5.4 TRAFFIC AND CIRCULATION

This section is based upon the *Foothill Parkway Westerly Extension Traffic Assessment*, prepared by RBF Consulting, dated June 2008 (refer to Appendix 15.4, TRAFFIC ASSESSMENT). Traffic modeling data provided by Meyer, Mohaddes Associates, dated June 2007, was the basis for the Traffic Assessment, and is included in the traffic volume figures for this section. The study involved the use of the *City of Corona General Plan* travel demand model, existing 2006 daily traffic volumes, and year 2010 and 2025 projections of daily volumes. In order to understand the difference between an acceptable traffic condition versus an unacceptable traffic condition, the following discussion outlines the performance criteria typically used in the transportation planning field to evaluate the level of service associated with a study roadway.

5.4.1 REGULATORY SETTING

REGIONAL TRANSPORTATION PLANS

There are several regional and subregional transportation plans that include the City of Corona. They include the Riverside County Congestion Management Program (CMP), the Southern California Association of Governments Comprehensive Transportation Plan (SCAG/CTP), the Regional Transportation Integrated Program (RTIP), the Regional Transportation Plan (RTP), and the Transportation Uniform Mitigation Fee (TUMF).

The City's *General Plan* Circulation Element provides several key initiatives that are proposed to improve regional traffic flow. These key initiatives include the State Transportation Improvement Program (STIP), Measure "A" Freeway and Highway improvements, the Community and Environmental Transportation Acceptability Process, and the TUMF.

The Western Riverside County Transportation Uniform Mitigation Fee Program has been established for future developments within western Riverside County that would result in traffic volumes exceeding the capacity of the Regional System of Highways and Arterials (RSHA or Regional System), as it presently exists. The Riverside Regional System needs to be expanded to accommodate anticipated future growth, as current funds are inadequate to construct the Regional System needed to avoid the unacceptable levels of traffic congestion and related adverse impacts.

RIVERSIDE COUNTY CONGESTION MANAGEMENT PROGRAM

The purpose of the 2007 Riverside County Congestion Management Program (CMP) (Riverside County Transportation Commission, December 12, 2007) is to develop a coordinated approach to managing and decreasing traffic congestion by linking the various transportation, land use, and air quality planning programs throughout the County. The program is consistent with that of the Southern California Association of Governments (SCAG).

CITY OF CORONA CIRCULATION ELEMENT

The *City of Corona General Plan* Circulation Element provides the necessary framework to guide the growth and development of the City's transportation-related infrastructure, and integrates land use and transportation planning by ensuring that all existing and future developments have adequate circulation. Table 5.4-1, below, includes the applicable Goals and Policies within the Circulation Element, relative to the proposed Foothill Parkway Westerly Extension, and describes the project's consistency with these goals and policies:

Table 5.4-1
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Traffic and Circulation

Goals and Policies	Project Consistency
Circulation Element Goals	
Local Thoroughfares and Transportation Routes Goal 6.1: "*Provide a system of streets that meets the needs of current and future residents and businesses, and facilitates the safe and efficient movement of people and goods throughout the City, while accommodating future growth consistent with the Land Use Element.*"	The extension of Foothill Parkway provides additional east/west capacity in the City, consistent with the projected future growth. The connections at Border Avenue and Chase Drive provide additional facilities for residents and emergency vehicles. The Project would be consistent with Goal 6.1 of the Circulation Element.
Transportation System Management and Transportation Demand Management Goal 6.3: "Maximize the efficiency of the circulation system through the use of transportation system management strategies. Reduce total vehicular miles traveled in Corona, including the development and improvement of alternative transportation modes, the reduction in the number of trips generated, and the reduction in trip distances."	The extension of Foothill Parkway would provide a more direct route for people traveling between the western and eastern portions of south Corona, thereby reducing trip distances. Therefore, the Project would be consistent with Goal 6.3 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Goal 6.5: "*Develop and maintain convenient bikeway and hiking trail systems to satisfy both recreational desires and transportation needs. Coordinate with the Riverside County Plan and the Santa Ana River Trails Plan.*"	The Foothill Parkway Westerly Extension Project would provide additional bikeways and hiking trails, which would tie into existing facilities. Therefore, the Project would be consistent with Goal 6.5 of the Circulation Element.
Truck Routes/Goods Movement Systems Goal 6.7: "*Support goods movement to and from land uses in the City without adverse impacts to residents or businesses of rail or truck congestion, noise or air quality impacts.*"	The proposed alignment would not be a designated truck route. Trucks would be allowed on Foothill Parkway; however, the sizes of trucks would be restricted on the proposed alignment. The proposed alignment is not anticipated to increase truck travel in the adjacent residential areas. The Project would be consistent with Goal 6.7 of the Circulation Element.
Circulation Element Policies	
Local Thoroughfares and Transportation Routes Policy 6.1.1: "*Design each arterial with sufficient capacity to accommodate anticipated traffic based on intensity of existing and planned land use, without providing excess capacity to encourage additional nonlocal cut-through traffic on City streets. Do not add excess arterial street capacity beyond what is required to support the land use growth proposed in the Land Use Element of the General Plan. Do not implement freeway access improvements that will facilitate further nonlocal traffic intrusion into the City.*"	The proposed alignment has been planned as a four-lane arterial roadway to support growth proposed in the Land Use Element. Additionally, the implementation of the Foothill Parkway Westerly Extension has been timed to compliment the planned improvements on SR-91 and I-15, so that the increased freeway capacities will encourage nonlocal travelers to remain on the freeway. Therefore, the Project would be consistent with Policy 6.1.1 of the Circulation Element.

Table 5.4-1 (Continued)
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Traffic and Circulation

Goals and Policies	Project Consistency
Local Thoroughfares and Transportation Routes Policy 6.1.3: "*Provide for safe roadway conditions by adhering to nationally recognized improvement standards and uniform construction and maintenance practices.*"	Foothill Parkway has been designed using standards set forth by the City of Corona, County of Riverside, Caltrans, and American Association of State Highway and Transportation Officials (AASHTO). The roadway would be subject to uniform construction and maintenance practices, under the direction of the City of Corona. Therefore, the Project would be consistent with Policy 6.1.3 of the Circulation Element.
Local Thoroughfares and Transportation Routes Policy 6.1.5: "*Design and employ traffic control measures to ensure City streets and roads function with safety and efficiency.*"	Traffic signals are planned on Foothill Parkway at Paseo Grande and the connections of Border Avenue and Chase Drive. At the intersection of Foothill Parkway and Mabey Canyon Road, a stop sign is planned on Mabey Canyon Road. A 100-foot inscribed diameter roundabout is planned at the intersection of Chase Drive and Mangular Avenue to reduce speeds at the intersection. Proper signage would also be used. The Project would be consistent with Policy 6.1.5 of the Circulation Element.
Local Thoroughfares and Transportation Routes Policy 6.1.6: "*Maintain Level of Service D or better on arterial streets wherever possible. At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard, on a case-by-case basis. Locations that may warrant the LOS E standard include Lincoln Avenue at SR-91, Main Street at SR-91, McKinley Avenue at SR-91, Hidden Valley Parkway at I-15, Cajalco Road at I-15 and Weirick Road at I-15. A higher standard such as Level of Service C or better may be adopted for local and collector streets in residential areas.*"	The proposed Project is expected to provide LOS C or better in the forecast year 2010. In forecast year 2025, the proposed Project is expected to provide LOS D or better on the study roadways, with the exception of Green River Road west of Palisades. The *City of Corona General Plan* Circulation Element Policy 6.1.6 states "*At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard, on a case-by-case basis.*" During the course of Project development, City of Corona staff reviewed this policy, and determined that, due to the close proximity of this segment to State Route 91 and the roadway segment's characteristics, this portion of Green River Road meets the criteria. As a result, the City of Corona staff has identified LOS E as acceptable for this segment. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast years 2010 and 2025 with Project conditions. The Project would be consistent with Policy 6.1.6 of the Circulation Element.
Local Thoroughfares and Transportation Routes Policy 6.1.7: "*Coordinate street system improvements and signalization with regional transportation efforts, including the Regional Transportation Plan, the State Transportation Improvement Program, the Riverside County Integrated Project (RCIP), the Community and Environmental Transportation Acceptability Process (CETAP), the Congestion Management Program, and other relevant regional and subregional efforts and programs.*"	The westerly extension of Foothill Parkway has been included in the *Regional Transportation Plan* (RTP), RCIP, and the *Riverside County Congestion Management Program* (CMP), as well as the *Regional Transportation Improvement Program* (RTIP), *Riverside County Comprehensive General Plan* (RCCGP), and *South Corona Community Facilities Plan*. The proposed alignment is not located within a transportation corridor area that the CETAP is intended to preserve. Therefore, the CETAP is not applicable to the proposed Project. The proposed Project does not require State funding; therefore, the Project is not included in the State Transportation Improvement Program. It should be noted that these documents are not at the level of specificity that would reflect final design, such as including the connection at Border Avenue or Chase Drive/Mangular Avenue. The Project would be consistent with Policy 6.1.7 of the Circulation Element.

Table 5.4-1 (Continued)
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Traffic and Circulation

Goals and Policies	Project Consistency
Local Thoroughfares and Transportation Routes Policy 6.1.8: "*Limit driveway and local street access on arterial streets to maintain a desired quality of traffic flow. Wherever possible, consolidate driveways and implement access controls during redevelopment of adjacent parcels.*"	Driveway and local street access on Foothill Parkway is limited to only six locations along a two-mile stretch of roadway. The Project would be consistent with Policy 6.1.8 of the Circulation Element.
Local Thoroughfares and Transportation Routes Policy 6.1.10: "*Design secondary, local, and collector streets to discourage their use as through traffic routes. Utilize residential neighborhood traffic control techniques to mitigate cut-through traffic impacts on residential streets. Consider adoption of a formalized neighborhood traffic control program.*"	The Border Avenue connection has been designed with a 25 mph design speed at its connection with Foothill Parkway. The Chase Drive connection has been designed as an "indirect" connection to Mangular Avenue with a roundabout. The roundabout configuration will contribute to traffic calming, and discourage the route as a through route. The Project would be consistent with Policy 6.1.10 of the Circulation Element.
Local Thoroughfares and Transportation Routes Policy 6.1.15: "*Design Sixth Street from Smith Avenue to El Sobrante Road as a Mixed-Use Boulevard, including measures that support the proposed mixed-use development patterns. To maintain the livability of the street, limit Sixth Street to four travel lanes within this segment. As mixed use development occurs in the Sixth Street corridor, consider the implementation of off-street shared parking with parking signage improvements, consolidation of driveways, installation of raised landscaped medians, bus turnouts, traffic signal enhancements, special pavement treatments at pedestrian crossings and intersections, curb extensions, signalized/enhanced crosswalks, wider sidewalks and other appropriate measures which enhance traffic flow, transit efficiency and pedestrian movements. Upgrade and improve key bottlenecks at intersections via additional lanes (to six through lanes), with transition back to four lanes at the mid-block. As part of this policy, the City shall also seek opportunities to enhance mobility on parallel and connecting routes in this corridor to relieve congestion on Sixth Street and allow for the development of mixed commercial and residential uses. This may include, but not be limited to, opportunities to improve traffic flow along Third Street, Tenth Street, the freeway, and also a potential new east/west corridor in the southern section of the City. Consider Bus Rapid Transit improvements in the Sixth Street corridor.*"	The extension of Foothill Parkway is an additional east/west corridor in the southern section of the City, and is expected to relieve congestion on 6th Street. The Project would be consistent with Policy 6.1.15 of the Circulation Element.

