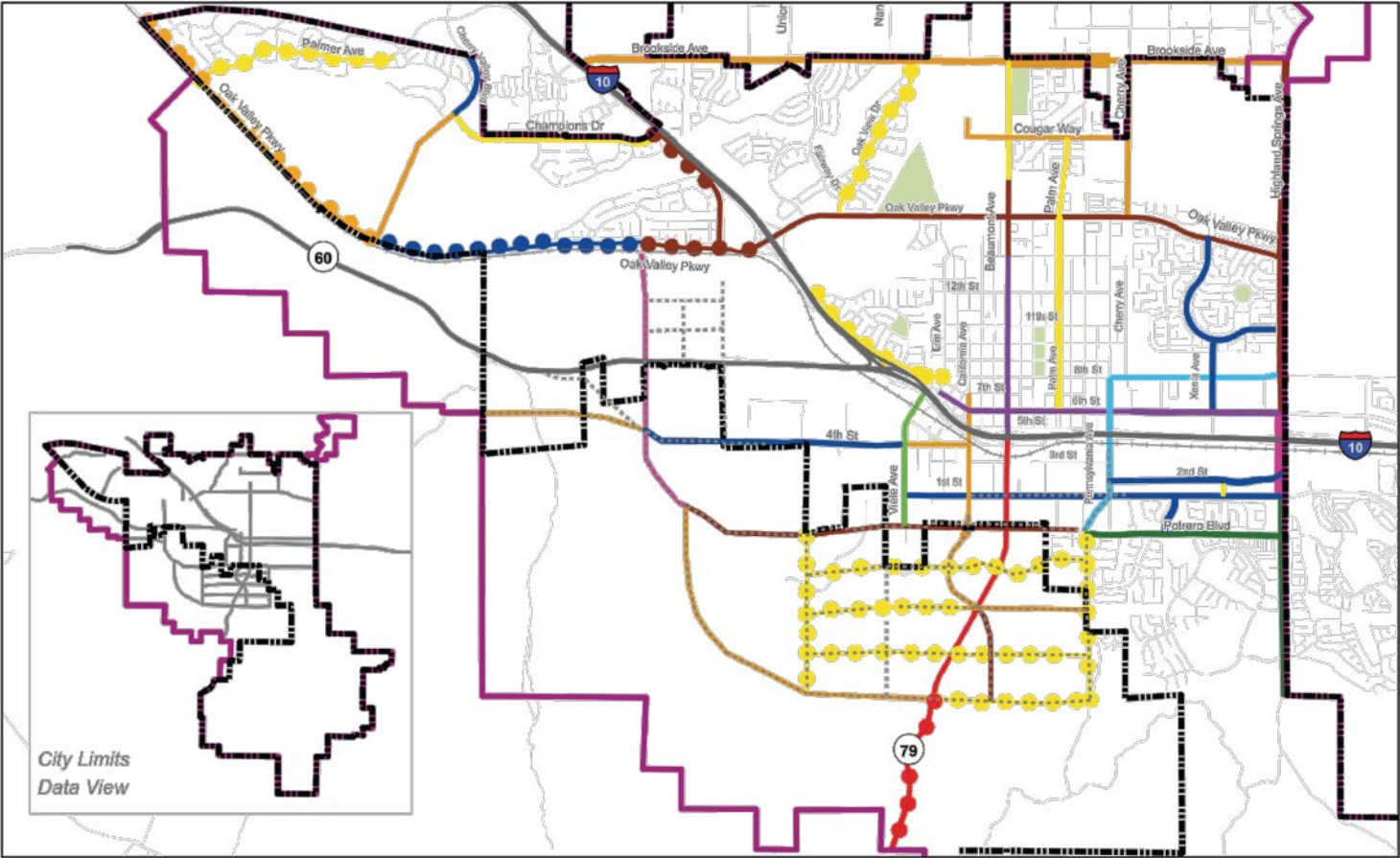
The study area is also partially located within the City of Banning. Exhibit 3-4 shows the City of Banning General Plan Circulation Element, and Exhibit 3-5 illustrates the City of Banning General Plan roadway cross-sections.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



1	Commerce Wy. & 2nd St.	2	Dwy. 1 & 2nd St.	3	Dwy. 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.

EXHIBIT 3-2: CITY OF BEAUMONT GENERAL PLAN CIRCULATION ELEMENT



ROADWAY CLASSIFICATION

- City Boundary
- Sphere of Influence
- Proposed Roadways
- Freeway
- Expressway A
- Expressway B
- Urban Arterial Highway
- Arterial Highway (4 Lanes)
- Arterial Highway Frontage
- Arterial Highway (2 Lanes)
- Major Highway (Painted Median)
- Major Highway (Raised Median)
- Major Frontage
- Downtown Streets
- Secondary Streets
- Secondary Frontage
- Collector Streets (4 Lanes)
- Industrial Collector (Painted Median)
- Industrial Collector (Raised Median)



EXHIBIT 3-3: CITY OF BANNING ROADWAY CROSS-SECTIONS (1 OF 5)

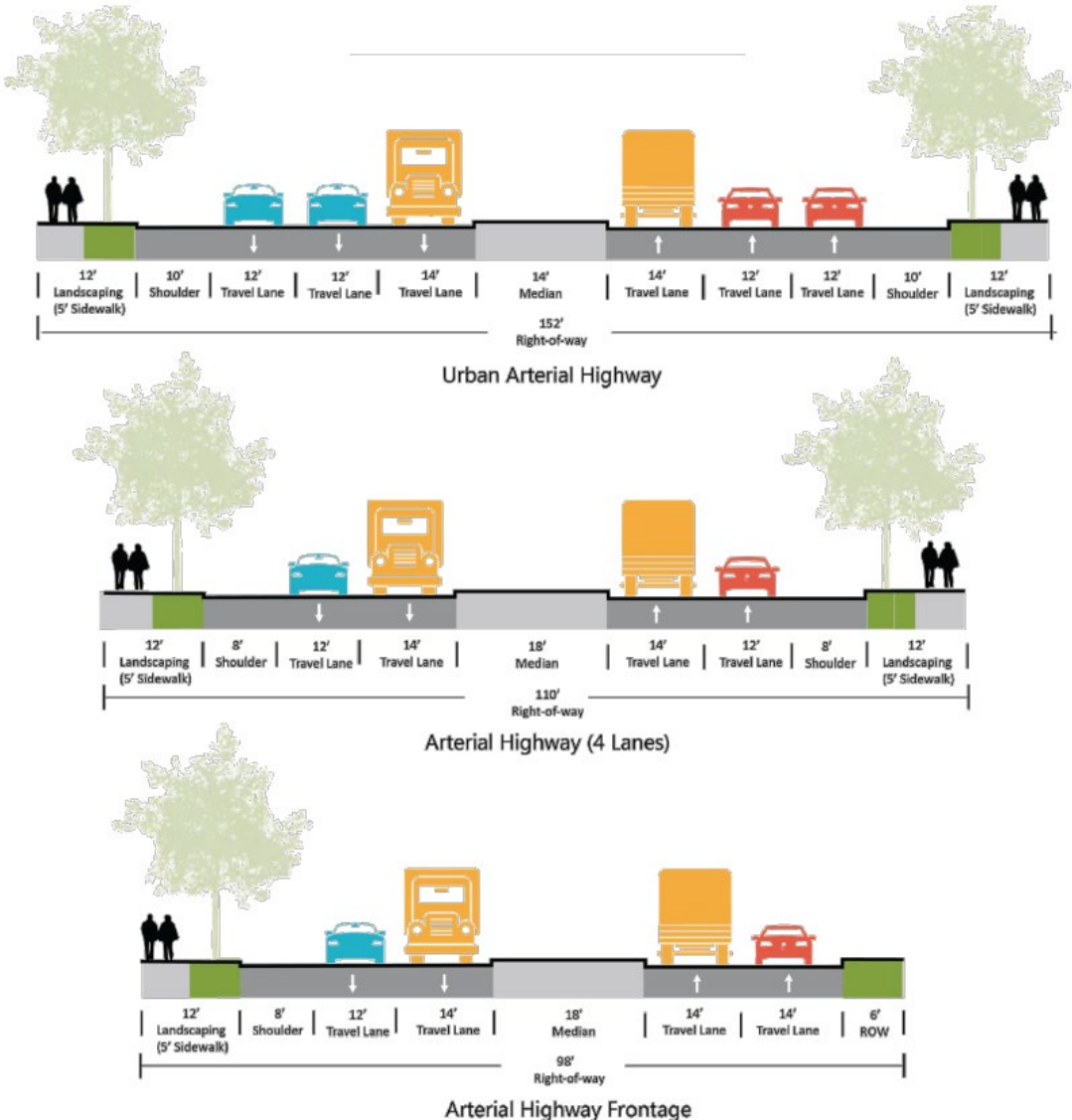
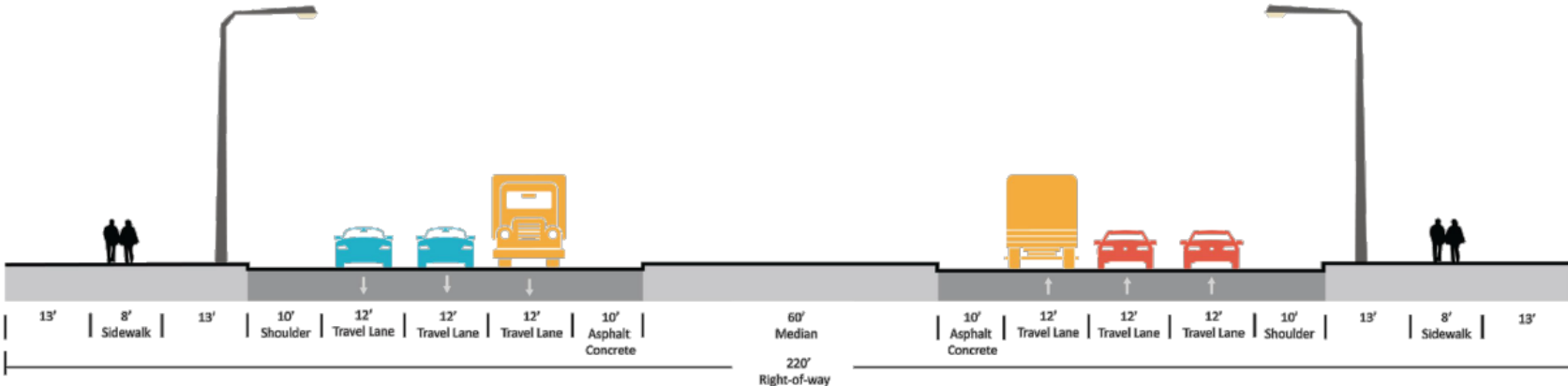
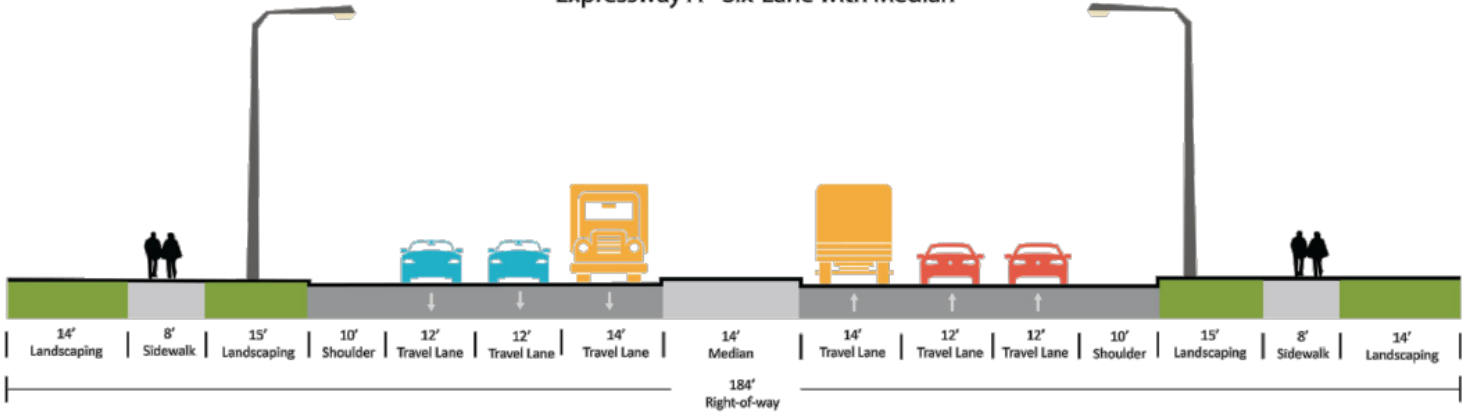


