1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Los Olivos (Tract 37294) development ("Project") located north of north of Los Alamos Road and west of Briggs Road in the County of Riverside. For the purposes of this analysis two site plan options have been evaluated: Option 1 (shown on Exhibit 1-1) shows an emergency vehicle access (EVA) only onto Los Alamos Road and Option 2 (shown on Exhibit 1-2) shows a secondary driveway onto Los Alamos Road via Street A.

The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and recommend improvements to achieve acceptable circulation system operational conditions. This TIA has been prepared in accordance with the County of Riverside Transportation Department Traffic Impact Analysis Preparation Guide (April 2008) and consultation with County of Riverside staff during the scoping process. (1) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

1.1 PROJECT OVERVIEW

For the purposes of this analysis, potential impacts have been assessed for a single phase with an anticipated Opening Year of 2019. Exhibit 1-1 identifies the preliminary site plan. The Project is proposed to include the development of 48 single family detached residential dwelling units (for both Options 1 and 2).

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 Project is estimated to generate a net total of 453 trip-ends per day on a typical weekday with approximately 36 AM peak hour trips and 48 PM peak hour trips. 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.

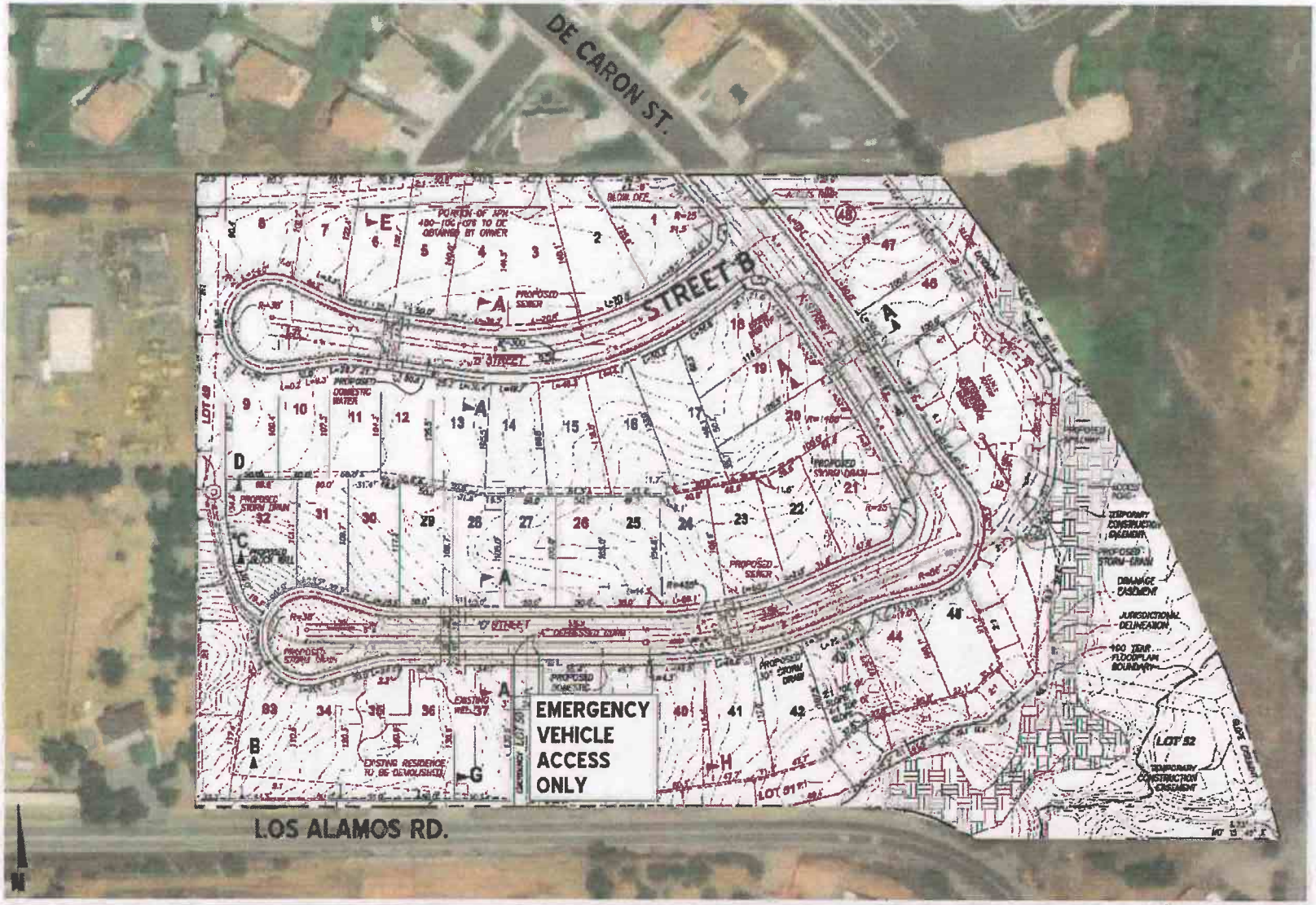
1.2 ANALYSIS SCENARIOS

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

- Existing (2018) Conditions
- Existing plus Project (E+P) Conditions – Options 1 & 2
- Existing plus Ambient Growth Plus Project (EAP) (2019) Conditions – Options 1 & 2
- Existing plus Ambient Growth Plus Project Plus Cumulative (EAPC) (2019) Conditions – Options 1 & 2

All study area intersections will be evaluated using the Highway Capacity Manual (HCM) (5th Edition) analysis methodology.

EXHIBIT 1-1: PRELIMINARY SITE PLAN (OPTION 1)



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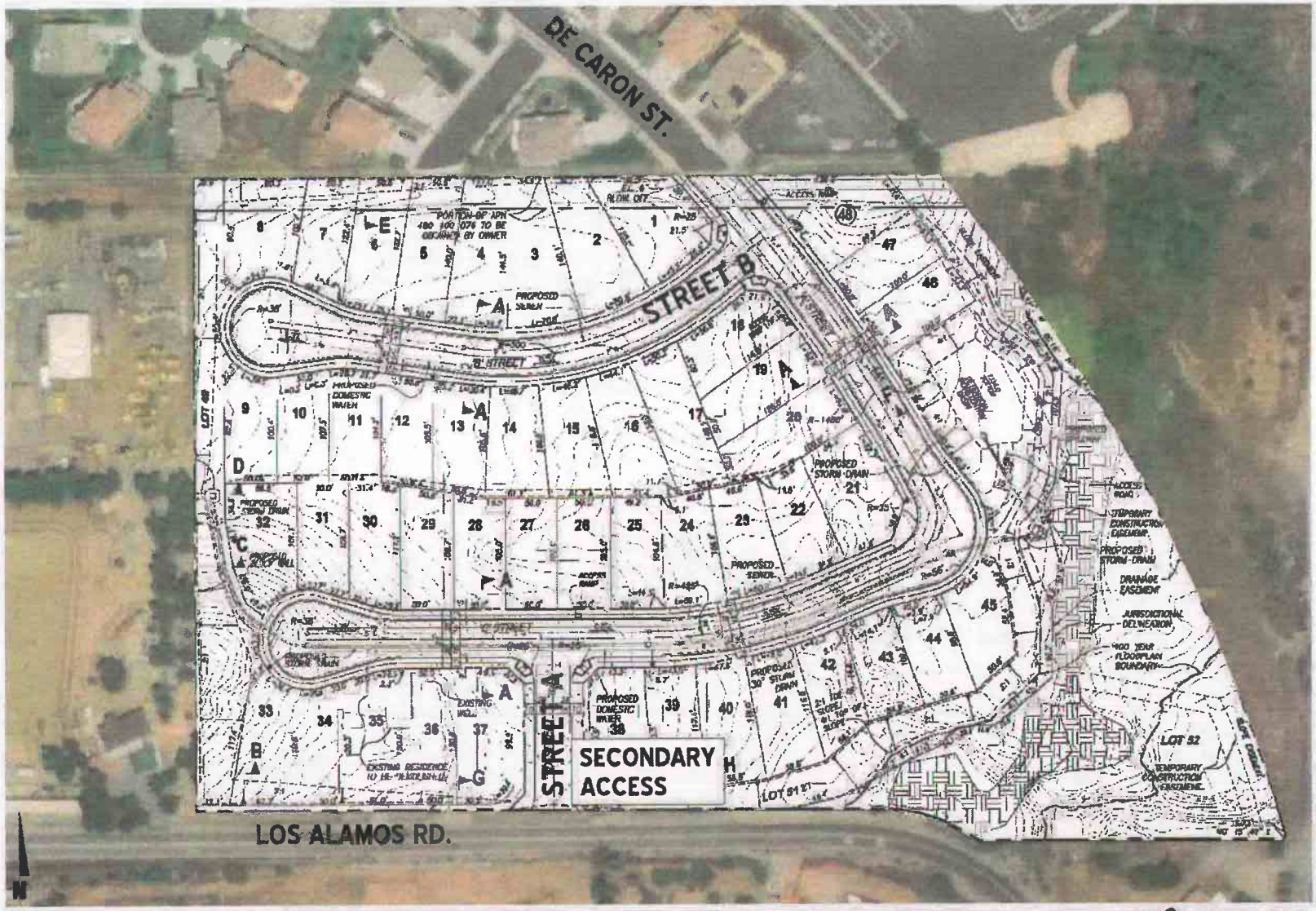
URBAN CROSSROADS