Table 5.4-1 (Continued)
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Traffic and Circulation

Goals and Policies	Project Consistency
Local Thoroughfares and Transportation Routes Policy 6.1.19: "*At locations where intersection level of service falls below LOS D (To LOS E or F), or is anticipated to fall below LOS D in the future based on studies, implement intersection improvements that will provide additional capacity and require developers of adjacent parcels to provide right-of-way setbacks sufficient to accommodate the "maximum feasible intersection" configuration. The maximum feasible intersection configuration on the approaches to a Major Arterial will include up to three lanes for through traffic, dual left turn lanes and an exclusive right turn lane. The maximum feasible intersection configuration at Secondary Arterial intersection approaches will include up to two lanes for through traffic, dual left-turn lanes, and an exclusive right-turn lane. In some locations, additional capacity may be needed, such as dual right turn lanes or an additional through lane. The need for those additional improvements shall be determined by project-specific traffic studies.*"	The proposed Project provides sufficient right of way set backs for the "maximum feasible intersection" configuration at the three Project intersections, and is therefore consistent with Policy 6.1.19 of the Circulation Element.
Intercity and Regional Transportation Policy 6.2.4: "*Participate in programs to mitigate regional traffic congestion*."	Implementation of the Project alignment is an important component of the planned circulation network identified in the City's *General Plan* and would serve to complete a critical transportation link in south Corona. Therefore, the Policy 6.2.4 of the Circulation Element is not applicable to the proposed Project.
Intercity and Regional Transportation Policy 6.2.6: "*Support regional air quality objectives through effective management of the City's transportation system.*"	The extension of Foothill Parkway will redistribute traffic and generally relieve congestion for the area as a whole, thereby supporting air quality objectives. Therefore, the Project would be consistent with Policy 6.2.6 of the Circulation Element.
Transportation System Management and Transportation Demand Management Policy 6.3.1: "*Implement and maintain traffic signal coordination and advanced traffic management strategies throughout the City to the maximum extent practical and integrate signal systems with adjacent jurisdictions and Caltrans.*"	The three proposed traffic signals at Paseo Grande, Border Avenue, and Chase Drive would be connected via fiber optic cable and tied into the City's Traffic Management Center. Therefore, the Project would be consistent with Policy 6.3.1 of the Circulation Element.
Transportation System Management and Transportation Demand Management Policy 6.3.2: "*Implement intersection capacity improvements where feasible and justified by traffic demands."*	The intersections of Green River at Paseo Grande and Chase Drive at Mangular Avenue would have increased capacities to meet anticipated traffic demands as a result of Project implementation. Therefore, the Project would be consistent with Policy 6.3.2 of the Circulation Element.
Public Transportation Policy 6.4.7: "*Preserve options for future transit use when designing improvements for roadways.*"	The proposed Project will not inhibit future transit. Therefore, the Project would be consistent with Policy 6.4.7 of the Circulation Element.

Table 5.4-1 (Continued)
Consistency Analysis with the *City of Corona General Plan*
Goals and Policies for Traffic and Circulation

Goals and Policies	Project Consistency
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.1: "*Provide for safety of bicyclists, equestrians, and pedestrians by adhering to national standards and uniform practices.*"	Bikeways, trails, and sidewalks will be designed to national standards and uniform practices. Therefore, the Project would be consistent with Policy 6.5.1 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.2: "*Maintain existing pedestrian facilities and encourage new development to provide walkways between and through developments.*"	The extension of Foothill Parkway and its connections to Border Avenue and Chase Drive provide additional pedestrian facilities and connectivity between neighborhoods. Therefore, the Project would be consistent with Policy 6.5.2 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.3*: Provide for accessibility of the disabled to pedestrian facilities.*	Disabled persons will have access to pedestrian facilities. These facilities will be designed to ADA standards. Therefore, the Project would be consistent with Policy 6.5.3 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.4*:* "*Develop bicycle routes in accordance with the City's adopted Bicycle Master Plan, and implement other elements of the Plan.*"	The extension of Foothill Parkway and its connections to Border Avenue and Chase Drive provide bicycle routes per the City's adopted Bicycle Master Plan. Therefore, the Project would be consistent with Policy 6.5.4 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.5: "*Develop and maintain a bikeway system that is compatible with routes of neighboring jurisdictions.*"	Refer to the response for Policy 6.5.4, above. The Project would be consistent with Policy 6.5.5 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.8: "*Use easements and/or rights-of-way along flood control channels, public utilities, railroads, and streets wherever possible for bikeways, equestrian and hiking trails.*"	A multipurpose wildlife trail would be provided at the base of the westerly fill slope through Wardlow Canyon, over and adjacent to a proposed Flood Control facility. Therefore, the Project would be consistent with Policy 6.5.8 of the Circulation Element.
Bicycle, Pedestrian, and Hiking Facilities Policy 6.5.9: "*Minimize conflict points among motorized traffic, pedestrians, and bicycle traffic.*"	The sidewalk and roadside multipurpose trail located along proposed Foothill Parkway would typically be separated from the roadway by seven-foot wide landscaped parkways. Street crossings are planned only at the local street intersections. As such, the Project would be consistent with Policy 6.5.9 of the Circulation Element.
Truck Routes/Goods Movement Systems Policy 6.7.6 "*Prevent through truck traffic in residential areas*"	Refer to the response for Goal 6.7, above. Trucks over a designated size are prohibited in residential areas and would not be permitted to use the proposed alignment to connect to residential streets. As such, the Project would be consistent with Policy 6.7.6 of the Circulation Element.

5.4.2 EXISTING CONDITIONS

METHODOLOGIES

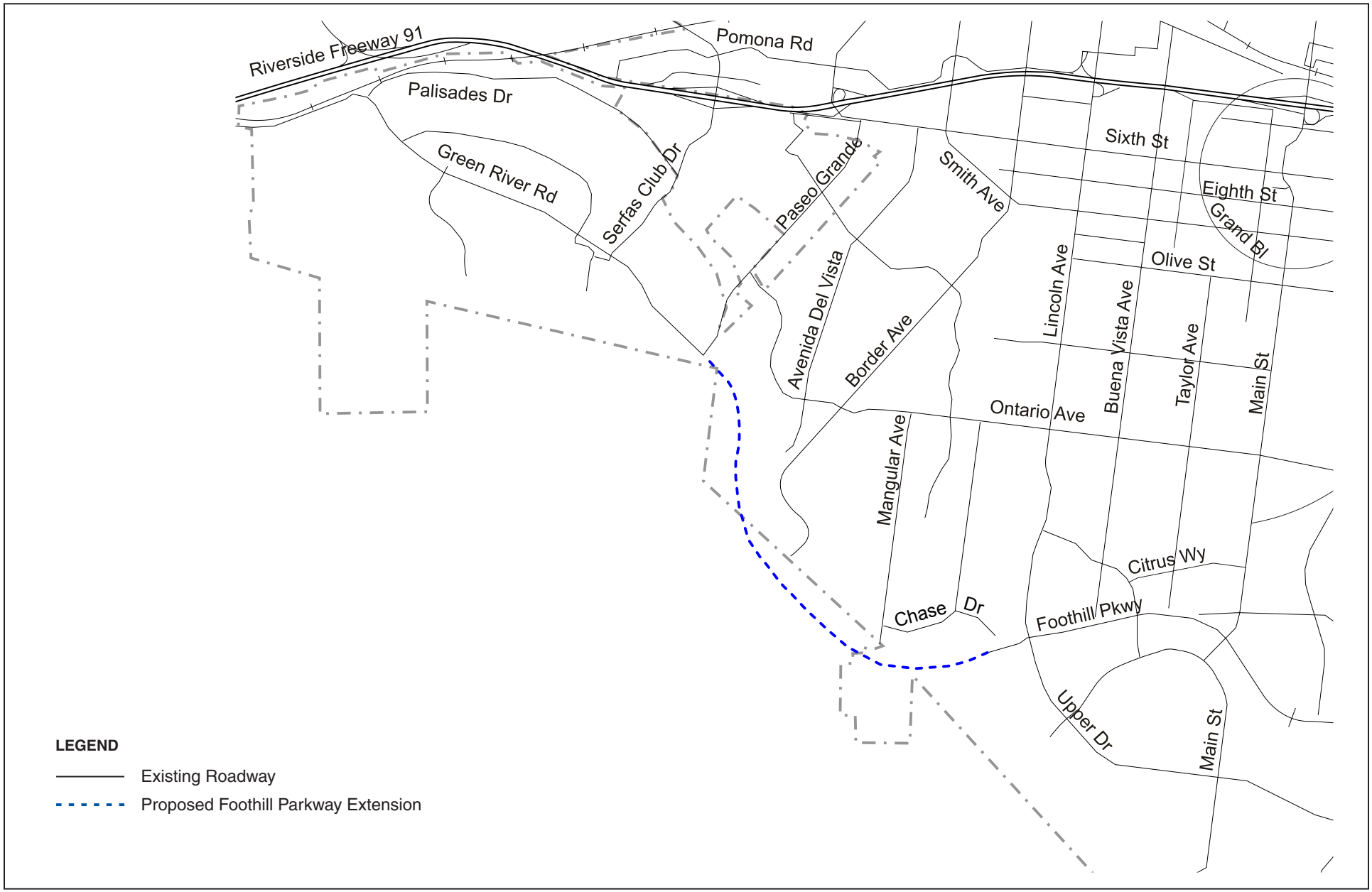
The proposed alignment consists of constructing Foothill Parkway between the terminus of Green River Road at Paseo Grande to the existing westerly terminus of Foothill Parkway in the vicinity of Skyline Drive. Figure 5.4-1, EXISTING CONDITIONS, shows the Project site location and circulation system in the Project vicinity. The proposed alignment will provide additional east-west corridor capacity in the City of Corona by connecting Green River Road to the existing terminus of Foothill Parkway. The proposed Foothill Parkway Westerly Extension is planned to be constructed as a four-lane divided roadway, consistent with the *City of Corona General Plan* Circulation Element, which identifies the roadway as a Secondary Four-lane Arterial roadway. Additional improvements related to the proposed alignment include connections and modifications to Border Avenue, Chase Drive, and Mangular Avenue, with signalized intersections at Paseo Grande, Border Avenue, and Chase Drive.

Average daily traffic (ADT) counts were collected to refine approach and departure volumes included in the travel demand model in the vicinity of the Project area.

The traffic analysis utilized the *City of Corona General Plan* travel demand model to analyze forecast years 2010 and 2025, both with and without the proposed alignment. Year 2010 is the approximate Project Opening Day, and accounts for existing conditions, as well as a proportion of the planned local and regional transportation and land use improvements, relative to total build-out. The Build-Out scenario, year 2025 for this project, incorporates all of the local and regional transportation and land use improvements expected by that time, including the potential future Riverside County-Orange County corridor. In 2005, the Riverside County-Orange County Major Investment Study was conducted which examined five corridors to relieve congestion on SR-91. Corridor B, the extension of the planned Mid County Parkway to Orange County via a tunnel, was the corridor assumed in this traffic model.

Utilizing the travel demand model, ADT volumes were identified for the following Foothill Parkway Westerly Extension scenarios:

- Forecast Year 2010 Without Project Conditions;
- Forecast Year 2010 With Project Conditions;
- Forecast Year 2025 Without Project Conditions; and
- Forecast Year 2025 With Project Conditions.



Source: Meyer, Mohaddes Associates, June 2007.

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Existing Conditions

Figure 5.4-1

In accordance with typical industry methods for forecast traffic volumes, the forecast year 2010 and 2025 conditions traffic volumes were conservatively determined by adding model forecast traffic growth to recently collected year 2006 traffic counts. Refinements to the travel demand model included the following steps:

- Modify the travel demand model roadway network to include the proposed Foothill Parkway Westerly Extension alignment and the proposed Border Avenue and Chase Drive connections;
- Run the model for 2025 using City of Corona Buildout land use information consistent with the City's *General Plan*;
- Calculate model volume growth between year 2001 and year 2025;
- Apply traffic model forecasted growth of four years to year 2006 traffic volumes to determine forecast year 2010 traffic volumes; and
- Apply traffic model forecasted growth of 19 years to year 2006 traffic volumes to determine forecast year 2025 traffic volumes.