EXHIBIT 3-3: CITY OF BANNING ROADWAY CROSS-SECTIONS (2 OF 5)



Expressway A - Six-Lane with Median



Expressway B - Six-Lane with Median

*Standard roadway cross-sections presented for information only and may be updated at the decision of the City Engineer.

EXHIBIT 3-3: CITY OF BANNING ROADWAY CROSS-SECTIONS (3 OF 5)

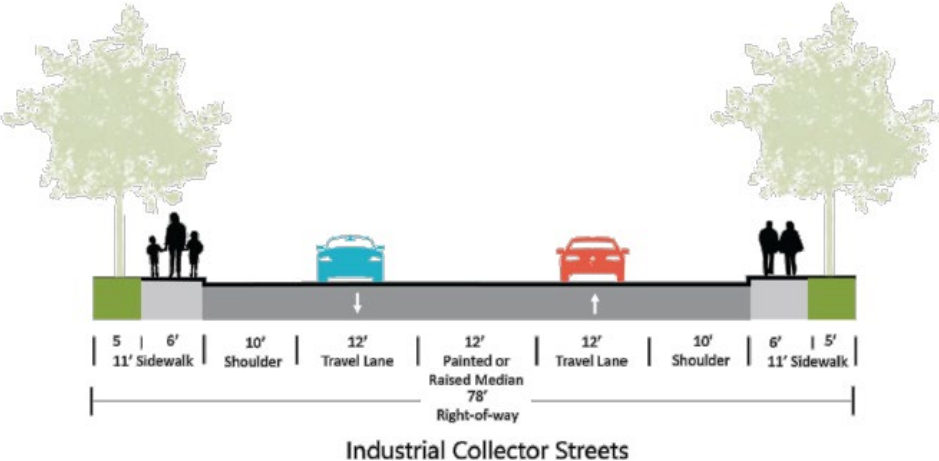


EXHIBIT 3-3: CITY OF BANNING ROADWAY CROSS-SECTIONS (4 OF 5)

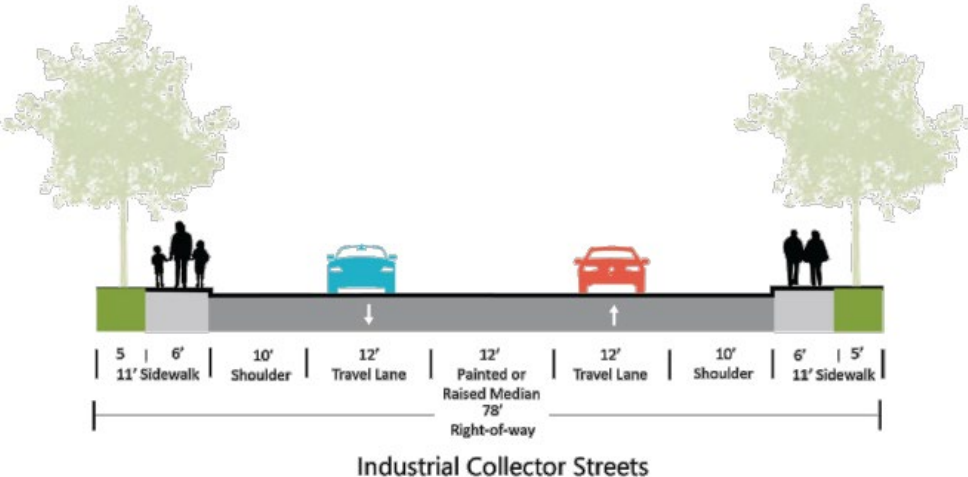
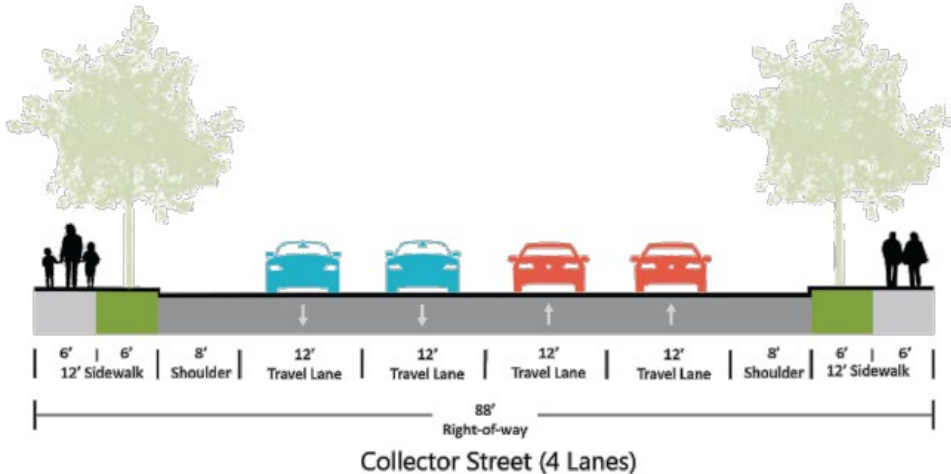


EXHIBIT 3-3: CITY OF BANNING ROADWAY CROSS-SECTIONS (5 OF 5)