EXHIBIT 1-2: PRELIMINARY SITE PLAN (OPTION 2)



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1.2.1 Existing Conditions

Existing physical conditions have been disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Phase 1 of the Clinton Keith Road extension has recently been completed and is now open to through traffic between Whitewood Road and Trois Valley Street.

1.2.2 E+P Conditions

The E+P analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. E+P traffic conditions was evaluated for both access alternatives: Option 1 and Option 2.

1.2.3 EAP (2019) Conditions

The EAP (2019) traffic conditions analyses determine potential traffic impacts based on a comparison of the EAP traffic conditions to Existing conditions. To account for background traffic growth, an ambient growth factor from Existing conditions of 2% (2 percent per year over 1 year) for 2019 conditions are included for EAP traffic conditions. Consistent with Riverside County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area. Similar to E+P traffic conditions, EAP (2019) traffic conditions was evaluated for both access alternatives: Option 1 and Option 2.

1.2.4 EAPC (2019) Conditions

The EAPC (2019) traffic conditions analyses determine 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 2% (for 2019 conditions) are included for EAPC traffic conditions. This comprehensive list was compiled from information provided by the County of Riverside, City of Menifee, City of Murrieta, and City of Temecula. For the purposes of this analysis, EAPC (2019) traffic conditions assumes the completion of Clinton Keith Road between Leon Road and Winchester Road (SR-79).

The EAPC (2019) conditions analysis will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Transportation Uniform Mitigation Fee (TUMF), County of Riverside Development Impact Fee (DIF) programs, Southwest Road and Bridge Benefit District (RBBD), or other approved funding mechanism (e.g., Community Facilities District, etc.) can accommodate the long-range cumulative traffic at the target Level of Service (LOS) identified in the County of Riverside (lead agency) General Plan. (3) Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF, non-DIF, or non-RBBD facilities) are identified as such.

1.3 STUDY AREA

1.3.1 INTERSECTIONS

The Project study area was defined in coordination with the County of Riverside. Consistent with County of Riverside traffic study guidelines, the study area includes any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project will add 50 or more peak hour trips.

The "50 peak hour trip" criteria generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted 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 impact (i.e., study area).