ROADWAY SEGMENT ANALYSIS METHODOLOGY

Level of Service (LOS) is commonly used as a qualitative description of roadway operation, and is based on the capacity of the roadway segment and the volume of traffic using the roadway segment. The ADT capacity thresholds analysis method is utilized by the City of Corona to determine the operating LOS of the study roadways. This method describes the operation of a roadway segment using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on corresponding Volume/Capacity (V/C) ratios shown in Table 5.4-2, V/C & LOS RANGES ROADWAY SEGMENTS.

Table 5.4-2
V/C & LOS Ranges Roadway Segments

LOS	V/C Ratio
A	$\leq$ 0.60
B	0.61 – 0.70
C	0.71 – 0.80
D	0.81 – 0.90
E	0.91 – 1.00
F	$\geq$ 1.00

ROADWAY SEGMENT PERFORMANCE CRITERIA

The *City of Corona General Plan* Environmental Impact Report (EIR) indicates that the City has not adopted a set threshold for an acceptable LOS for roadway segments. However, the *General Plan* Circulation Element Policy 6.1.6, under Goal 6.1, calls for improvements to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard, on a case-by-case basis. Therefore, any roadway expected to operate at LOS E or LOS F is considered deficient, with the exception of roadways operating at LOS E that have been deemed acceptable by the City. Roadway segments are considered to operate over-capacity when the future forecast daily traffic volume exceeds the daily capacity values. The *General Plan* EIR defines daily capacity values, in average daily traffic (ADT), as follows:

- Major Arterial six lane – 53,900 ADT
- Major Arterial four lane – 35,900 ADT
- Secondary – 25,900 ADT
- Collector – 13,000 ADT

RIVERSIDE COUNTY CMP PERFORMANCE CRITERIA

According to the Riverside County CMP, the adopted minimum level of service (LOS) is LOS E or better, and a deficiency plan is required if the CMP facility LOS is reduced to LOS F.

EXISTING ROADWAY CIRCULATION SYSTEM

Currently, the Project site consists of vacant land. However, portions of Foothill Parkway have been constructed from Interstate 15 (I-15) to Skyline Drive. Foothill Parkway, east of the Project site, is designated as a Secondary Arterial four-lane road. Green River Road and Lincoln Avenue are designated as Major Arterial four-lane roads.

Currently, Green River Road extends from State Route 91 east to Paseo Grande, and Foothill Parkway extends west from Interstate 15 at El Cerrito Road to approximately 600 feet west of Skyline Drive. Green River Road, between Tanglewood Drive and Paseo Grande, is a two-lane divided roadway with a continuous left-turn lane and curb, gutter, and sidewalk on the north side of the roadway. West of Tanglewood Drive, Green River Road is a four-lane divided roadway with a continuous left-turn lane and curb, gutter, and sidewalk on both sides. Paseo Grande is a two-lane divided roadway with a continuous left-turn lane. The westerly side of Paseo Grande is constructed with curb, gutter, and sidewalk. Foothill Parkway, at its current westerly terminus, is a four-lane divided roadway with a raised landscaped median and curb, gutter, and sidewalk on both sides. Border Avenue is a two-lane undivided roadway with sidewalk on both sides. Chase Drive is a two-lane undivided roadway with no curb or sidewalk. Mangular Avenue is a two-lane undivided roadway with curb, gutter, and sidewalk on the westerly side only.

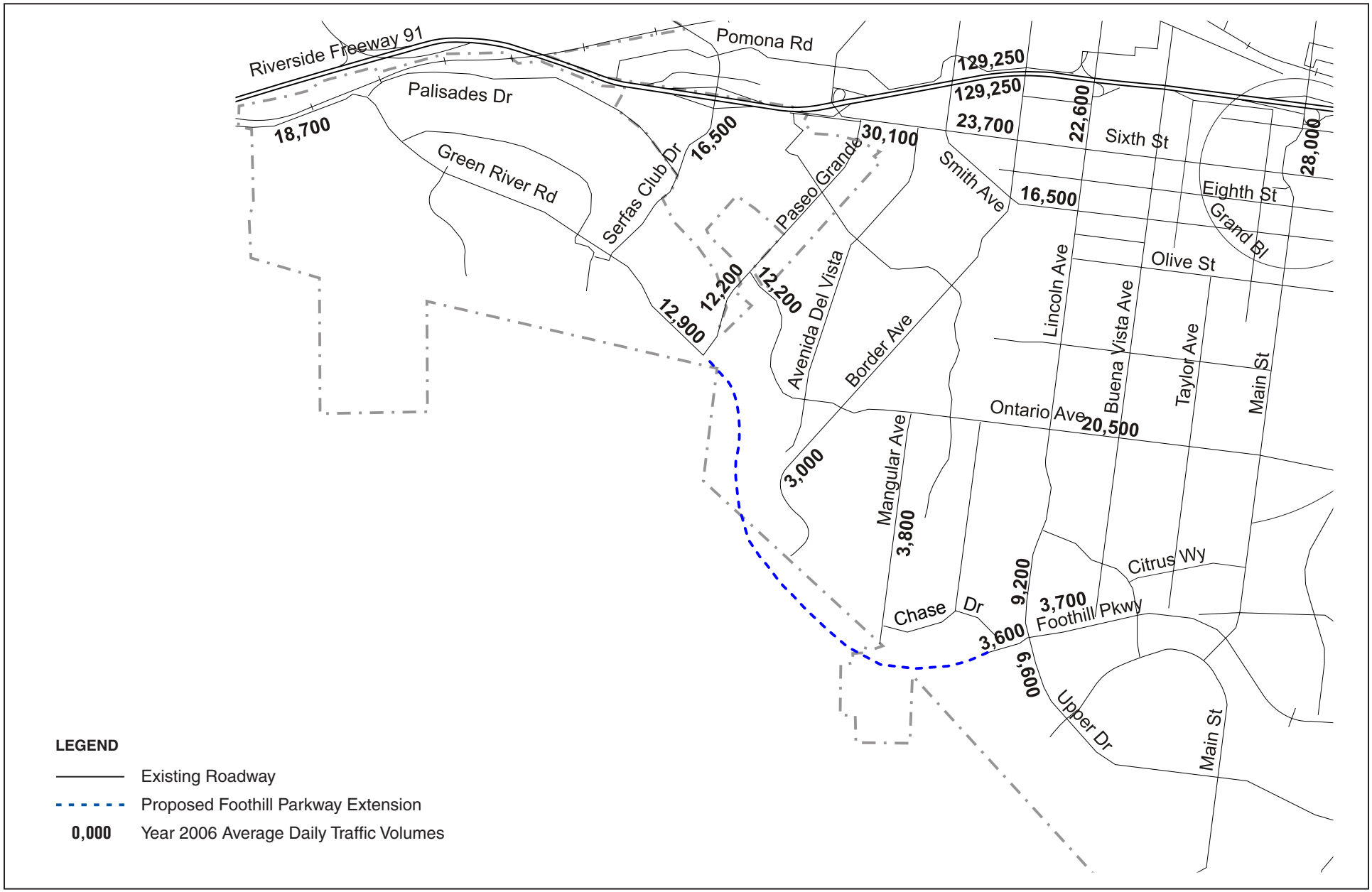
EXISTING TRAFFIC ANALYSIS

The following fourteen roadways in the vicinity of the Project area were analyzed:

- 6th Street west of Smith Avenue;
- 10th Street west of Lincoln Avenue;
- Green River Road west of Palisades Drive;
- Serfas Club Drive south of SR-91;
- Paseo Grande north of Foothill Parkway;
- Ontario Avenue east of Paseo Grande;
- Ontario Avenue east of Lincoln Avenue;
- Green River Road west of Paseo Grande;
- Foothill Parkway east of Paseo Grande (with Project scenarios only);
- Foothill Parkway east of Lincoln Avenue;
- Upper Drive south of Foothill Parkway;
- Border Avenue north of Foothill Parkway;
- Mangular Avenue north of Foothill Parkway; and
- Lincoln Avenue north of Foothill Parkway.

EXISTING TRAFFIC CONDITIONS

Year 2006 ADT volumes for the study roadway segments were identified for existing conditions as shown in Figure 5.4-2, EXISTING CONDITIONS ADT VOLUMES. The existing year 2006 ADT capacity, volume, and LOS are presented in Table 5.4-3, EXISTING YEAR 2006 ADT VOLUMES AND LOS, below.



Source: Meyer, Mohaddes Associates, June 2007.

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Existing Conditions ADT Volumes

Figure 5.4-2

Table 5.4-3
Existing Year 2006 ADT Volumes and LOS

Study Roadway Segment	Capacity (ADT)	Existing Volume (ADT)	Existing V/C – LOS
6th St west of Smith Ave	35,900	30,100	0.84 – D
10th St west of Lincoln Ave	25,900	16,500	0.64 – B
Green River Rd west of Palisades Dr	13,000	18,700	**1.44 – F**
Serfas Club Dr south of SR-91	35,900	16,500	0.46 – A
Paseo Grande north of Foothill Pkwy	13,000	12,200	**0.94 – E**
Ontario Ave east of Paseo Grande	13,000	12,200	**0.94 – E**
Ontario Ave east of Lincoln Ave	35,900	20,500	0.57 – A
Green River Rd west of Paseo Grande	35,900	12,900	0.36 – A
Foothill Pkwy east of Lincoln Ave	25,900	3,700	0.14 – A
Upper Dr south of Foothill Pkwy	35,900	6,600	0.18 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,200	0.26 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

Source: Meyer, Mohaddes Associates, June 2007.

As shown in Table 5.4-3 above, the study roadway segments are currently operating acceptably per the City of Corona performance criteria, with the exception of the Green River Road segment west of Palisades Drive, Paseo Grande north of Foothill Parkway, and Ontario Avenue east of Paseo Grande. Paseo Grande and Ontario Avenue currently operate at LOS E, based on the designated capacities for those roadways. Green River Road west of Palisades currently operates at LOS F. As a two-lane collector roadway, its current ADT volume exceeds capacity.

ALTERNATIVE TRANSPORTATION SYSTEMS

Public Transportation

Public transportation plays a vital role in the overall circulation system within Corona, as many citizens may not be able to afford other means of travel or may choose not to drive. The City of Corona has a well-balanced circulation system, as the City provides intercity buses, local buses, and a Metrolink station, all of which help alleviate automobile dependency. According to the Circulation Element of the *Corona General Plan*, a majority of the available public transportation is provided by the Riverside Transit Agency (RTA) via fixed route bus services. RTA provides four bus routes within the City of Corona, with routes connecting to the West Corona Metrolink Station, the City of Fullerton, the City of Murrieta, and Lake Elsinore.

Additionally, the City provides transit services through a local fixed route bus service, the Corona Cruiser. The Corona Cruiser bus routes connect with RTA regional bus routes, the West Corona Metrolink Station, and Park and Ride lots.

Bikeways

In 2001, the City of Corona developed and adopted a *Bicycle Master Plan*, which was recertified on March 15, 2006. The Plan calls for bicycle lanes on various streets in order to increase emphasis on nonmotorized transportation. Additionally, in all parts of the City, walking and biking would continue to be important for short distance trips, school trips, and recreational activities, while also enhancing the City's urban environment, reducing motor vehicle emissions, promoting a healthy lifestyle, and reducing the number of automobile trips. The 2006 *Bicycle Master Plan* proposes bicycle facilities consisting of Class I to Class III throughout the City (refer to Table 5.4-4, BICYCLE FACILITIES, below for a description).

Table 5.4-4
Bicycle Facilities

Bicycle Facilities	Description
Class I Bike Path	Provides a completely separate right-of-way (ROW) from auto traffic, for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.
Class II Bike Lanes	Provides striped bike lanes for one-way bike travel on a street or highway.
Class III Bike Routes	Provides designated bike routes noted by signs alongside roadways, but without separate striping, for shared use with pedestrians or motor vehicle traffic.
Source: *City of Corona General Plan* Circulation Element, Adopted March 17, 2004 (Resolution No. 2004-034). *Highway Design Manual*, California Department of Transportation, June 26, 2006.	