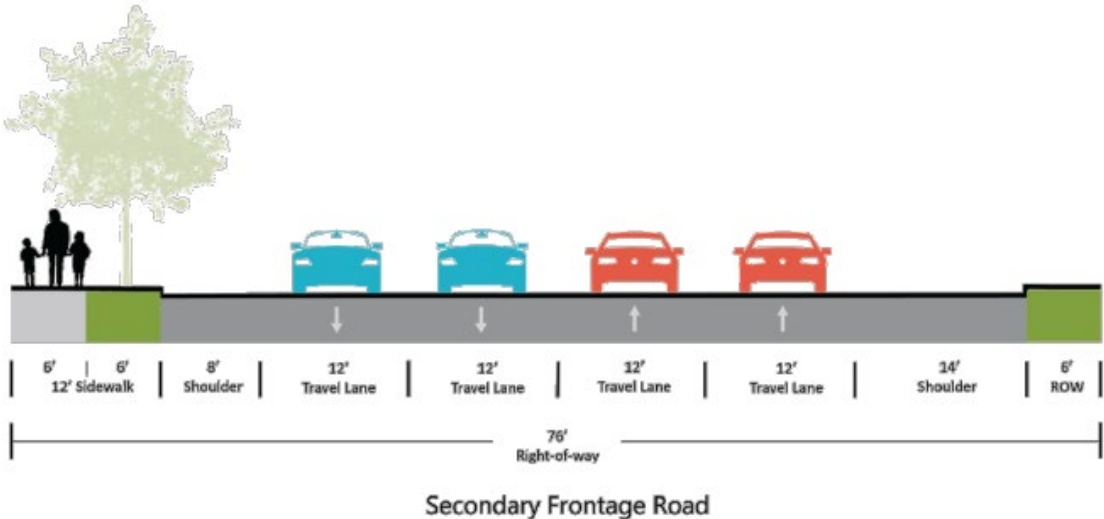
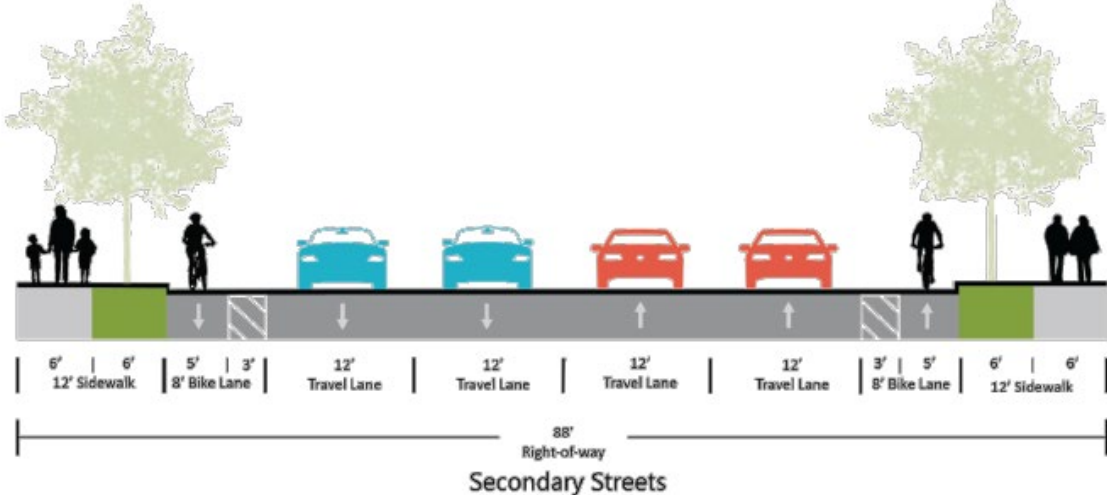


EXHIBIT 3-4: CITY OF BANNING GENERAL PLAN CIRCULATION ELEMENT

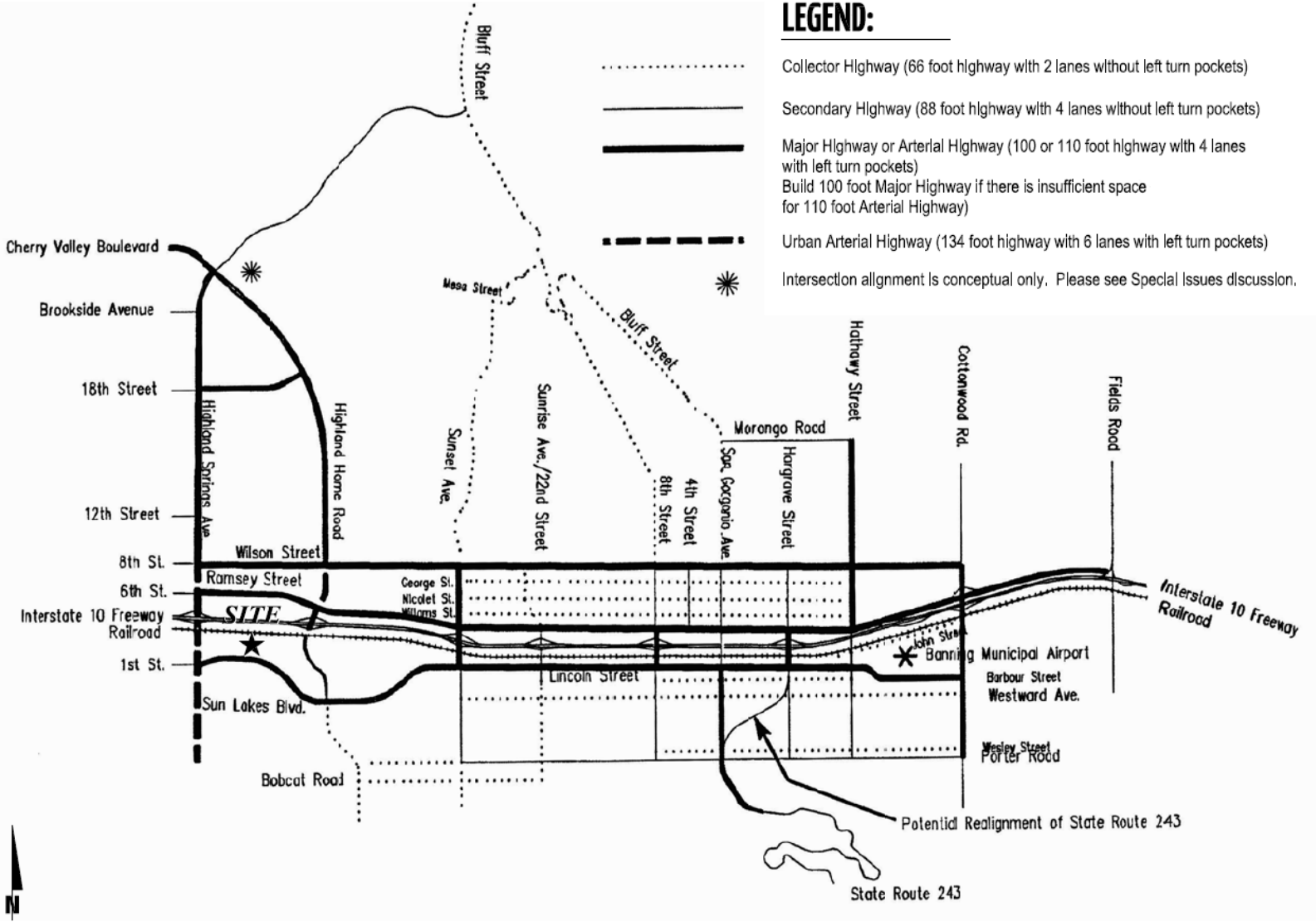
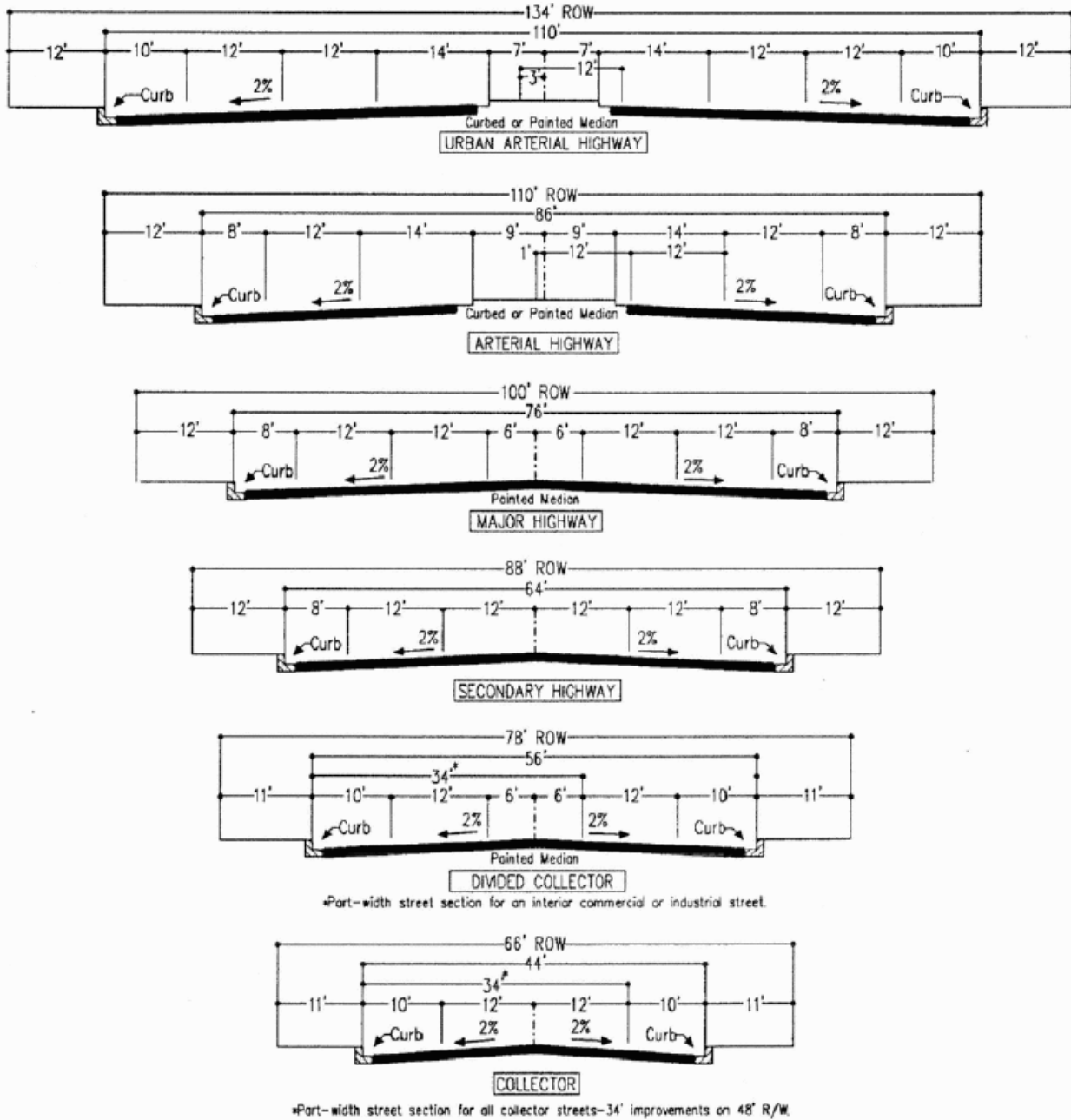