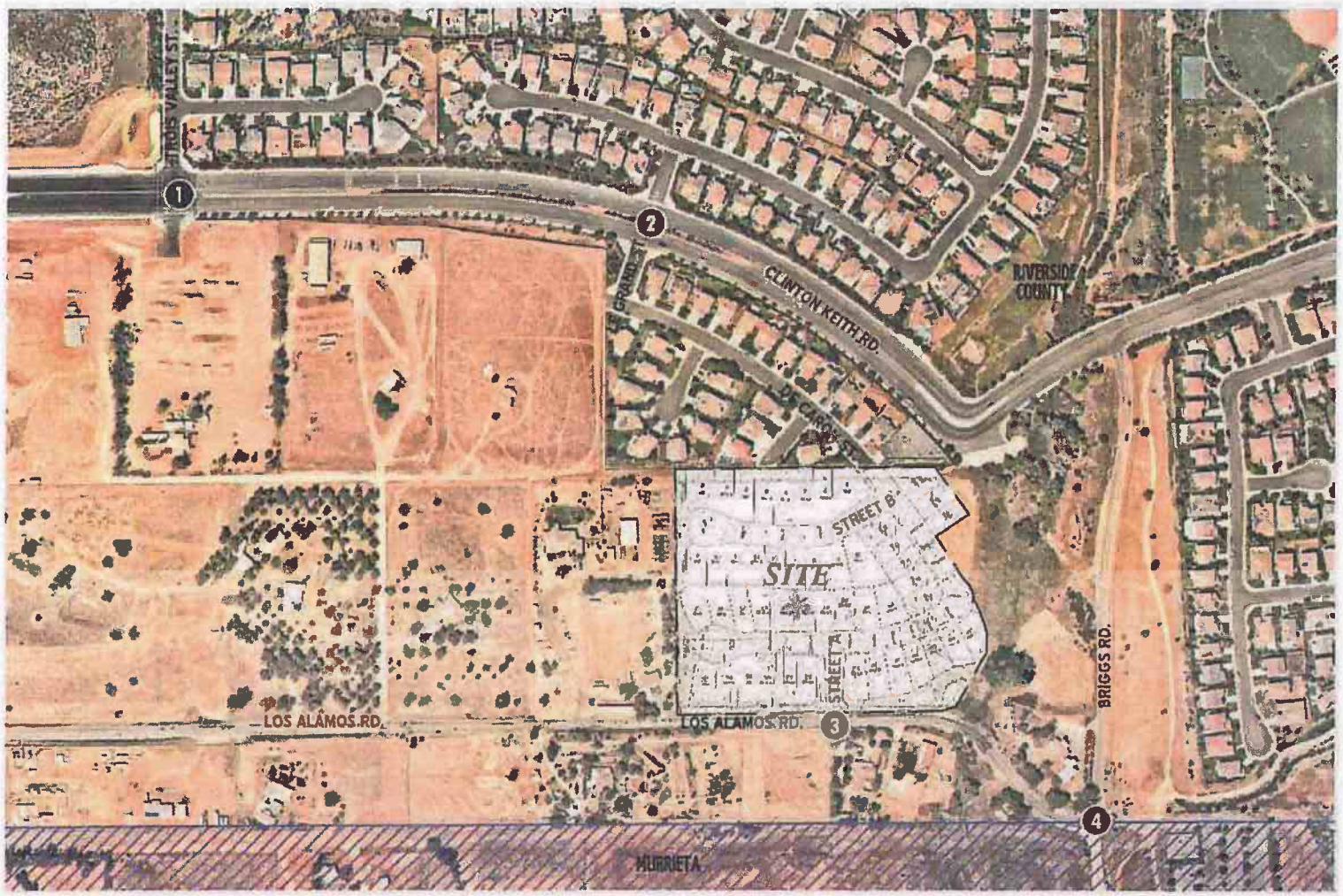
To ensure that this TIA satisfies the needs of the County of Riverside, Urban Crossroads, Inc. prepared a Project specific traffic study scoping agreement for review by County staff prior to the preparation of this TIA. The agreement provides an outline of the study area, trip generation, trip distribution, and analysis methodology. The agreement approved by the County of Riverside is included in Appendix 1.1. The Project is anticipated to contribute less than 50 peak hour trips to the off-site study area intersections, as such, the study area was developed in consultation with County staff. Exhibit 1-3 and Table 1-1 presents the study area and intersection analysis locations.