Encouragement to use bicycles necessitates the provision of bike lanes and bike paths. Class I Bike Paths provide a completely separated right-of-way (R/W) for the exclusive use of bicycles and pedestrians, thus motorized traffic/non-motorized traffic cross flow is minimized. Class II Bike Lanes are facilities that provide a striped lane for one-way bike travel on a street or highway, while Class III Bike Routes provide a shared use with pedestrian or motor vehicle traffic.

Pedestrian Paths

Walking trips are a primary transportation mode for many people, especially children. Pedestrian facilities include sidewalks, pedestrian trails, and multi-purpose trails. Additionally, primary components of the pedestrian circulation system are sidewalks and crosswalks. The downtown area of Corona has high levels of pedestrian activity, especially in the 6th Street mixed-use corridor. Currently, the existing Santa Ana River Trail has a Class I Bikeway located between State Route 91 (SR-91) and the Green River Golf Course, located west of the Project site.

5.4.3 STANDARDS OF SIGNIFICANCE

SIGNIFICANCE CRITERIA

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act (CEQA). The City of Corona is the lead agency responsible for preparation of the traffic impact analysis, in accordance with CEQA authorizing legislation.

Environmental impact thresholds as indicated in Appendix G, *Initial Study Checklist*, of the CEQA Guidelines were also used as significance thresholds in this analysis. As such, the Project would create a significant impact if it would cause one or more of the following to occur:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) (refer to *Impact Statements 5.4-1 and 5.4-2*);

- Exceed, either individually or cumulatively, a LOS standard established by the CMP agency for designated roads or highways (refer to *Impact Statement 5.4-3*);

- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (refer to Section 10.0, EFFECTS FOUND NOT TO BE SIGNIFICANT);

- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (refer to *Impact Statement 5.4-4*);

- Result in inadequate emergency access (refer to *Impact Statements 5.4-1* and *5.4-6*);

- Result in inadequate parking capacity (refer to Section 10.0, EFFECTS FOUND NOT TO BE SIGNIFICANT); and/or

- Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks) (refer to *Impact Statement 5.4-5*).

Potential impacts associated with the proposed alignment have been identified. The impacts are categorized according to topic, and then numbered consecutively under each category. The numbered mitigation measures in Section 5.4.5, MITIGATION MEASURES, directly correspond with the numbered impact statements.

5.4.4 IMPACTS

SHORT-TERM (CONSTRUCTION) IMPACTS

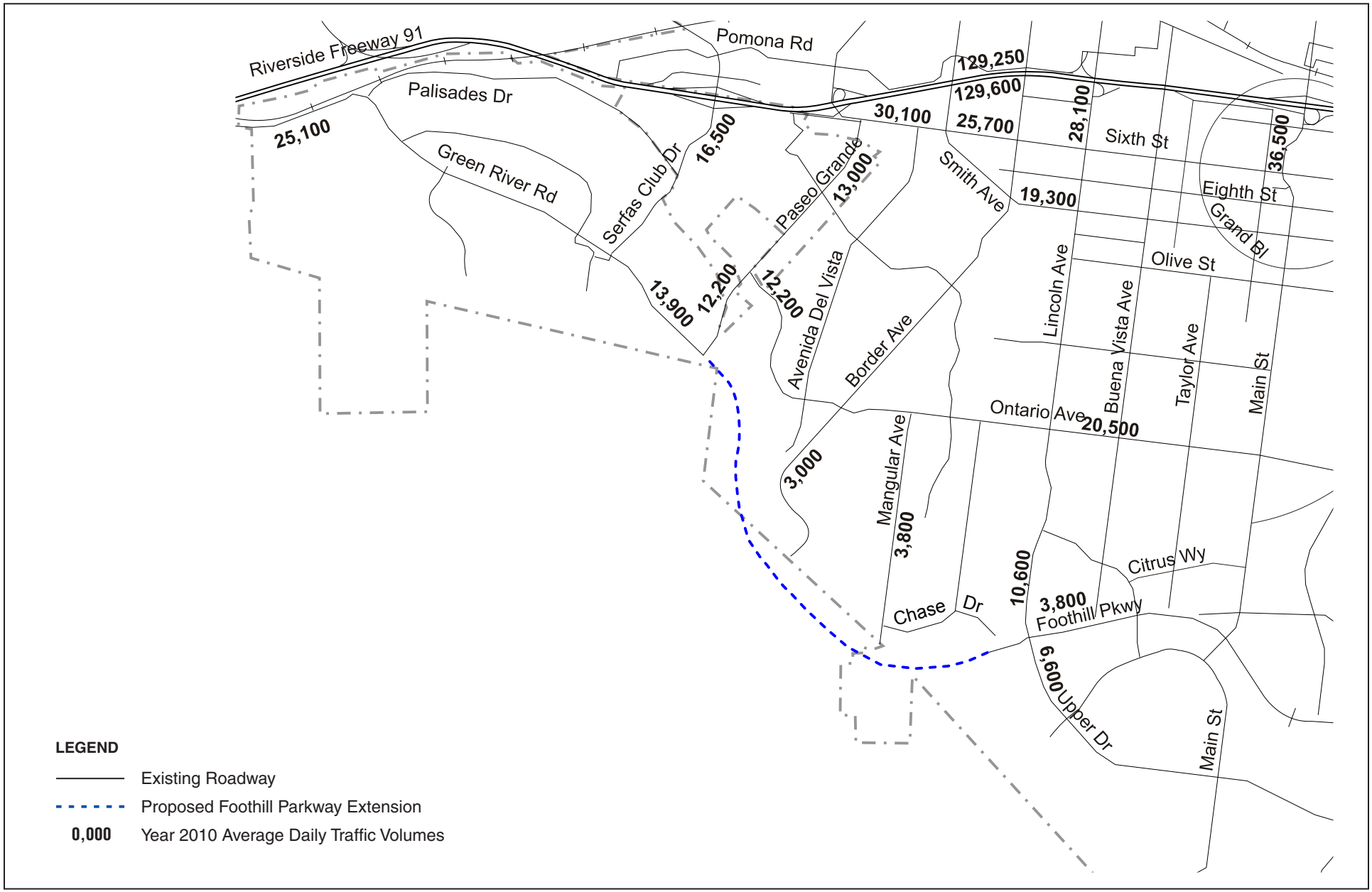
5.4-1 *Project implementation would result in temporary circulation impacts associated with construction of the roadway extension. Impacts to nearby residents, pedestrians, bicyclists, and traffic congestion may occur during construction. However, these impacts are temporary in nature and would cease upon project completion.* ***Significance: Implementation of recommended Mitigation Measures 5.4-1a and 5.4-1b would reduce impacts to less than significant levels.***

Impact Discussion: Anticipated impacts to traffic congestion during construction would be minor and cease upon completion of Project construction. A detailed Traffic Management Plan (TMP) shall be prepared by a registered Civil Engineer prior to construction of the proposed alignment. The TMP will delineate all road closures, provisions to maintain access to adjacent residential properties at all times, prior notices, adequate sign-postings, detours, provisions for pedestrians along the trails and bicycle transportation, and permitted hours of construction activity. Proper detours and warning signs would be established along all adjacent roadways and the existing hiking trails to ensure public safety. The TMP shall be devised so that construction would not interfere with emergency response or evacuation plans. With implementation of Mitigation Measures 5.4-1a and 5.4-1b, less than significant impacts are anticipated.

TRIP DISTRIBUTION AND ASSIGNMENT

5.4-2 *The proposed alignment would not cause an increase in traffic which is substantial relative to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).* ***Significance: Less than significant impacts are anticipated in this regard.***

Impact Discussion: The proposed Project would result in the redistribution of traffic in the vicinity of the roadway extension. Analysis has concluded that due to circulation and access improvements implemented as part of the *City of Corona General Plan*, deterioration in levels of service within the Project area is anticipated to occur at some locations. However, the deterioration in levels of service is within the criteria set by the *City of Corona General Plan* Circulation Element Policy 6.1.6. In other locations within the Project area, increased levels of service are expected.



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2010 Without Project ADT Volumes

Figure 5.4-3

The projected roadway ADT volumes were analyzed under the following four scenarios:

- Forecast Year 2010 Without Project Conditions;
- Forecast Year 2010 With Project Conditions;
- Forecast Year 2025 Without Project Conditions; and
- Forecast Year 2025 With Project Conditions.

Forecast Year 2010 Without Project Conditions

ADT volumes for the study roadway segments were identified for forecast year 2010 without Project conditions as shown in Figure 5.4-3, YEAR 2010 WITHOUT PROJECT ADT VOLUMES. The ADT capacity, volume, and LOS are presented in Table 5.4-5, FORECAST YEAR 2010 WITHOUT PROJECT CONDITIONS, below.

Table 5.4-5
Forecast Year 2010 Without Project Conditions

Study Roadway Segment	Capacity (ADT)	Forecast Year 2010 Volume (ADT)	Forecast Year 2010 V/C – LOS
6th St west of Smith Ave	53,900[1]	30,100	0.56 – A
10th St west of Lincoln Ave	25,900	19,300	0.75 – C
Green River Rd west of Palisades Dr	53,900[1]	25,100	0.47 – A
Serfas Club Dr south of SR-91	35,900	16,500	0.46 – A
Paseo Grande north of Foothill Pkwy	13,000	12,200	**0.94 – E**
Ontario Ave east of Paseo Grande	13,000	12,200	**0.94 – E**
Ontario Ave east of Lincoln Ave	35,900	20,500	0.57 – A
Green River Rd west of Paseo Grande	35,900	13,900	0.39 – A
Foothill Pkwy east of Lincoln Ave	25,900	3,800	0.15 – A
Upper Dr south of Foothill Pkwy	35,900	6,600	0.18 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	10,600	0.30 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.

As shown in Table 5.4-5, the study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2010 without project conditions, with the exception of the Paseo Grande segment north of Foothill Parkway and Ontario Avenue east of Paseo Grande, both of which are expected to operate at LOS E.

Forecast Year 2025 Without Project Conditions

ADT volumes for the study roadway segments were identified for forecast year 2025 without project conditions as shown in Figure 5.4-4, YEAR 2025 WITHOUT PROJECT ADT VOLUMES. Forecast year 2025 conditions assume improvements to the study roadway segments consistent with the *City of Corona General Plan* Circulation Element. The ADT capacity, volume, and LOS are presented in Table 5.4-6, FORECAST YEAR 2025 WITHOUT PROJECT CONDITIONS, below.