EXHIBIT 3-5: CITY OF BANNING GENERAL PLAN CIRCULATION ELEMENT



SOURCE: CITY OF BANNING (June 6, 2005)

3.4 BICYCLE & PEDESTRIAN FACILITIES

The City of Beaumont General Plan Bicycle and Pedestrian Priority Network is shown on Exhibit 3-6. 2nd Street is identified as a bicycle and pedestrian priority network. Existing Class II bicycle lanes are located along 2nd Street. Exhibit 3-7 illustrates the existing pedestrian facilities, including sidewalks and crosswalks. As shown on Exhibit 3-7, there are existing pedestrian facilities in the vicinity of the Project site that would likely serve pedestrians.

3.5 TRANSIT SERVICE

The study area is currently served by the Beaumont Transit with bus services along Highland Springs Avenue and 2nd Street via Route 3, Route 4, and Community Link 120/125. The study area is also served by Pass Transit with bus service along Highland Springs Avenue and 2nd Street via Route 1, Route 5, and Route 6. The transit services are illustrated on Exhibit 3-8. These transit routes could potentially serve the Project. Transit service is reviewed and updated by Beaumont Transit and Pass Transit periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.6 EXISTING (2021) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in May 2018, January 2021, and May 2021. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

Due to the COVID-19 pandemic, schools and businesses within the study area may have been closed or operating at less than full capacity. Where applicable, historic traffic counts will be utilized in conjunction with the adjustment factors below to reflect pre-COVID-19 conditions. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules.

City staff provided growth rate factors for the field traffic volumes that occurs in pre-, in-, and post-COVID-19 periods. If the data is from January 1, 2020 to March 15, 2020, the counts would be acceptable. If the data is between March 15, 2020 and March 15, 2021, a growth factor of 25% is to be applied. If new traffic counts are to be collected, a growth factor of 25% to be applied to all the data. If older counts before Jan. 1, 2020 are to be used, a growth factor of 2% (compounded annually) to be applied. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. These raw turning volumes have been flow conserved between intersections with limited access, no access, and where there are currently no uses generating traffic.