The Congestion Management Program (CMP) study area intersections are anticipated to operate at LOS E or better with the implementation of planned improvements or improvements recommended in this traffic study. However, there are no CMP intersections identified within the study area.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP
1	Trois Valley St. & Clinton Keith Rd.	County of Riverside	No
2	Le Grand St. & Clinton Keith Rd.	County of Riverside	No
3	Street A & Los Alamos Rd. – Future Intersection	County of Riverside	No
4	Briggs Rd. & Los Alamos Rd.	County of Riverside	No

EXHIBIT 1-3: LOCATION MAP



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1.4 Analysis Findings

This section provides a summary of the analysis results for Existing (2018), E+P, EAP (2019), and EAPC (2019).

Existing (2018) Conditions

For Existing (2018) traffic conditions, the study area intersections are currently operating at an acceptable LOS (i.e., LOS D or better) during one or both of the peak hours.

E+P Conditions

The intersection analysis results indicate that the addition of Project traffic is not anticipated to result in any new LOS deficiencies for both access alternatives.

EAP (2019) Conditions

The intersection analysis results indicate that the study area intersections are anticipated to operate at an acceptable LOS under EAP (2019) traffic conditions for both access alternatives. EAP (2019) traffic conditions assumes the completion of a 4-lane roadway along Clinton Keith Road between Whitewood Road and Trois Valley Street. In addition, an interim U-turn lane will be provided between Le Grand Street and Leon Road along Clinton Keith Road to provide existing and future residents access to westbound Clinton Keith Road.

EAPC (2019) Conditions

The intersection analysis results indicate that the study area intersections are anticipated to operate at an acceptable LOS under EAPC (2019) traffic conditions. EAPC (2019) traffic conditions assumes the completion of a 4-lane roadway along Clinton Keith Road between Whitewood Road and Trois Valley Street in conjunction with the completion of Clinton Keith Road between Leon Road and Winchester Road (SR-79).

1.5 On-Site Roadway and Site Access Improvements

The Project is proposed to have access onto Los Alamos Road via Street A and a future extension of De Caron Street to the northeast. All Project driveways are proposed to be stop controlled on the minor street with free-flow along the major streets and are proposed to allow for full access. Regional access to the Project site will be provided by the I-215 Freeway (via the Scott Road interchange and/or Clinton Keith Road interchange).

As part of the development, the Project will construct improvements on the site adjacent roadway of Los Alamos Road. Roadway improvements necessary to provide site access and on-site circulation are assumed to be constructed in conjunction with site development and are described below. These improvements should be in place prior to occupancy.

1.5.1 Site Adjacent Roadway Improvements

The recommended site-adjacent roadway improvements for the Project are described below. These improvements need to be incorporated into the Project description prior to Project

approval or imposed as conditions of approval as part of the Project approval. Exhibit 1-4 illustrates the site adjacent roadway improvement recommendations for the Project with Option 1 (with EVA access) and on Exhibit 1-5 for Option 2 (with secondary access on Los Alamos Road).

Los Alamos Road – Los Alamos Road is a proposed east-west oriented roadway located on the Project's southern boundary. Construct Los Alamos Road at its ultimate half-section width as a Local Street (56-foot right-of-way) between the Project's western and eastern boundaries and would be those required by final conditions of approval for the proposed Project and applicable County of Riverside standards.

Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the County of Riverside General Plan Circulation Element.

1.5.2 Site Access Improvements

The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 and Exhibit 1-5 illustrates the on-site and site adjacent recommended intersection lane improvements. Construction of on-site and site adjacent improvements are recommended to occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

The following intersection recommendations represent the minimum lanes that must be provided to achieve acceptable peak hour operations. As there is not anticipated to be sufficient receiving lanes beyond the Project, a minimum of one lane should be provided in each direction of travel until such time that the adjacent roadways are also widened to their ultimate General Plan roadway classification. However, the site adjacent roadways will be improved consistent with Section 1.7.1 *Site Adjacent Roadway Improvements* of this report.