Table 5.4-6
Forecast Year 2025 Without Project Conditions

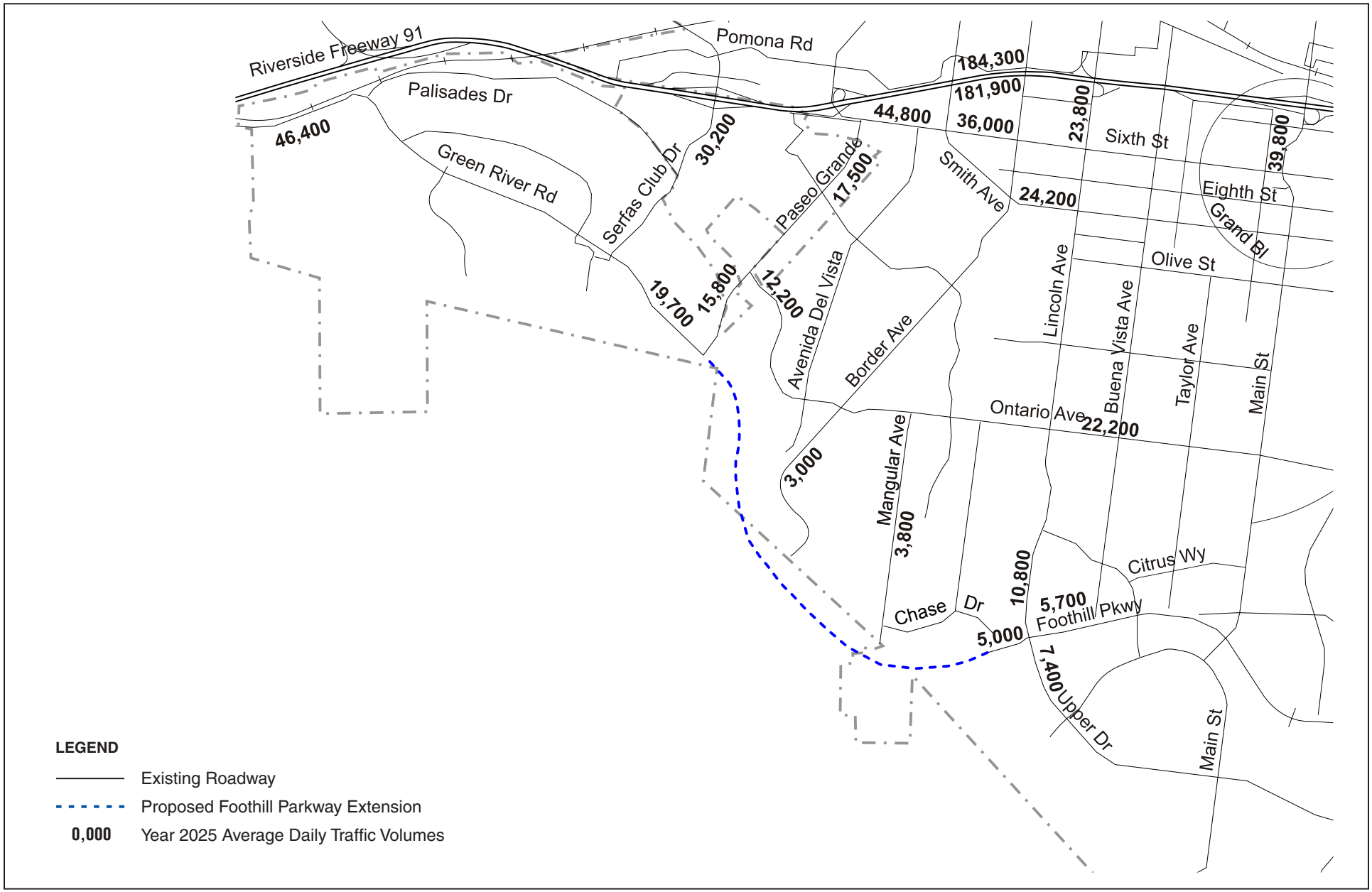
Study Roadway Segment	Capacity (ADT)	Forecast Year 2025 Volume (ADT)	Forecast Year 2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	44,800	0.83 – D
10th St west of Lincoln Ave	25,900	24,200	**0.93 – E**
Green River Rd west of Palisades Dr	53,900[1]	46,400	0.86 – D
Serfas Club Dr south of SR-91	35,900	30,200	0.84 – D
Paseo Grande north of Foothill Pkwy	13,000	15,800	**1.22 – F**
Ontario Ave east of Paseo Grande	13,000	12,200	**0.94 – E**
Ontario Ave east of Lincoln Ave	35,900	22,200	0.62 – B
Green River Rd west of Paseo Grande	35,900	19,700	0.55 – A
Foothill Pkwy east of Lincoln Ave	25,900	5,700	0.22 – A
Upper Dr south of Foothill Pkwy	35,900	7,400	0.21 – A
Border Ave north of Foothill Pkwy	13,000	3,000	0.23 – A
Mangular Ave north of Foothill Pkwy	13,000	3,800	0.29 – A
Lincoln Ave north of Foothill Pkwy	35,900	10,800	0.30 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.

As shown in Table 5.4-6, the study roadway segments are forecast to operate acceptably with the exception of 10th Street west of Lincoln, Paseo Grande north of Foothill Parkway, and Ontario Avenue east of Paseo Grande, according to City of Corona performance criteria, for forecast year 2025 without project conditions. The segments of 10th Street west of Lincoln and Ontario Avenue east of Paseo Grande are expected to operate at LOS E. Paseo Grande is expected to operate at LOS F.



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 Without Project ADT Volumes

Figure 5.4-4

Forecast Year 2010 With Project Conditions

This scenario evaluates the forecast year 2010 with project conditions ADT. Under this scenario, the extension of Foothill Parkway would be constructed, as well as both the Border Avenue and the Chase Drive/Mangular Avenue connections.

Figure 5.4-5, YEAR 2010 WITH PROJECT ADT VOLUMES, shows forecast year 2010 with Project conditions ADT volumes. Table 5.4-7, FORECAST YEAR 2010 WITH PROJECT CONDITIONS, summarizes the 2010 ADT capacity, volume, and LOS of the study roadway segments if the proposed alignment was constructed as well as both the Border Avenue and Chase Drive/Mangular Avenue connections.

Table 5.4-7
Forecast Year 2010 With Project Conditions

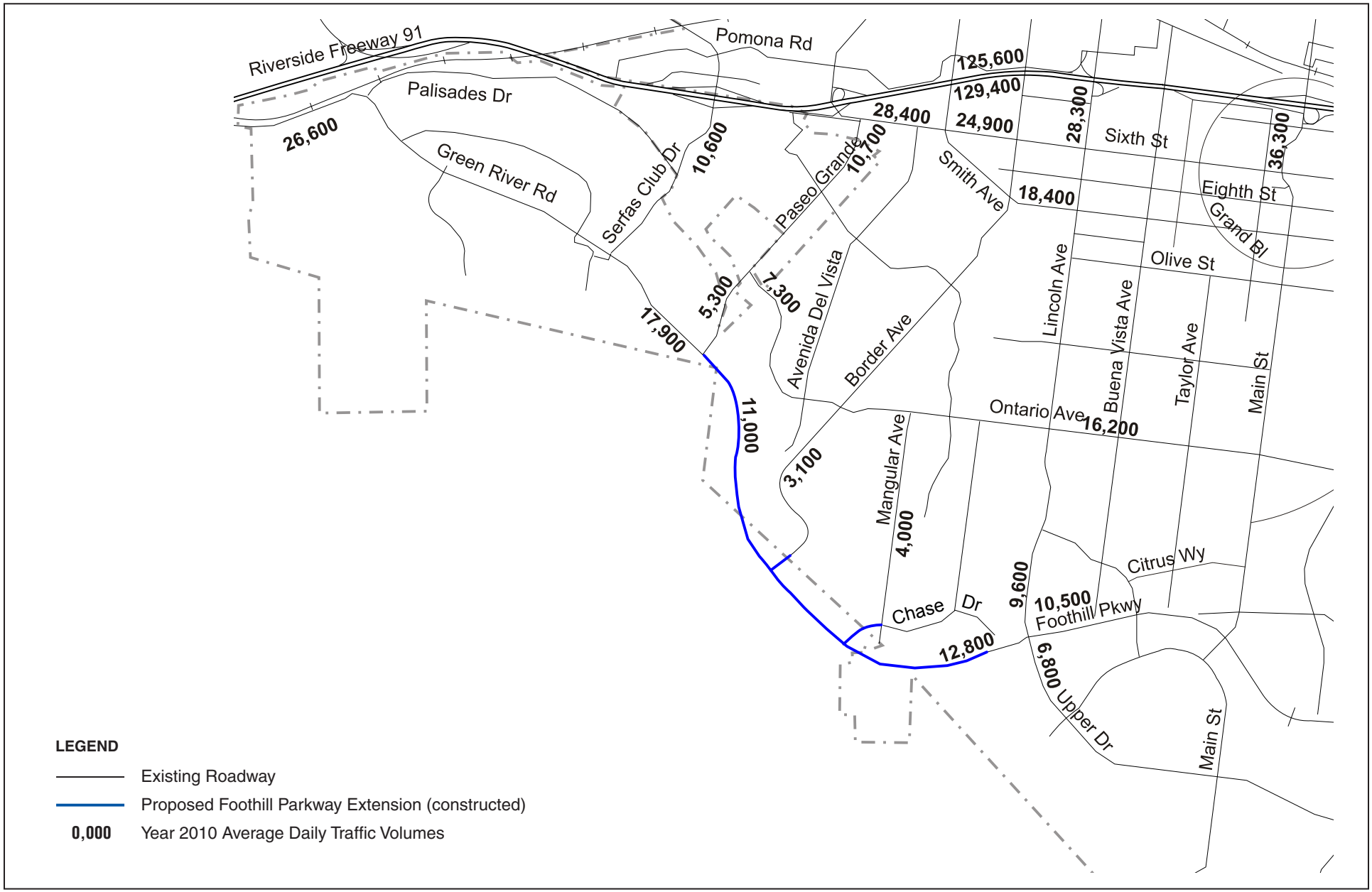
Study Roadway Segment	Capacity (ADT)	2010 Volume (ADT)	2010 V/C – LOS
6th St west of Smith Ave	53,900[1]	28,400	0.53 – A
10th St west of Lincoln Ave	25,900	18,400	0.71 – C
Green River Rd west of Palisades Dr	53,900[1]	26,600	0.49 – A
Serfas Club Dr south of SR-91	35,900	10,600	0.30 – A
Paseo Grande north of Foothill Pkwy	13,000	5,300	0.41 – A
Ontario Ave east of Paseo Grande	13,000	7,300	0.56 – A
Ontario Ave east of Lincoln Ave	35,900	16,200	0.45 – A
Green River Rd west of Paseo Grande	35,900	17,900	0.50 – A
Foothill Pkwy east of Paseo Grande	25,900	11,000	0.42 – A
Foothill Pkwy east of Lincoln Ave	25,900	10,500	0.41 – A
Upper Dr south of Foothill Pkwy	35,900	6,800	0.19 – A
Border Ave north of Foothill Pkwy	13,000	3,100	0.24 – A
Mangular Ave north of Foothill Pkwy	13,000	4,000	0.31 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,600	0.27 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.

As shown in Table 5.4-7, the study roadways are forecast to operate acceptably, according to City of Corona performance criteria, for forecast year 2010 with project conditions. Compared to the Without Project scenario, the traffic volumes along Green River Road, Foothill Parkway (east of Lincoln Avenue), Upper Drive, Border Avenue, and Mangular Avenue increased and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased under Project conditions due to the redistribution of traffic.



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2010 With Project ADT Volumes

Figure 5.4-5

The analysis and ADT determined for the above scenario indicates that the proposed connections of Border Avenue and Chase Drive/Mangular Avenue to Foothill Parkway would result in some volume changes along those streets, relative to existing and Without Project conditions. The volume changes are approximately 100 vehicles per day along Border Avenue and 200 vehicles per day along Mangular Avenue. This additional volume translates to a percentage growth of three percent along Border Avenue and five percent along Mangular Avenue, which will not affect the overall level of service. However, further north near Ontario Avenue, traffic volumes along Border Avenue and Mangular Avenue are expected to decrease with construction of the proposed connections to Foothill Parkway, since the connections will provide the neighborhood an alternate east-west route through the City of Corona. These traffic volume decreases are discussed further in the "Focused Neighborhood Traffic Study" subsection below.

Forecast Year 2025 With Project Conditions

This scenario evaluates the forecast year 2025 with project conditions ADT. Under this scenario, the extension of Foothill Parkway would be constructed, as well as both the Border Avenue and Chase Drive/Mangular Avenue connections.

Figure 5.4-6, YEAR 2025 WITH PROJECT ADT VOLUMES, shows forecast year 2025 with project conditions ADT volumes. Table 5.4-8, YEAR 2025 WITH PROJECT CONDITIONS, summarizes the 2025 ADT capacity, volume, and LOS of the study roadway segments if the proposed alignment was constructed as well as both the Border Avenue and Chase Drive/Mangular Avenue connections.