EXHIBIT 3-6: CITY OF BANNING GENERAL PLAN BICYCLE AND PEDESTRIAN PRIORITY NETWORK

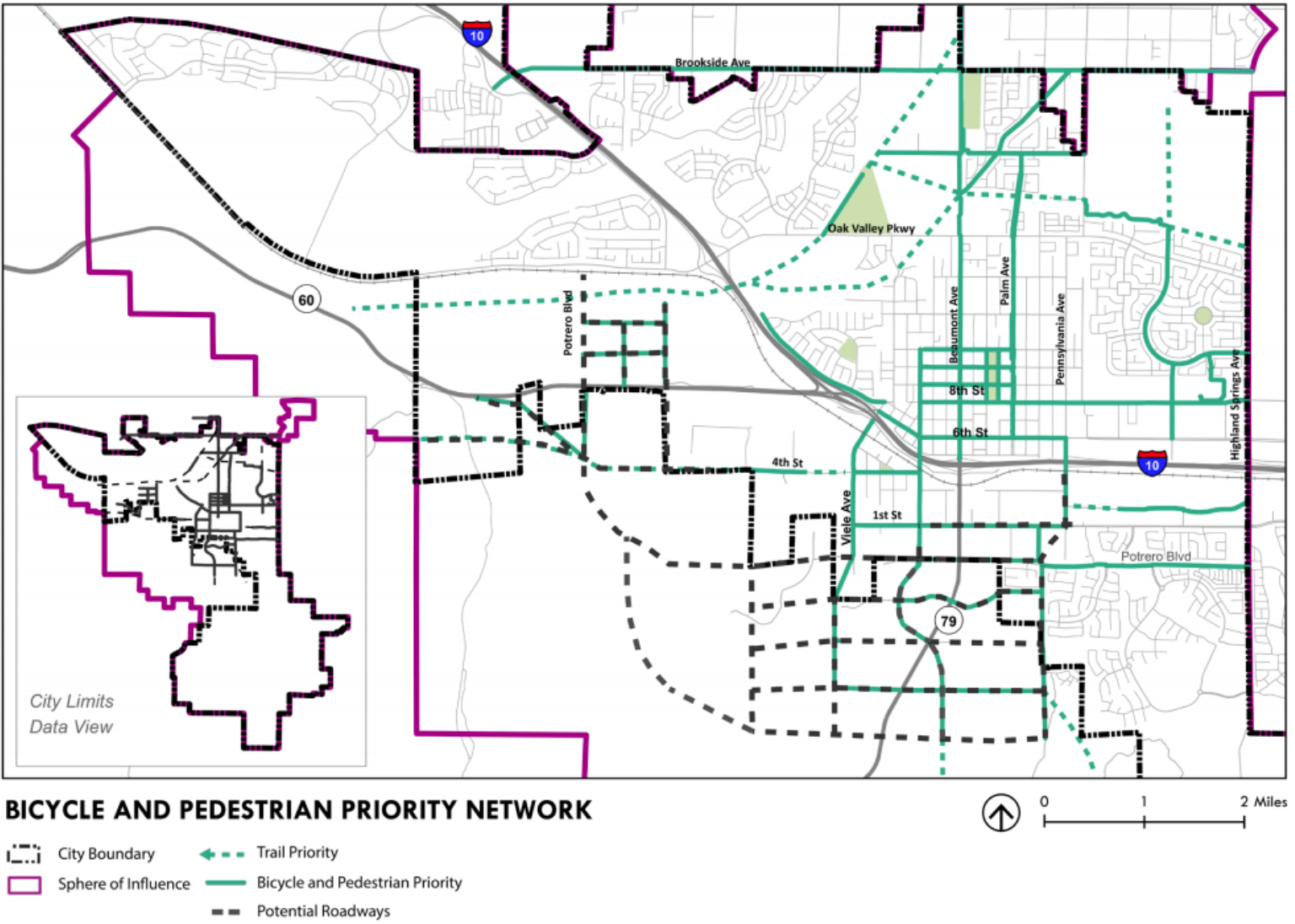


EXHIBIT 3-7: EXISTING PEDESTRIAN FACILITIES

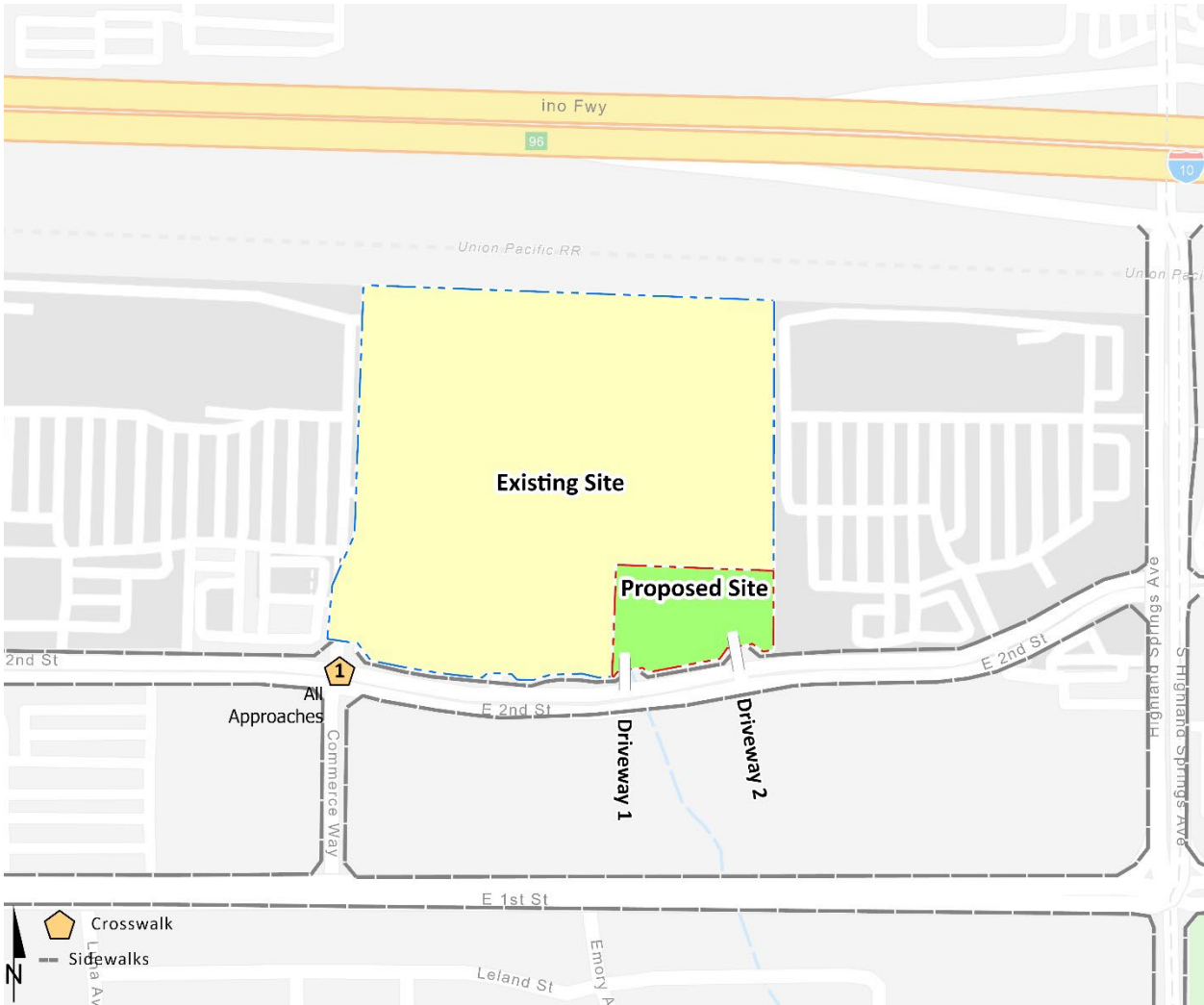


EXHIBIT 3-8: EXISTING TRANSIT ROUTES



Existing weekday Average Daily Traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-9. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 13.56 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.37 percent. As such, the above equation utilizing a factor of 13.56 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.37 percent (i.e., $1/0.0737 = 13.56$) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Exhibit 3-9.

3.7 EXISTING (2021) INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that all study area intersections are currently operating at an acceptable LOS during the peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

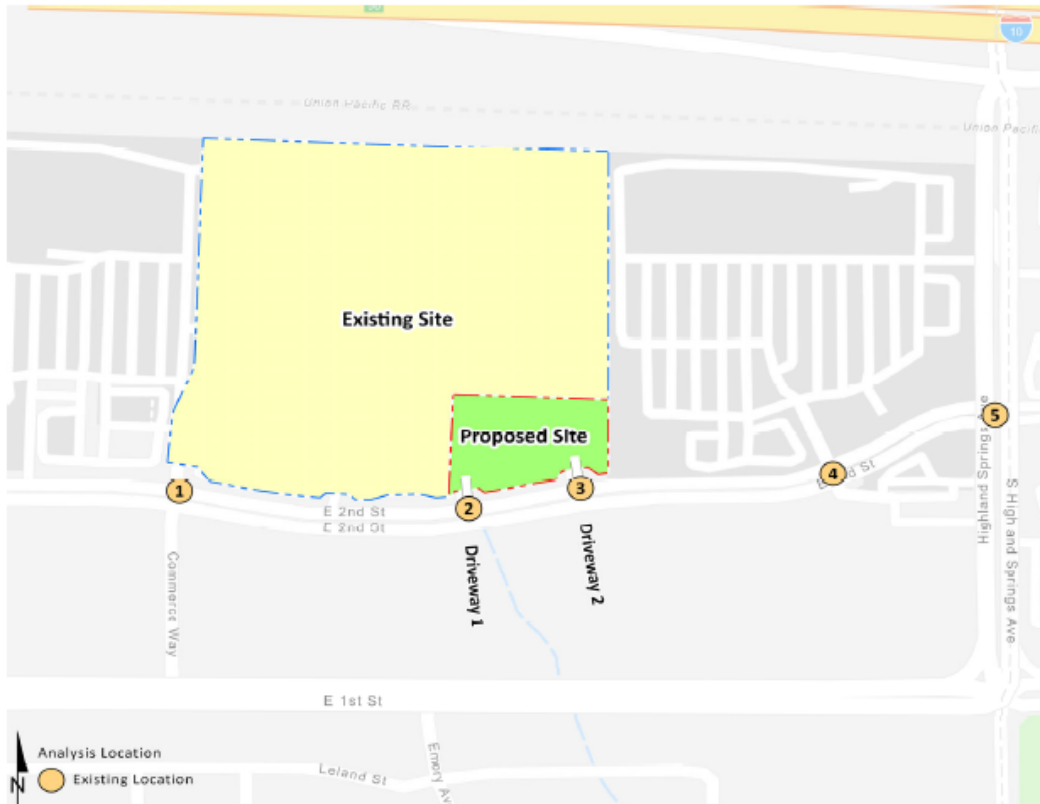
TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2021) CONDITIONS

# Intersection	Traffic Control ¹	Delay ² (secs.)		Level of Service	
		AM	PM	AM	PM
1 Commerce Wy. & 2nd St.	TS	13.3	24.7	B	C
2 Driveway 1 & 2nd St.	CSS	9.9	11.8	A	B
3 Driveway 2 & 2nd St.	CSS	9.8	11.8	A	B
4 Paseo Beaumont & 2nd St.	TS	14.5	17.8	B	B
5 Highland Springs Av. & 2nd St.	TS	19.5	29.9	B	C

¹ CSS = Cross-street Stop; TS = Traffic Signal

² Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) is considered the delay and LOS for the intersection.

EXHIBIT 3-9: EXISTING (2021) TRAFFIC VOLUMES



1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.
13,650		16,800		20,450		21,900		21,200	7,600
8(15)		168(163)		36(53)		66(146)		45(93)	35(97)
131(218)		76(193)		343(678)		375(705)		389(634)	19(73)
201(374)		74(271)				3(10)		3(10)	15(47)
4(10)		44(94)		11(18)		75(168)		5(10)	368(722)
19(103)		188(226)		288(759)		280(558)		3(6)	11(68)
3(18)		58(135)				14(15)		14(25)	33(37)
									42(113)
									518(541)
									15(27)
5,850		13,050		20,450		21,550		1,050	16,700
		20,750						21,200	

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4 PROJECTED FUTURE TRAFFIC

The Project is to consist of the development of a 16-vehicle fueling position Gasoline/Service Station on an existing Walmart site. Vehicular access will be provided via the following existing driveways:

- 2nd Street via Commerce Way – Full access
- 2nd Street via Driveway 1 – Right-in/Right-out access
- 2nd Street via Driveway 2 – Left-in/Right-in/Right-out access

Regional access to the Project site is available from the I-10 Freeway via the Highland Springs Avenue interchange.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

Trip generation rates used for this analysis are based upon information collected by the ITE as provided in their Trip Generation Manual (10th Edition, 2017). (2) As shown in Table 4-1, the proposed Project is anticipated to generate a total of 1,210 trip-ends per day on a typical weekday with 62 trips during the weekday AM peak hour and 98 trips during the weekday PM peak hour.

Pass-by trip reductions have been applied to the proposed Project uses based on percentages have been obtained from the ITE Trip Generation Handbook (3rd Edition, 2017). (7) These percentages represent traffic that is already on the roadway today that would make an intermediate stop at the site before continuing on to their ultimate destination. The pass-by trip reductions will be applied to off-site study area intersections only while the Project driveways will evaluate 100% of the Project traffic (pass-by trip reductions to be added back).

TABLE 4-1: PROJECT TRIP GENERATION SUMMARY

Land Use ¹	ITE Code	Units ²	AM Peak Hour			PM Peak Hour			Weekday Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates									
Gasoline/Service Station	944	VFP	5.14	5.14	10.28	7.02	7.01	14.03	172.01

Land Use ¹	Quantity	Units ²	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Vehicular Trips									
Gasoline/Service Station	16	VFP	82	82	164	112	112	224	2,752
Pass-By (62% AM; 56% PM/Daily):			-51	-51	-102	-63	-63	-126	-1,542
Project Buildout Total:			31	31	62	49	49	98	1,210

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

² VFP = Vehicle Fueling Position

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. Exhibit 4-1 illustrates the passenger car trip distribution patterns.