Access Alternative: Option 2 Only:

Street A & Los Alamos Road (#3) – Install a stop control on the southbound approach and construct the intersection with the following geometrics:

Northbound Approach: Not Applicable (N/A)

Southbound Approach: One shared left-right turn lane.

Eastbound Approach: One shared left-through lane.

Westbound Approach: One shared through-right turn lane.

On-site traffic signing and striping should be implemented 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 County of Riverside sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

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

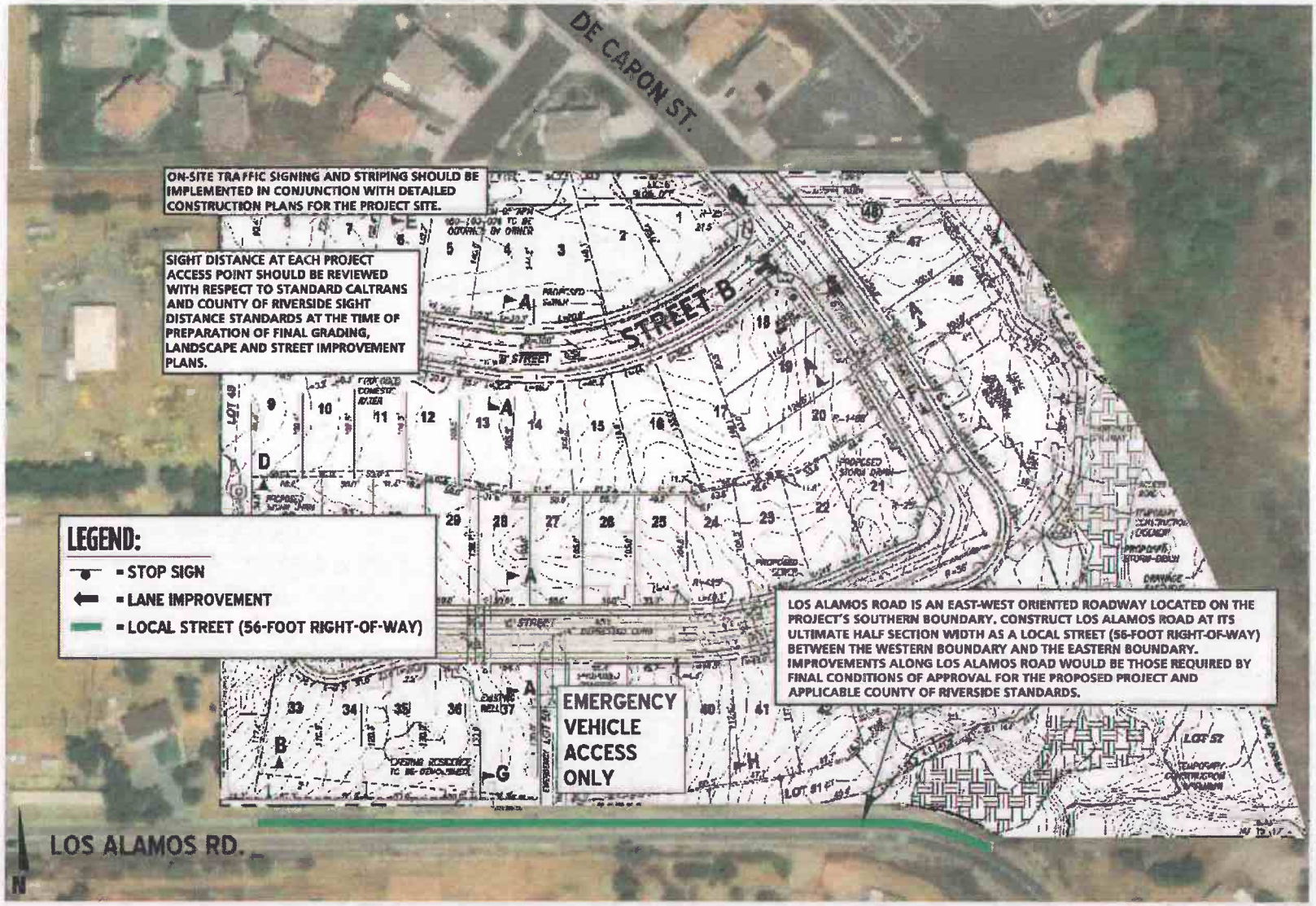

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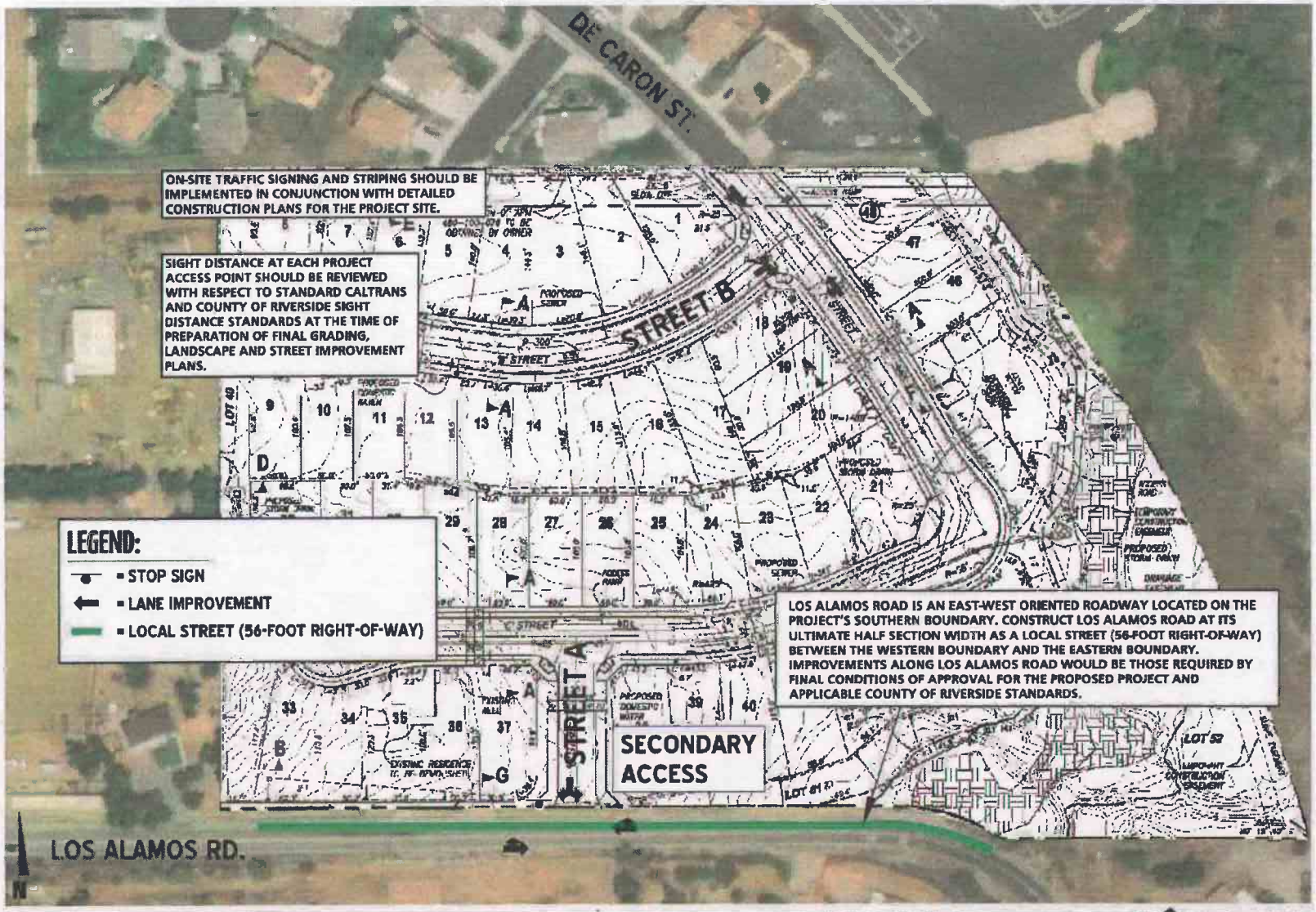
EXHIBIT 1-5: OPTION 2 SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS