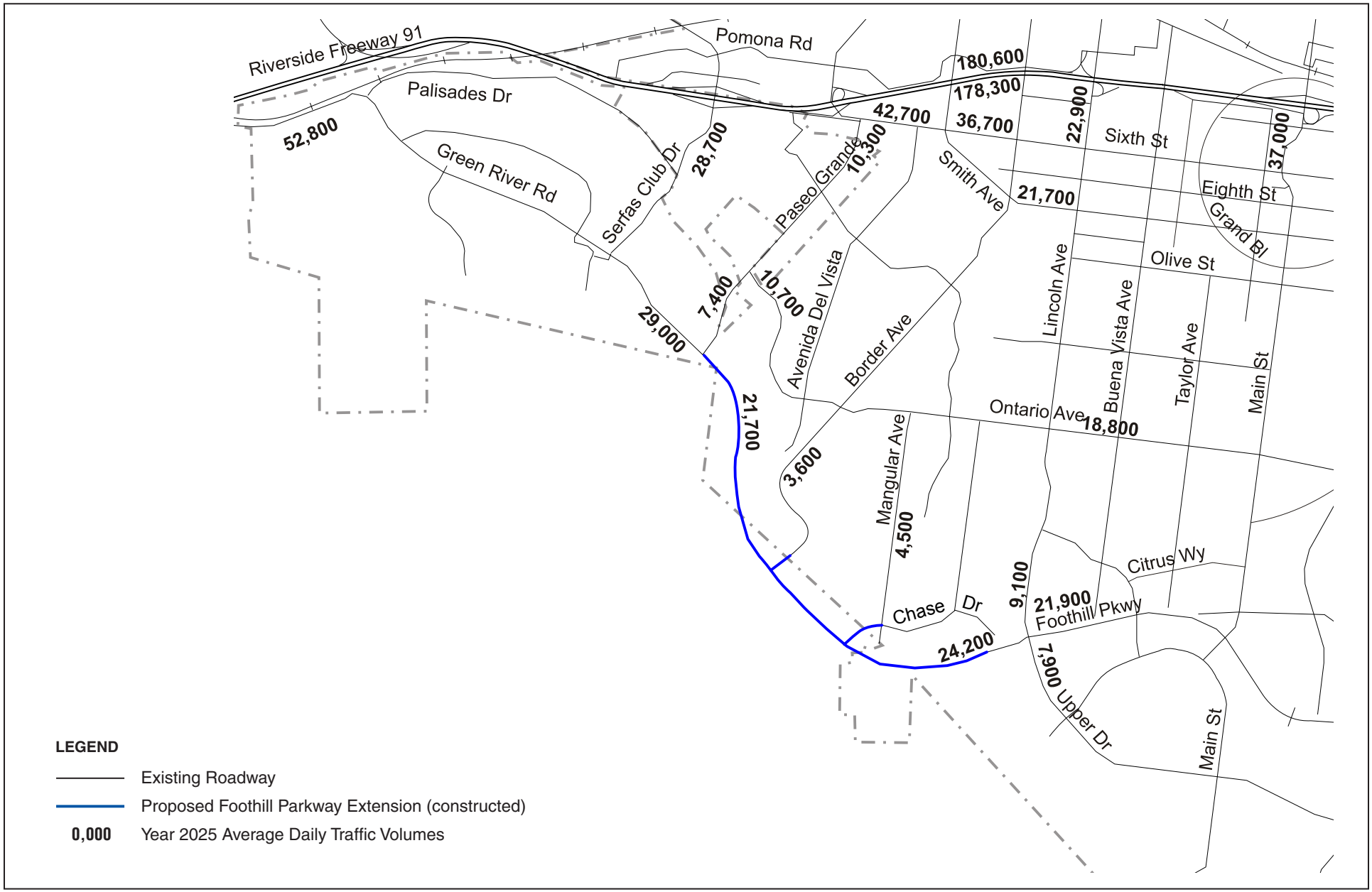
Table 5.4-8
Forecast Year 2025 With Project Conditions

Study Roadway Segment	Capacity (ADT)	2025 Volume (ADT)	2025 V/C – LOS
6th St west of Smith Ave	53,900[1]	42,700	0.79 – C
10th St west of Lincoln Ave	25,900	21,700	0.84 – D
Green River Rd west of Palisades Dr	53,900[1]	52,800	**0.98 – E**
Serfas Club Dr south of SR-91	35,900	28,700	0.80 – C
Paseo Grande north of Foothill Pkwy	13,000	7,400	0.57 – A
Ontario Ave east of Paseo Grande	13,000	10,700	0.82 – D
Ontario Ave east of Lincoln Ave	35,900	18,800	0.52 – A
Green River Rd west of Paseo Grande	35,900	29,000	0.81 – D
Foothill Pkwy east of Paseo Grande	25,900	21,700	0.84 – D
Foothill Pkwy east of Lincoln Ave	25,900	21,900	0.85 – D
Upper Dr south of Foothill Pkwy	35,900	7,900	0.22 – A
Border Ave north of Foothill Pkwy	13,000	3,600	0.28 – A
Mangular Ave north of Foothill Pkwy	13,000	4,500	0.35 – A
Lincoln Ave north of Foothill Pkwy	35,900	9,100	0.25 – A

Notes:
ADT = Average Daily Traffic
LOS = Level of Service
V/C = Volume to Capacity ratio; deficient roadway segment operation shown in **bold**.

[1] ADT capacity reflects programmed improvements to 6th Street (west of Smith Avenue) and Green River Road (west of Palisades), to be completed in 2010.

Source: Meyer, Mohaddes Associates, June 2007.



Source: Meyer, Mohaddes Associates, June 2007.

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Year 2025 With Project ADT Volumes

Figure 5.4-6

As shown in Table 5.4-8, the study roadways are forecast to operate acceptably, according to City of Corona performance criteria, for forecast year 2025 with Project conditions, with the exception of Green River Road west of Palisades Drive. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City of Corona General Plan Circulation Element Policy 6.1.6. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2025 with Project conditions. Compared to the Without Project scenario, the traffic volumes on Green River Road, Foothill Parkway (east of Lincoln Avenue), Upper Drive, Border Avenue, and Mangular Avenue increased and volumes along 6th Street, 10th Street, Serfas Club Drive, Paseo Grande, Ontario Avenue, and Lincoln Avenue decreased under Project conditions due to the redistribution of traffic.

Border Avenue & Mangular Avenue Traffic Volumes

Traffic volumes are expected to change on Border Avenue and Mangular Avenue due to traffic redistribution resulting from the proposed connections of Border Avenue and Chase Drive/Mangular Avenue to Foothill Parkway. The proposed Chase Drive connection will be a short segment, connecting Foothill Parkway and Mangular Avenue. Mangular Avenue is a north/south local collector, like Border Avenue. Typically, traffic utilizing Border Avenue and Mangular Avenue is local traffic associated with the adjacent residential land uses.

The travel demand model provided forecast year 2025 traffic volumes utilizing the planned connections of Border Avenue to Foothill Parkway and Chase Drive to Foothill Parkway. Table 5.4-9 shows forecast year 2025 ADT volumes for Border Avenue and Mangular Avenue north of the Foothill Parkway Westerly Extension.

Table 5.4-9
Forecast Year 2025 Border Avenue & Mangular Avenue Traffic Volumes

Roadway Segment	Existing Year 2006	Forecast Year 2025 Without Foothill Parkway Extension	Forecast Year 2025 With Foothill Parkway Extension[1]	Increase in ADT Volumes (Percent Change)
Border Ave n/o Foothill Pkwy	3,000	3,000	3,600	600 (20%)
Mangular Ave n/o Foothill Pkwy	3,800	3,800	4,500	700 (18%)

Source: Meyer, Mohaddes Associates, June 2007.
1 = Assumes the Border Avenue and Chase Drive connections to Foothill Parkway.
Note: N/A = Not Available/Not Applicable. e/o = east of, w/o = west of, n/o = north of, s/o = south of.

The analysis and ADT determined for the above scenario indicates that the proposed connections of Border Avenue and Chase Drive/Mangular Avenue to Foothill Parkway would result in volume changes along those streets relative to the existing and without project conditions. The volume changes are approximately 600 vehicles per day along Border Avenue and 700 vehicles per day along Mangular Avenue. This additional volume translates to a percentage growth of 20 percent along Border

Avenue and 18 percent along Mangular Avenue, but will continue to produce a level of service LOS A along both streets. Traffic volumes along Border Avenue and Mangular Avenue near Ontario Avenue are expected to decrease with construction of the proposed connections to Foothill Parkway, since the connections will provide the neighborhoods an alternate east-west route through the City of Corona. At the intersection of Border Avenue and Ontario Avenue, where John Adams Elementary School is located, traffic volumes on both Border Avenue and Ontario Avenue are expected to decrease. These traffic volume decreases are discussed further in the "Focused Neighborhood Traffic Study" subsection below.

Focused Neighborhood Traffic Study

In April 2007, the City of Corona conducted a focused neighborhood traffic study near the east end of the proposed Project to evaluate existing and potential cut through traffic in the area. Existing Foothill Parkway, west of Lincoln Avenue, is currently accessible to adjacent neighborhoods to the northwest via Elysia Street. Four Kings Road connects Elysia Street to Chase Drive. Elysia Street and Four Kings Road are residential streets with homes fronting both sides. City staff conducted coincident license plate surveys at the corners of Four Kings Road at Chase Drive and Elysia Street at Foothill Parkway during three peak hours. With the data collected, license plate numbers and the times they passed the survey locations were matched up to determine the amount of traffic cutting though that neighborhood from nearby neighborhoods off of Oak Avenue and Mangular Avenue. The analysis from the three study periods concluded that approximately 65% of the 1700 ADT on Four Kings Road is cut through traffic in the existing condition, without the Foothill Parkway Westerly Extension.

With the results from the neighborhood study and traffic volume forecasts provided by MMA, City staff performed a detailed analysis of the streets in the neighborhood bounded by Border Avenue, Lincoln Avenue, Ontario Avenue, and Foothill Parkway. Year 2010 volumes were projected for six scenarios:

- Without Foothill Parkway (No Project) (refer to Section 7.0, ALTERNATIVES TO THE PROPOSED PROJECT)
- Foothill Parkway Westerly Extension with Border Avenue and Chase Drive/Mangular Avenue connections (consistent with the City's General Plan).
- Foothill Parkway Westerly Extension only, no connections to Border Avenue or Chase Drive (refer to Section 7.0, ALTERNATIVES TO THE PROPOSED PROJECT)
- Foothill Parkway Westerly Extension with Chase Drive/Mangular Avenue connection only (no connection at Border Avenue) (refer to Section 7.0, ALTERNATIVES TO THE PROPOSED PROJECT).
- Foothill Parkway Westerly Extension with Border Avenue connection only (no connection at Chase Drive/Mangular Avenue) (Refer to Section 7.0, ALTERNATIVES TO THE PROPOSED PROJECT).
- Foothill Parkway Westerly Extension, 2-Lane Reduced Width, with Border Avenue and Chase Drive connections (refer to Section 7.0, ALTERNATIVES TO THE PROPOSED PROJECT).

Figures 5.4-7, EXISTING (YEAR 2007) FOCUSED NEIGHBORHOOD TRAFFIC, and Figure 5.4-8, YEAR 2010 FOCUSED NEIGHBORHOOD TRAFFIC WITH PROJECT, illustrate traffic volumes in this area for the existing condition, year 2007 for this study, and year 2010 with the incorporation of Foothill Parkway and the proposed connections at Border Avenue and Chase Drive.

The results of the analysis show that cut through traffic on Four Kings Road and Elysia Street would be reduced greatly with the extension of Foothill Parkway and connections at both Chase Drive and Border Avenue. Traffic volumes on Mangular Avenue and Border Avenue near Ontario Avenue are expected to decrease, as well. Most of the existing traffic on these roadways is generated from adjacent residences, with vehicles traveling to and from Ontario Avenue and parallel east/west roadways to the north. With the connections on Border Avenue and Chase Drive, it is expected that a portion of that traffic will redirect to the south, to access Foothill Parkway as an alternative to Ontario Avenue. Near Foothill Parkway, the traffic volumes on those two streets are expected to increase, as Border Avenue and Mangular Avenue both currently terminate at their south ends, similar to a cul-de-sac. These increases, however, are well below the designated capacity for collector roadways, consistent with the City's General Plan. Less than significant traffic impacts would occur in this regard.