4.3 MODAL SPLIT

The traffic reducing potential of public transit, walking, or bicycling have not been considered in this TA. Essentially, the traffic projections are "conservative" in that these alternative travel modes might be able to reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

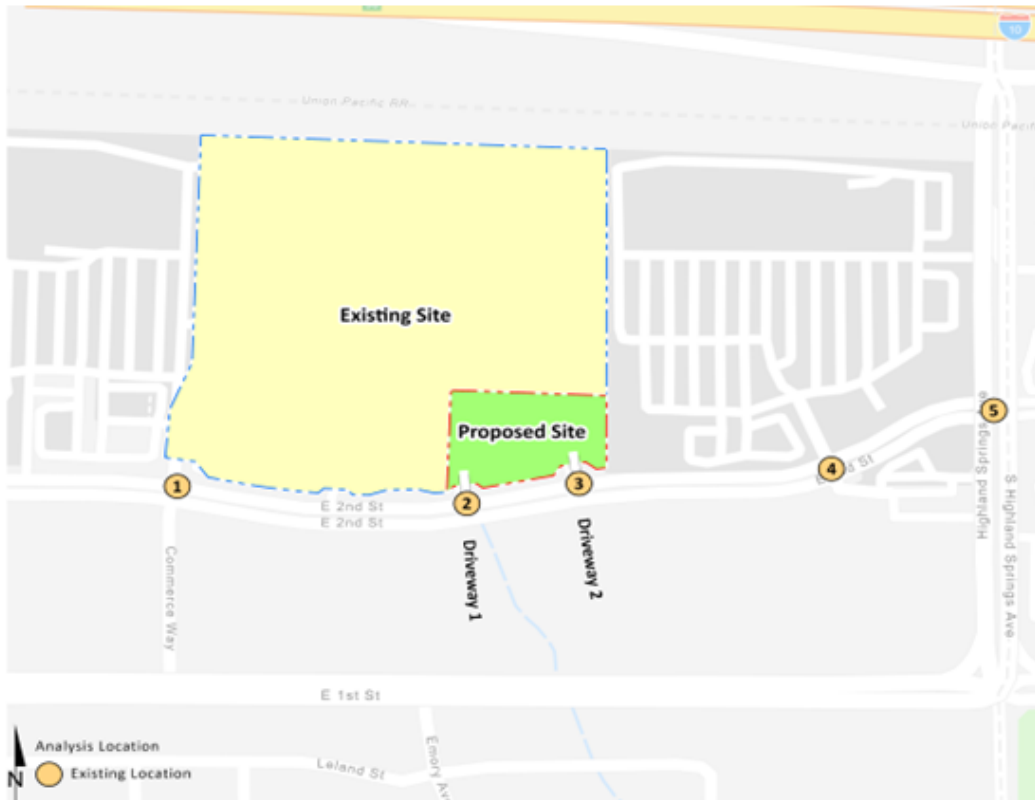
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-2.

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2.0% per year for 2024 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. The total ambient growth is 6.12% for 2024 traffic conditions (growth of 2.0 percent per year over 3 years). This ambient growth rate is applied to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth traffic volumes have been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

Opening Year Cumulative (2024) traffic volumes are provided in Section 5 of this report. The traffic generated by the proposed Project was then manually added to the base volume to determine Opening Year Cumulative "With Project" forecasts for 2024.

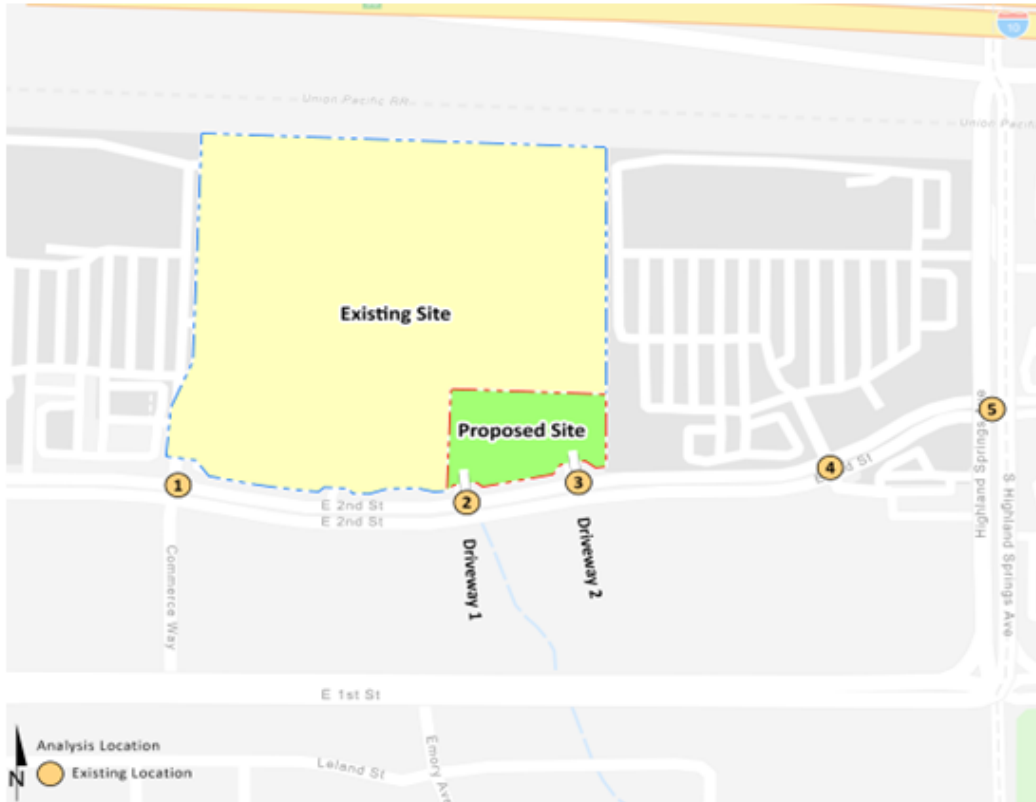
EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION



1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.																															
<table border="1"> <tr> <td>0(5)</td> <td>0(30)</td> <td>0(65)</td> </tr> <tr> <td>5(0) →</td> <td>↑ 10(0)</td> <td>↑ 10(0)</td> </tr> </table>	0(5)	0(30)	0(65)	5(0) →	↑ 10(0)	↑ 10(0)	<table border="1"> <tr> <td>10(10)</td> <td>← 35(0)</td> <td>← 0(35)</td> </tr> <tr> <td>15(30) →</td> <td></td> <td></td> </tr> </table>	10(10)	← 35(0)	← 0(35)	15(30) →			<table border="1"> <tr> <td>15(10)</td> <td>← 40(0)</td> <td>← 35(0)</td> </tr> <tr> <td>15(0) →</td> <td></td> <td></td> </tr> <tr> <td>0(30) →</td> <td></td> <td></td> </tr> </table>	15(10)	← 40(0)	← 35(0)	15(0) →			0(30) →			<table border="1"> <tr> <td></td> <td>← 75(0)</td> <td></td> </tr> <tr> <td>0(30) →</td> <td></td> <td></td> </tr> </table>		← 75(0)		0(30) →			<table border="1"> <tr> <td>40(0)</td> <td></td> <td></td> </tr> <tr> <td>0(15) →</td> <td>↑ 10(5)</td> <td>↑ 15(25)</td> </tr> <tr> <td>0(15) →</td> <td>35(0)</td> <td>0(25)</td> </tr> </table>	40(0)			0(15) →	↑ 10(5)	↑ 15(25)	0(15) →	35(0)	0(25)
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###(##) Percent Inbound/Outbound Peak Hour Distribution

EXHIBIT 4-2: PROJECT ONLY TRAFFIC VOLUMES



1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.																									
250		650	700	650		650		500																										
<table border="1"> <tr> <td>← 2(2)</td> <td>↑ 9(15)</td> <td>← 20(32)</td> </tr> <tr> <td>2(2) →</td> <td>↑ 5(8)</td> <td>↑ 5(8)</td> </tr> </table>	← 2(2)	↑ 9(15)	← 20(32)	2(2) →	↑ 5(8)	↑ 5(8)	<table border="1"> <tr> <td>← 18(36)</td> <td>↑ 36(48)</td> <td>← -14(-14)</td> </tr> <tr> <td>14(22) →</td> <td></td> <td></td> </tr> </table>	← 18(36)	↑ 36(48)	← -14(-14)	14(22) →			<table border="1"> <tr> <td>← 37(74)</td> <td>↑ 38(52)</td> <td>← -15(-15)</td> </tr> <tr> <td>5(7) →</td> <td></td> <td>9(15) →</td> </tr> </table>	← 37(74)	↑ 38(52)	← -15(-15)	5(7) →		9(15) →	<table border="1"> <tr> <td></td> <td></td> <td>← 23(37)</td> </tr> <tr> <td>9(15) →</td> <td></td> <td></td> </tr> </table>			← 23(37)	9(15) →			<table border="1"> <tr> <td>← 12(20)</td> <td>↑ 5(7)</td> <td>↑ 11(17)</td> </tr> <tr> <td>5(7) →</td> <td></td> <td>8(12)</td> </tr> </table>	← 12(20)	↑ 5(7)	↑ 11(17)	5(7) →		8(12)
← 2(2)	↑ 9(15)	← 20(32)																																
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14(22) →																																		
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5(7) →		9(15) →																																
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5(7) →		8(12)																																
Nominal	650	650	700	650	650	650	650	650	480																									

###(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

Other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Beaumont.

Exhibit 4-3 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-2. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-2 are reflected as part of the background traffic. Cumulative ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-4.

TABLE 4-2: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

TAZ	Project	Land Use	Quantity ¹
City of Beaumont			
B1	Sundance	Residential	4,450 DU
B2	Four Seasons Tract No. 32260 & 33096	Residential	1,890 DU
B3	Sundance Corporate Center	Commercial/Industrial	13.60 AC
B4	Potrero Creek Estates	Residential	700 DU
B5	Tract No. 32850	Residential	95 DU
B6	San Gorgonio Village Phase 2	Commercial	22.50 AC
B7	Beyond Beaumont	Commercial	6.589 TSF
B8	Highland & 8th Retail	Fast-Food w/ Drive-Thru	3.500 TSF
		Super Con. Mkt. w/ Gas Station	12 VFP
B9	Beaumont Auto Dealership	Industrial	10.900 TSF
		Commercial	31.400 TSF
City of Banning			
BA1	Sun Lakes Village North Specific Plan Amendment No. 5	Industrial	877.298 TSF
		Office	52.065 TSF
		Commercial	37.189 TSF
BA2	Sunset Crossroads	Industrial	5,545.000 TSF
		Commercial	268.400 TSF
		Hotel	125.000 RM

¹ AC = Acres; DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; RM = Rooms

EXHIBIT 4-3: CUMULATIVE DEVELOPMENT LOCATION MAP

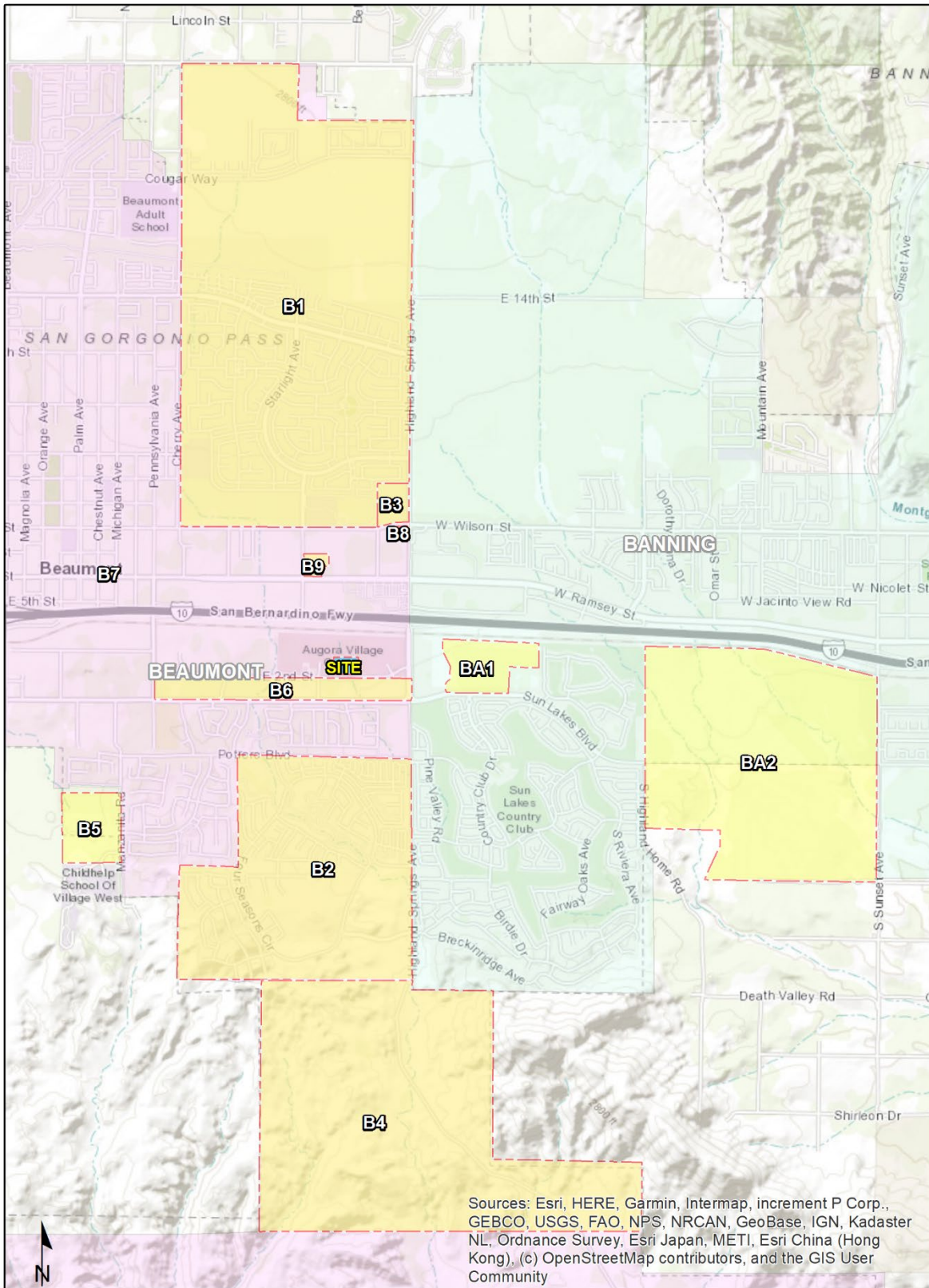
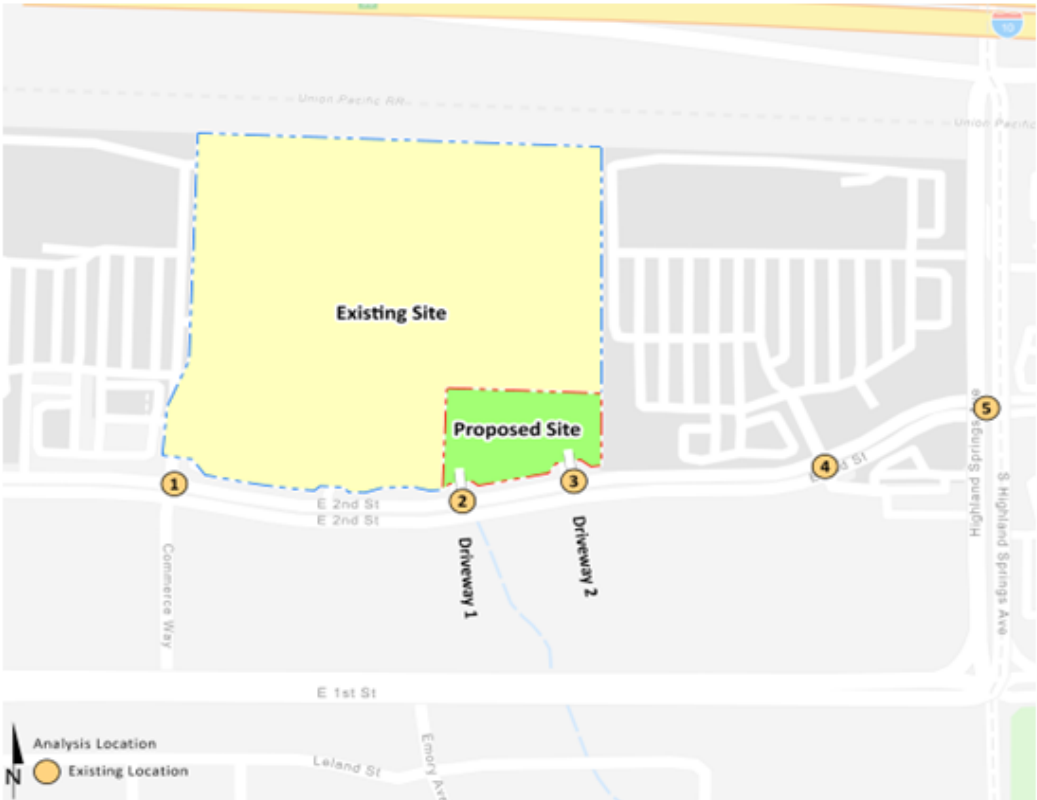


EXHIBIT 4-4: CUMULATIVE ONLY TRAFFIC VOLUMES



1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.
150		150		150		150		150	

###(##) AM(PM) Peak Hour Intersection Volumes
 ## Average Daily Trips

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5 OPENING YEAR CUMULATIVE (2024) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2024) Without and With Project traffic forecasts, and the resulting intersection operations analysis.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2024) conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

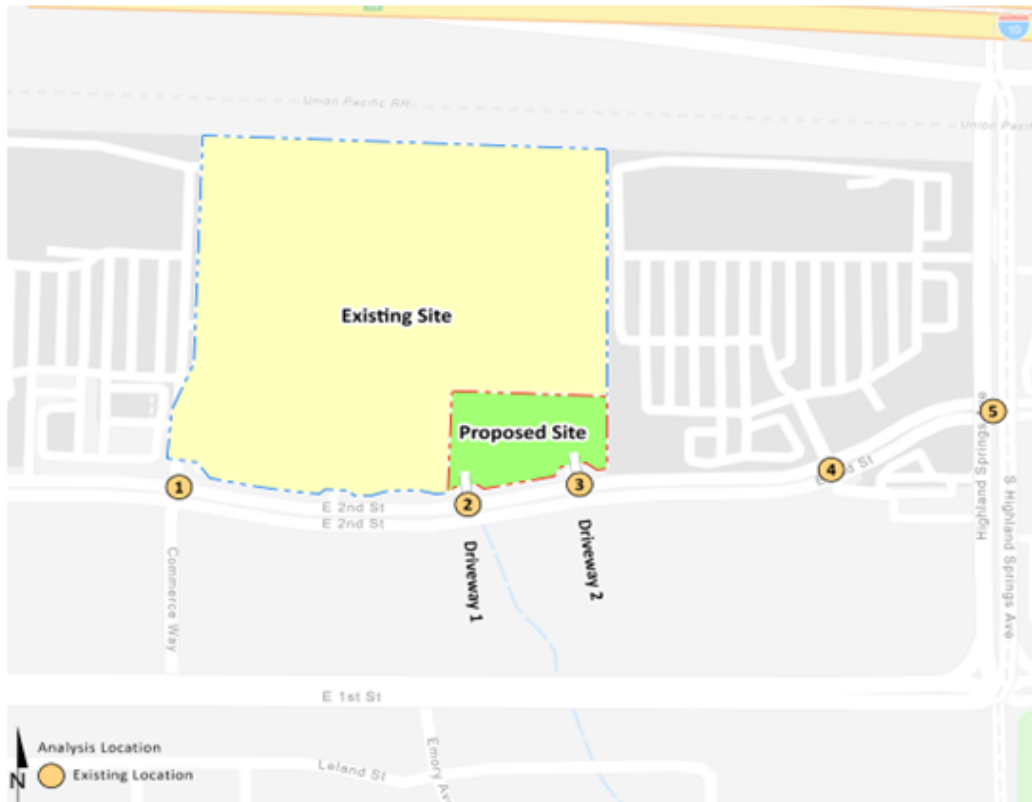
5.2 OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 6.12% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2024) Without Project traffic conditions are shown on Exhibit 5-1.