CONGESTION MANAGEMENT PROGRAM

5.4-3 *The proposed alignment would not exceed, either individually or cumulatively, a LOS standard established by the CMP agency for designated roads or highways.* ***Significance: Less than significant impacts are anticipated in this regard.***

Impact Discussion: The Riverside County Congestion Management Program facilities located within the Project area are State Route 91 (SR-91) and Interstate 15 (I-15). Volume changes associated with the proposed Project on SR-91 and I-15 are minor. On SR-91, west of Green River Road, and on I-15, south of El Cerrito Road, less than a 1% increase in average daily trips (ADT) is expected. On SR-91, between Green River Road and the SR-91/I-15 interchange, and on I-15, between El Cerrito Road and the SR-91/I-15 interchange, model volume ADT's are expected to decrease, ranging from 0% to 4%, with an average 1.8% decrease. These expected increases and decreases are minor, and are within expected tolerances of the model.

As identified in the CMP, State Route 91 (SR-91) between State Route 71 and Interstate 15 (I-15) had a LOS of "F" in 1991 when the CMP was first established, and therefore, is exempt from CMP requirements. As identified in the CMP, I-15 operates at a deficient LOS (LOS F) based on floating car runs. Therefore, the proposed Project would not cause a nearby CMP facility to change to deficient LOS (LOS F), and no CMP impact is forecast to occur.

DESIGN ELEMENTS

5.4-4 *The proposed alignment would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment).* ***Significance: Implementation of recommended Mitigation Measure 5.4-4 would reduce impacts to less than significant levels.***

Impact Discussion: Design standards set forth by the City of Corona, County of Riverside, Caltrans, and the American Association of State Highway and Transportation Officials, such as minimum roadway geometrics, stopping sight distances, and minimum clearances, have been used to develop the proposed alignment. Use of such standards minimizes potential hazards for roadway users. Land uses surrounding the Project site include residential uses, vacant properties, limited agricultural uses, and the Cleveland National Forest. Hazards due to incompatible uses of the roadway, such as farm equipment, are not anticipated.

Traffic signals are often considered to improve the safety and operation at intersection locations. In order to ensure that the advantages outweigh the disadvantages of installing a traffic signal, and to provide consistency in the application of signals, traffic signal warrants are prepared which evaluate traffic conditions, pedestrian characteristics, and physical characteristics of a given location. The satisfaction of a traffic signal warrant does not in itself require the installation of a traffic signal. As part of this Project, a traffic signal warrant analysis shall be prepared by a registered Civil Engineer prior to construction of the proposed alignment at the following intersection:

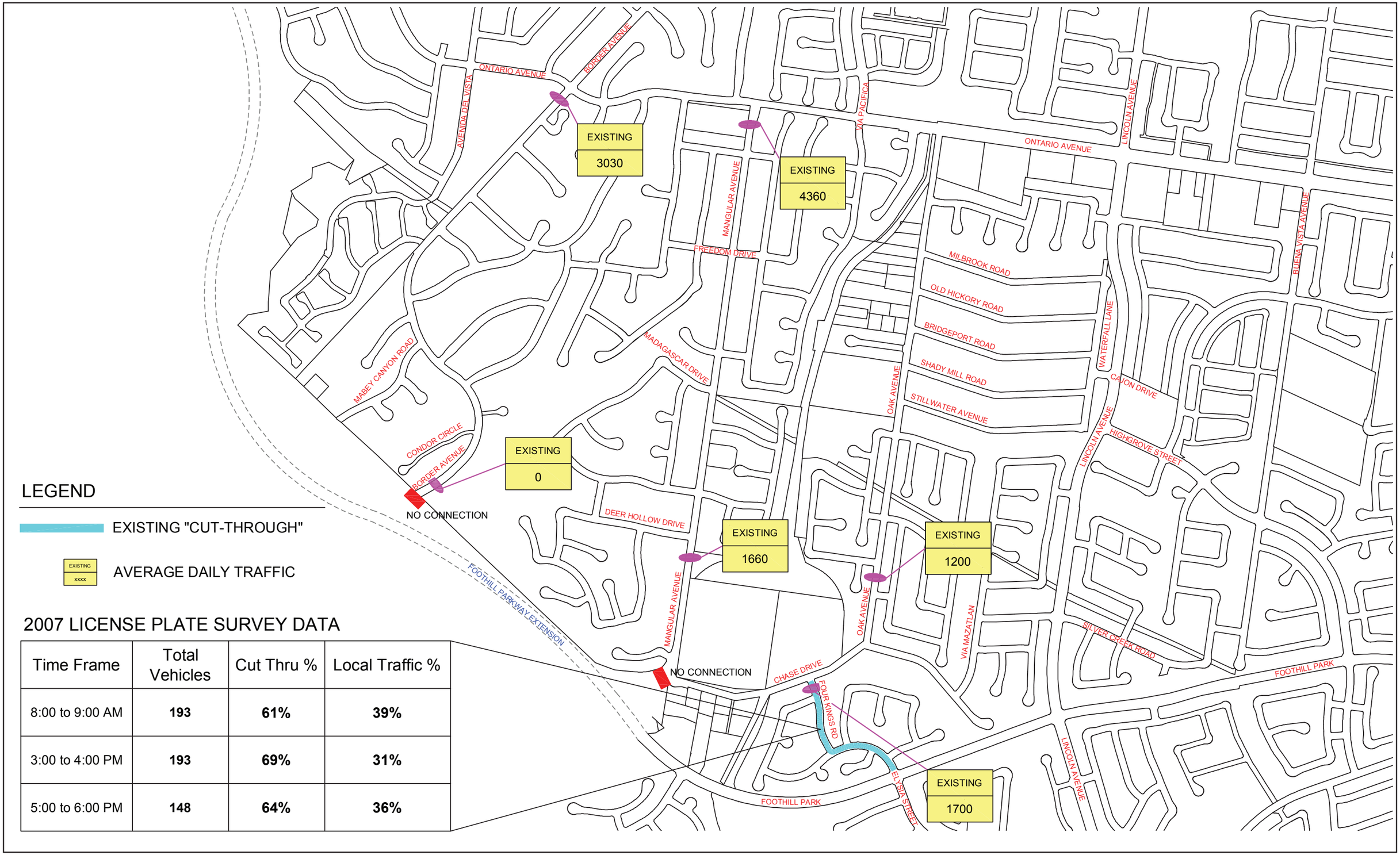
- Foothill Parkway/Trudy Way

Traffic signal warrant analyses have already been prepared for the following intersections, as part of previously constructed development:

- Foothill Parkway/Elysia Street; and
- Foothill Parkway/Lincoln Avenue.

The traffic signal warrant analysis that was prepared by the City of Corona for the Foothill Parkway/Elysia Street intersection determined that the forecast volumes on opening day (year 2010) do not warrant a traffic signal. A traffic signal has been constructed at the Foothill Parkway/Lincoln Avenue intersection, and is currently in operation.

Additional intersections may require traffic signal warrant analysis based on direction from the City of Corona Public Works Director. With implementation of Mitigation Measure 5.4-4, less than significant impacts are anticipated.



2007 LICENSE PLATE SURVEY DATA

Time Frame	Total Vehicles	Cut Thru %	Local Traffic %
8:00 to 9:00 AM	**193**	**61%**	**39%**
3:00 to 4:00 PM	**193**	**69%**	**31%**
5:00 to 6:00 PM	**148**	**64%**	**36%**

Source: City of Corona Traffic Engineering Department, 6/13/07.

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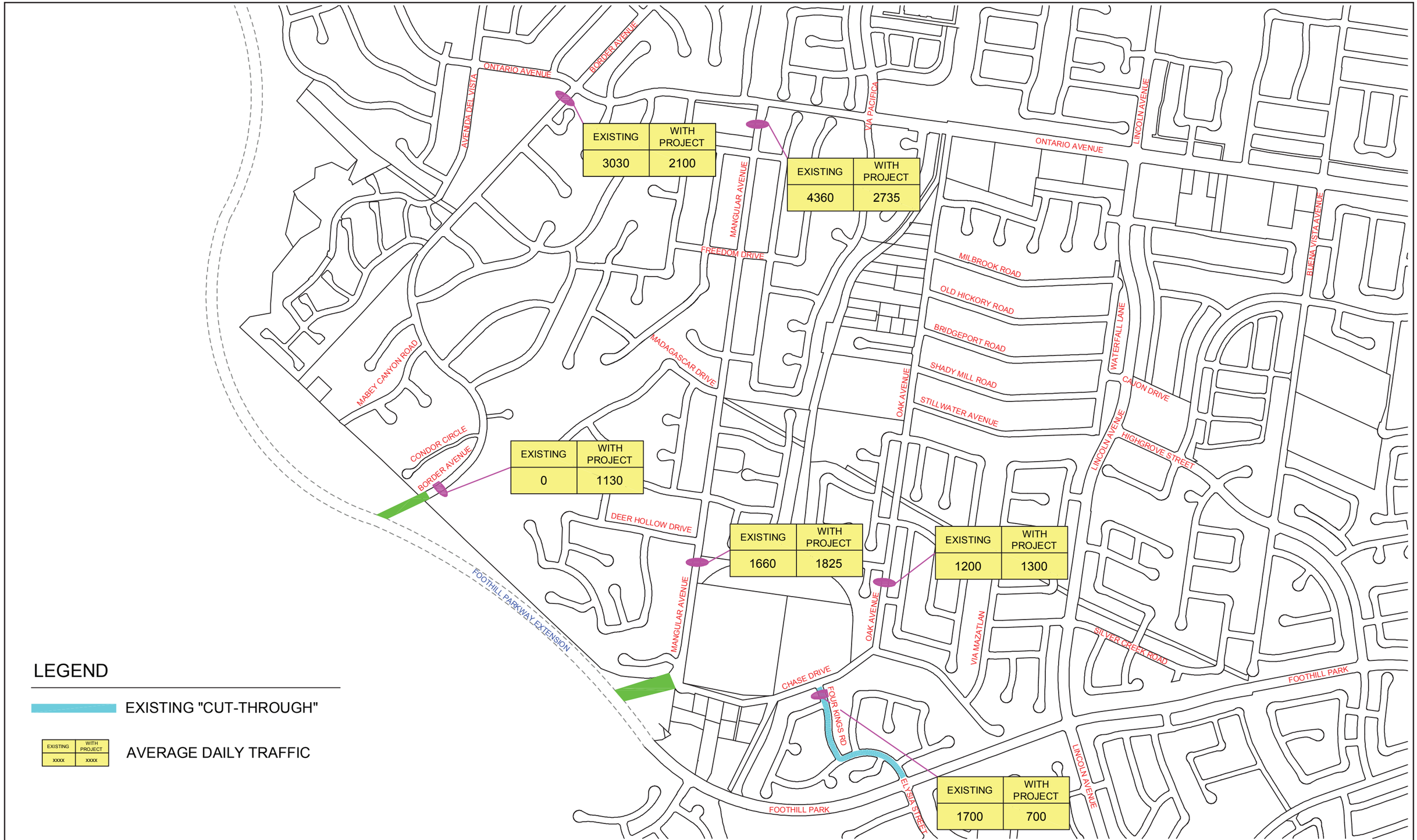
Existing (Year 2007) Focused Neighborhood Traffic

Figure 5.4-7

Back of 11 x 17 page



Source: City of Corona Traffic Engineering Department, 6/13/07.