5.3 OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Opening Year Cumulative (2024) Without Project traffic in conjunction with the addition of Project traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2024) With Project traffic conditions are shown on Exhibit 5-2.

EXHIBIT 5-1: OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC VOLUMES

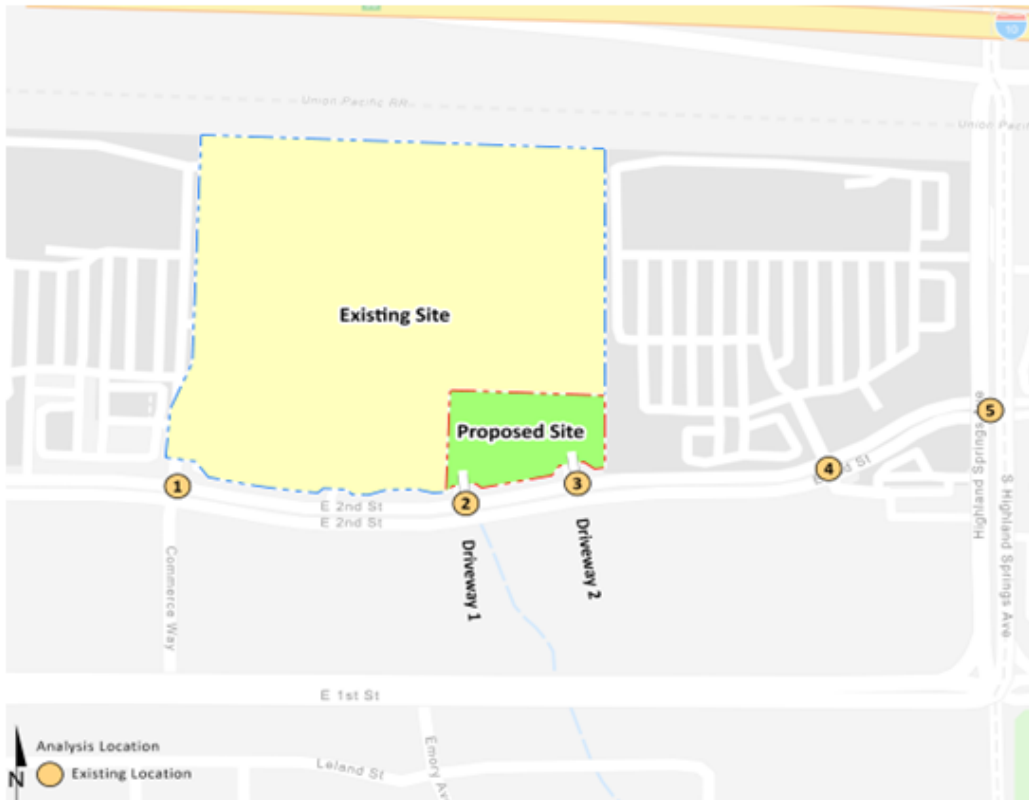


1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Beaumont & 2nd St.	5	Highland Springs Av. & 2nd St.
14,600	17,950	0,887	21,800	2,700	23,300	10,450	22,650	42,450	8,050
↓ 81(16) ↓ 131(31) ↓ 220(402) ↑ 180(181) ↑ 81(204) ↑ 78(288) ↓ 4(11) → ↓ 20(109) → ↓ 3(19) →	↓ 180(181) ↓ 81(204) ↓ 78(288) ↓ 4(11) → ↓ 20(109) → ↓ 3(19) →	↓ 18(11) ↓ 38(56) ↓ 365(728) ↓ 323(829) →	↓ 70(155) ↓ 400(757)	↓ 4(27) ↓ 12(19) → ↓ 311(810) →	↓ 70(216) ↓ 5(12) ↓ 124(258) ↓ 47(99) ↓ 415(681) ↓ 3(10) ↓ 80(178) → ↓ 303(597) → ↓ 15(16) → ↓ 6(10) → ↓ 3(7) → ↓ 15(27) →	↓ 399(584) ↓ 619(619) ↓ 173(268) ↓ 37(102) ↓ 20(77) ↓ 16(50) ↓ 390(767) → ↓ 11(72) → ↓ 41(44) → ↓ 47(129) → ↓ 638(947) ↓ 16(28)			
6,200	22,150	21,800	23,000	1,100	22,650	22,650	22,650	22,650	22,650

###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 5-2: OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC VOLUMES



1	Commerce Wy. & 2nd St.	2	Driveway 1 & 2nd St.	3	Driveway 2 & 2nd St.	4	Paseo Besumont & 2nd St.	5	Highland Springs Av. & 2nd St.
14,650	18,600	3,600	22,500	4,650	23,950	10,450	23,250	42,950	8,050
10(18)	180(181)	63(157)	74(134)	41(106)	108(237)	70(216)	47(99)	411(604)	37(102)
139(231)	81(204)	351(684)	385(712)	5(12)	438(718)	5(12)	438(718)	763(619)	20(77)
229(417)	98(320)			124(258)	3(10)	124(258)	3(10)	173(266)	16(50)
4(11) →	48(99) ↑	337(851) →	17(26) →	80(178) →	6(10) ↑	80(178) →	6(10) ↑	395(774) →	58(146) ↑
22(111) →	202(245) ↑		320(825) →	312(612) →	3(7) ↓	312(612) →	3(7) ↓	11(72) →	646(959) ↓
3(19) →	64(148) ↑			15(16) ↓	15(27) ↑	15(16) ↓	15(27) ↑	46(51) ↓	16(28) ↓
6,250	14,350	22,800	22,500	23,600	1,100	23,250	22,950		

AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

5.4 INTERSECTION OPERATIONS ANALYSIS

5.4.1 OPENING YEAR CUMULATIVE (2024) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2024) Without Project conditions with roadway and intersection geometrics consistent with Section 5.1 *Roadway Improvements*. As shown on Table 5-1, all study area intersections are anticipated to operate at an acceptable LOS under Opening Year Cumulative (2024) Without Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2024) Without Project traffic conditions are included in Appendix 5.1 of this TA.

TABLE 5-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2024) CONDITIONS

# Intersection	Traffic Control ²	2024 Without Project Delay ¹ (secs.)				2024 With Project Delay ¹ (secs.)			
		Level of Service		Level of Service		Level of Service		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Commerce Wy. & 2nd St.	TS	13.8	29.7	B	C	14.6	35.4	B	D
2 Driveway 1 & 2nd St.	CSS	10.1	12.1	B	B	10.5	13.8	B	B
3 Driveway 2 & 2nd St.	CSS	9.9	12.1	A	B	10.2	13.8	B	B
4 Paseo Beaumont & 2nd St.	TS	14.7	18.4	B	B	14.7	18.6	B	B
5 Highland Springs Av. & 2nd St.	TS	20.1	35.0	B	D	20.3	36.2	C	D

¹ Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) is considered the delay and LOS for the intersection.

² CSS = Cross-street Stop; TS = Traffic Signal

5.4.2 OPENING YEAR CUMULATIVE (2024) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 5-1, all area intersections anticipated to operate at an acceptable LOS during the peak hours with the addition of Project traffic. The intersection operations analysis worksheets for Opening Year Cumulative (2024) With Project traffic conditions are included in Appendix 5.2 of this TA.

5.5 RECOMMENDED IMPROVEMENTS

As shown on Table 5-1, the study area intersections are anticipated to operate at an acceptable LOS with the addition of Project traffic. As such, no intersection improvements have been recommended for the purposes of this TA.

6 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Beaumont are funded through a combination of improvements constructed by the Project, development impact fee programs or fair share contributions. Fee programs applicable to the Project are described below.

6.1 RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF)

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. (8) This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

6.2 CITY OF BEAUMONT DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The City of Beaumont has created its own local DIF program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

The Project Applicant will be subject to the City's DIF fee program and will pay the requisite City DIF fees at the rates then in effect. The Project Applicant's payment of the requisite DIF fees at the rates then in effect pursuant to the DIF Program will mitigate its impacts to DIF-funded facilities.

6.3 MEASURE A

Measure A, Riverside County's half-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2039. Measure A funds a wide variety of transportation projects and services throughout the County. RCTC is responsible for administering the program. Measure A dollars are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

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7 REFERENCES

1. **Western Riverside Council of Governments.** *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* WRCOG : s.n., January 2020.
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3. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **Caltrans.** *Manual on Uniform Traffic Control Devices (MUTCD).* [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.
6. **California Department of Transportation.** *California Manual on Uniform Traffic Control Devices (MUTCD).* [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2017.
7. **Institute of Transportation Engineers (ITE).** *Trip Generation Handbook.* 3rd Edition. 2017.
8. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

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