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FOOTHILL PARKWAY WESTERLY EXTENSION • DRAFT EIR

Year 2010 Focused Neighborhood Traffic With Project

Figure 5.4-8

Back of 11 x 17 page

ALTERNATIVE TRANSPORTATION SYSTEMS

5.4-5 *Project implementation would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The project will incorporate bicycle lanes and sidewalks on either side of the roadway.* ***Significance: This is viewed as a positive impact from existing conditions. Less than significant impacts are anticipated in this regard.***

Impact Discussion: Consistent with the *City of Corona General Plan* Circulation Element, a Class II Bike Lane is proposed along the Foothill Parkway Westerly Extension. A Class II Bike Lane provides a striped lane for one-way bike travel on a street or highway for bicyclists. Currently, access to regional trails in Cleveland National Forest is provided via the Project site. The design of the Project will allow for continued access to these trails and private property located within the Cleveland National Forest.

No transit lines are located or proposed within the Project site. The closest transit lines, located within ¼ mile of the Project site, are the Riverside Transit Agency Route 3 (located along Main Street and portions of 8th Street and 10th Street) and the Blue Line (located along Main Street, Magnolia Avenue, and portions of Grand Boulevard). However, potential impacts to the City's bus routes in the area would be minimized by advanced coordination with the transit providers and notifications. Furthermore, the proposed alignment would help accommodate planned circulation needs of the future. This is viewed as a positive impact to the circulation needs of the City. Less than significant impacts are anticipated.

PROJECT ACCESS

5.4-6 *The Project would not result in inadequate emergency access.* ***Significance: Analysis has concluded project implementation would result in a less than significant impact in this regard.***

Impact Discussion: There are many properties, both adjacent to the proposed roadway and in remote locations, whose access will be impacted by the proposed Foothill Parkway extension. In order to maintain access to these locations, points of connection will be made along Foothill Parkway at key locations.

An alley approach-type driveway will be provided on the eastbound side of widened Green River Road, approximately 40 feet east of San Simeon Drive. This connection will provide access to an existing paved road that circulates among several properties to the south and east.

A local street intersection will be placed at the intersection of eastbound Foothill Parkway and Mabey Canyon Road, which will allow right-in, right-out only access to the properties along Mabey Canyon Road, south of Foothill Parkway.

A third access point, an alley approach-type driveway, will be provided to access the Addison property on the south side of Foothill Parkway, near the proposed Chase Drive/Mangular Avenue connection. Providing access to the Addison property will

also allow for continued access to two parcels located to the west of the Addison property that have permanent easements across the Addison property.

A fourth access point will be located at the east end of the Project. A nursery property, located south of the Addison property, has a permanent easement across the Addison property and currently uses a small access road that transects the Addison property along its north-facing slope and ties into Chase Drive via the Kroonen Wash access road. The southerly cut slope on proposed Foothill Parkway will sever this existing access road. Therefore, the access road will be realigned to the southeast and will tie into an existing access road at a debris basin, built as part of Tentative Tract Map 31955 improvements. Access to this debris basin currently extends from the terminus of existing Foothill Parkway. New access will be provided via an alley approach-type driveway on the south side of Foothill Parkway.

A fifth access point will be located approximately 250 feet east of Paseo Grande, from eastbound Foothill Parkway to a proposed staging area and wildlife trail along the west side of the Project. From this staging area, there will be access under the proposed MWD bridge structure to the east side of Foothill Parkway and an existing access road that ties into Adobe Avenue. The wildlife trail that will extend from the staging area along the southerly boundary of Foothill Parkway will also serve as an access road to existing access roads and horse trails within Wardlow Canyon.

The existing intersection of Chase Drive and Mangular Avenue is an uncontrolled “L” intersection, with Mangular Avenue extending to the north and Chase Drive extending to the east. A driveway ties into this intersection from south, providing access to four parcels, three of which have homes built on them. A 100-foot inscribed diameter roundabout is proposed at this location. Access will be maintained to the homes to the south via a driveway access point on the south side of the roundabout.

Pedestrians and bicyclists will have full use of a seven- to eight-foot bicycle lane, a five-foot sidewalk along the north side of Foothill Parkway, and a ten to 14-foot wide multi-purpose trail on the south side of the roadway. Proposed connections on Border Avenue and Chase Drive would also have bicycle lanes and sidewalks, providing full access throughout the improvements and new connections between adjacent neighborhoods.

The design of the proposed access locations would allow for adequate vehicular and emergency access to public roadways. Additionally, the proposed Project will provide an additional east/west corridor in the City for emergency vehicles to reach their destinations, as well as for emergency evacuations. The proposed connections to Border Avenue and Chase Drive/Mangular Avenue will allow for emergency ingress and egress for the adjacent neighborhoods. The current layout of fire station locations within the City was planned based on the City’s General Plan Circulation Element, which assumes the extension of Foothill Parkway and connections to Border Avenue and Chase Drive/Mangular Avenue would be constructed. Project implementation would result in a less than significant impact in this regard.

CUMULATIVE IMPACTS

Threshold: Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

Threshold: Exceed, either individually or cumulatively, a LOS standard established by the CMP agency for designated roads or highways.

Refer to Table 5.4-6 above for forecasted year 2025 without project circulation conditions. Table 5.4-6 serves as the basis of the cumulative analysis. As shown in Table 5.4-8, the study roadways are forecast to operate acceptably, according to City of Corona performance criteria, for forecast year 2025 with Project conditions, with the exception of Green River Road west of Palisades Drive. Due to the roadway geometry and close proximity of this segment to State Route 91, this arterial is considered a critical link of the interchange; therefore the City of Corona has identified LOS E as acceptable for this heavily traveled freeway interchange, consistent with the City of Corona General Plan Circulation Element Policy 6.1.6. Therefore, all study roadways are forecast to operate acceptably according to City of Corona performance criteria for forecast year 2025 with Project conditions. As such, overall cumulative impacts would be less than significant in this regard.

The traffic analysis conducted for the proposed Project concluded that cut through traffic on Four Kings Road, Elysia Street, Mangular Avenue, and Border Avenue near Ontario Avenue would be reduced greatly with construction of the Foothill Parkway extension with connections at both Chase Drive and Border Avenue. It is also expected that a portion of the traffic currently utilizing Ontario Avenue will utilize Foothill Parkway as an alternative. Near Foothill Parkway, the traffic volumes on Border Avenue and Mangular Avenue are expected to increase, however, the volume on these streets is below the expected traffic volumes for collector roadways. As the extension of Foothill Parkway will provide traffic congestion relief, the extension would also increase safety along the City streets by reducing the numbers of vehicles utilizing the same roadway. Therefore, the Project would improve traffic flow within the City and would not significantly contribute to a cumulative impact.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Potentially Significant Impact.

Project Cumulative Contribution: Potentially Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.4-1a and 5.4-1b.

Threshold: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Site-specific designs of future developments are identified on a project-by-project basis. Therefore, the specific street layouts and driveway locations are unknown. Without this detail, it is not possible to determine if hazards exist due to design. However, the City's *General Plan* includes goals and policies to ensure that roadways be designed for safe and efficient movement. Compliance with the goals and policies of the City's *General Plan* ensures that overall cumulative impacts from roadway hazards and incompatible uses do not occur within the City.

Design standards set forth by the City of Corona, County of Riverside, Caltrans, and the American Association of State Highway and Transportation Officials, such as minimum roadway geometrics, stopping sight distances, and minimum clearances, have been used to develop the proposed alignment. The proposed alignment is subject to these safety design standards. Additionally, Mitigation Measure 5.4-4 is recommended to ensure a traffic warrant analysis is prepared if directed by the City of Corona Public Works Director. Hazards due to incompatible uses of the roadway, such as farm equipment, are not anticipated. The proposed Project would not significantly contribute to cumulative impacts.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: 5.4-4.

Threshold: Result in inadequate emergency access.

The City's *General Plan* policies require developments to provide adequate access for emergency vehicles, including adequate width and vertical clearance for new streets. Therefore, all developments would not result in an overall cumulative impact to emergency access.

The nature of the proposed Project, a roadway extension, would provide increased emergency access through providing another alternative transportation route and by alleviating traffic congestion on other streets within the City. Additionally, the proposed roadway design would include adequate width and vertical clearance to allow for emergency vehicles. Therefore, the Project would not significantly contribute to cumulative impacts in this regard.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: None are required.

Threshold: Conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The City of Corona provides several transit routes for alternative transportation. The Riverside Transit Agency (RTA) provides bus service, the City provides a dial-a-ride service, and Metrolink provide commuter rail. Sidewalks, 4 to 5 feet in width, are required along all roadways and bikeways are located throughout the city, as outlined in the Bicycle Master Plan. New development is required to undergo site-specific environmental review, which would address impacts to alternative transportation and provide mitigation for impacts to alternative transportation. With implementation of the City's policies and project-specific mitigation measures, development within the City is not anticipated to have an overall cumulative impact.

The proposed Project includes a 7- to 8-foot wide Class II Bike Lane. Additionally, the design of the Project allows for continued access to trails within the Cleveland National Forest.

No transit lines are located or proposed within the Project site, however, the closest transit line is located within ¼ mile of the Project site. Project impacts to the City's bus routes would be minimized through coordination with the transit providers. The proposed Project provides an additional route for public transportation. This is viewed as a positive impact to the circulation needs of the City, therefore the Project would not significantly contribute to cumulative impacts.

Level of Significance Before Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Level of Significance After Mitigation –

Overall Cumulative Impact: Less Than Significant Impact.

Project Cumulative Contribution: Less Than Significant Impact.

Mitigation Measures: None are required.

5.4.5 MITIGATION MEASURES

The following mitigation measures directly correspond to the impact statements in the Impact Subsection.

SHORT-TERM (CONSTRUCTION) IMPACTS

5.4-1a Short-term mitigation for roadways shall be mitigated by a Traffic Management Plan (TMP) to be established by the City prior to construction. This Plan shall consist of prior notices, adequate sign-posting, and detours (including pedestrian, horseback, and bicycle paths). The TMP shall specify implementation timing of each plan element (prior notices, sign-posting, detours, etc.) as determined appropriate by the City Engineer. Adequate access to and from adjacent residential areas shall be provided at all times. The TMP shall be revised and approved by the City Police and Fire Departments so that construction shall not interfere with any emergency response or evacuation plans. Construction activities shall proceed in a timely manner in an effort to reduce impacts.

5.4-1b Proper detours and warning signs shall be established to ensure public safety. Alternative routes for the existing bicycle, horseback, and hiking trails along the Project site into the Cleveland National Forest shall be clearly marked and safety of those that utilize the path shall be considered at all times. This includes the use of proper lighting (where appropriate), fencing/shielding, sufficient headway for horse riders to pass through, proper storage of equipment and construction supplies, covering loose piles of soil, silt, clay, sand debris, or other earthen material so as to eliminate any discharge onto the existing pathway or temporary pathway, and immediately hosing down/cleaning such areas of the existing pathway or temporary pathway that have been affected by construction debris or sedimentation from the Project. Upon completion of construction, access to the existing bicycle, horseback, and hiking trails into the Cleveland National Forest shall be maintained. Trails that are impacted during construction, and remain in place after construction, shall be returned to pre-project conditions.

TRIP DISTRIBUTION AND ASSIGNMENT

5.4-2 No mitigation measures are required.

CONGESTION MANAGEMENT PROGRAM

5.4-3 No mitigation measures are required.

DESIGN ELEMENTS

5.4-4 A traffic signal warrant analysis shall be prepared by a registered Civil Engineer prior to construction of the proposed alignment at the following intersection:

- Foothill Parkway/Trudy Way

Additional intersections may require traffic signal warrant analysis based on direction from the City of Corona Public Works Director. A traffic signal will be installed at an intersection where it is deemed appropriate, based on the traffic signal warrant determination and the professional recommendation of the City Traffic Engineer.

ALTERNATIVE TRANSPORTATION

5.4-5 No mitigation measures are required.

PROJECT ACCESS

5.4-6 No mitigation measures are required.

CUMULATIVE IMPACTS

Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4.

5.4.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the recommended Mitigation Measures 5.4-1a, 5.4-1b, and 5.4-4 would reduce potential traffic and circulation impacts to less than significant levels. As such, no significant and unavoidable impacts related to traffic and circulation would result from development of the proposed alignment.

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