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2 METHODOLOGIES

This section documents the methodologies and assumptions used to perform this traffic assessment.

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) (6th Edition) 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

County of Riverside

The County of Riverside, City of Menifee, City of Murrieta, and City of Temecula require signalized intersection operations analysis based on the methodology described in Chapter 18 and Chapter 31 of 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.

California Department of Transportation (Caltrans)

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, the traffic modeling and signal timing optimization software package Synchro (Version 10) has been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-215 Freeway ramps at Scott Road and Clinton Keith Road). (5) Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the Chapter 16 of the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections.

TABLE 2-1: SIGNALIZED INTERSECTION DESCRIPTION OF LOS

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

Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network. Signal timing for the freeway arterial-to-ramp intersections have been obtained from Caltrans District 8 and were utilized for the purposes of this analysis. All signalized study area intersections with the County of Riverside, City of Menifee, City of Murrieta, and City of Temecula have also utilized the Synchro software.

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 = [Hourly Volume] / [4 x Peak 15-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, with the exception of Horizon Year traffic conditions. Per Chapter 4 of 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) In an effort to conduct a conservative analysis, a PHF of 0.92 has been utilized for Horizon Year traffic conditions only, where applicable, unless the PHF is higher for Existing conditions.

2.2.2 UNSIGNALIZED INTERSECTIONS

The County of Riverside, City of Menifee, City of Murrieta, and City of Temecula require the operations of unsignalized intersections be evaluated using the methodology described in Chapter 19, Chapter 20, and Chapter 32 of 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 DESCRIPTION OF LOS

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. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

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 TIA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices *(CA MUTCD)* for all study area intersections. (6)

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 TIA 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 TIA 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.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans

planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersections:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location
3	Street A & Los Alamos Rd. – Future Intersection (Option 2 only)
4	Briggs Rd. & Los Alamos Rd.

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Existing Conditions* of this report. The traffic signal warrant analysis for future conditions is presented in Section 5 *E+P Traffic Analysis*, Section 6 *EAP Traffic Analysis*, and Section 7 *EAPC Traffic Analysis* of this report.

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 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.

2.4 Minimum Level of Service (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions. Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:

- *LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*

Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental impacts and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate the impacts of such approval. Any such approval must incorporate all feasible mitigation measures, make specific findings to support the decision, and adopt a statement of overriding considerations.

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 would result in a deficiency, the following will be utilized:

- A deficiency occurs at study area intersections if the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and the addition of project trips causes the peak hour LOS of the study area intersection to operate at unacceptable LOS (i.e., LOS E or F). Per the County of Riverside traffic study guidelines, for intersections currently operating at unacceptable LOS (LOS E or F), a deficiency would occur if the Project contributes 50 or more peak hour trips to pre-project traffic conditions.

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3 EXISTING CONDITIONS

This section provides a summary of the existing circulation network, the County of Riverside General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with County of Riverside staff (Appendix 1.1), the study area includes a total of 4 existing and future intersections as shown previously on Exhibit 1-2. 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 GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-2 shows the adopted County of Riverside General Plan Circulation Element and Exhibit 3-3 illustrates the Circulation Element per General Plan Amendment (GPA) No. 960. In 2008, Riverside County embarked on its first General Plan review cycle since the adoption of the 2003 General Plan. GPA No. 960 was adopted by the Riverside County Board of Supervisors on December 8, 2015. Exhibit 3-4 illustrates the adopted County of Riverside General Plan roadway cross-sections.

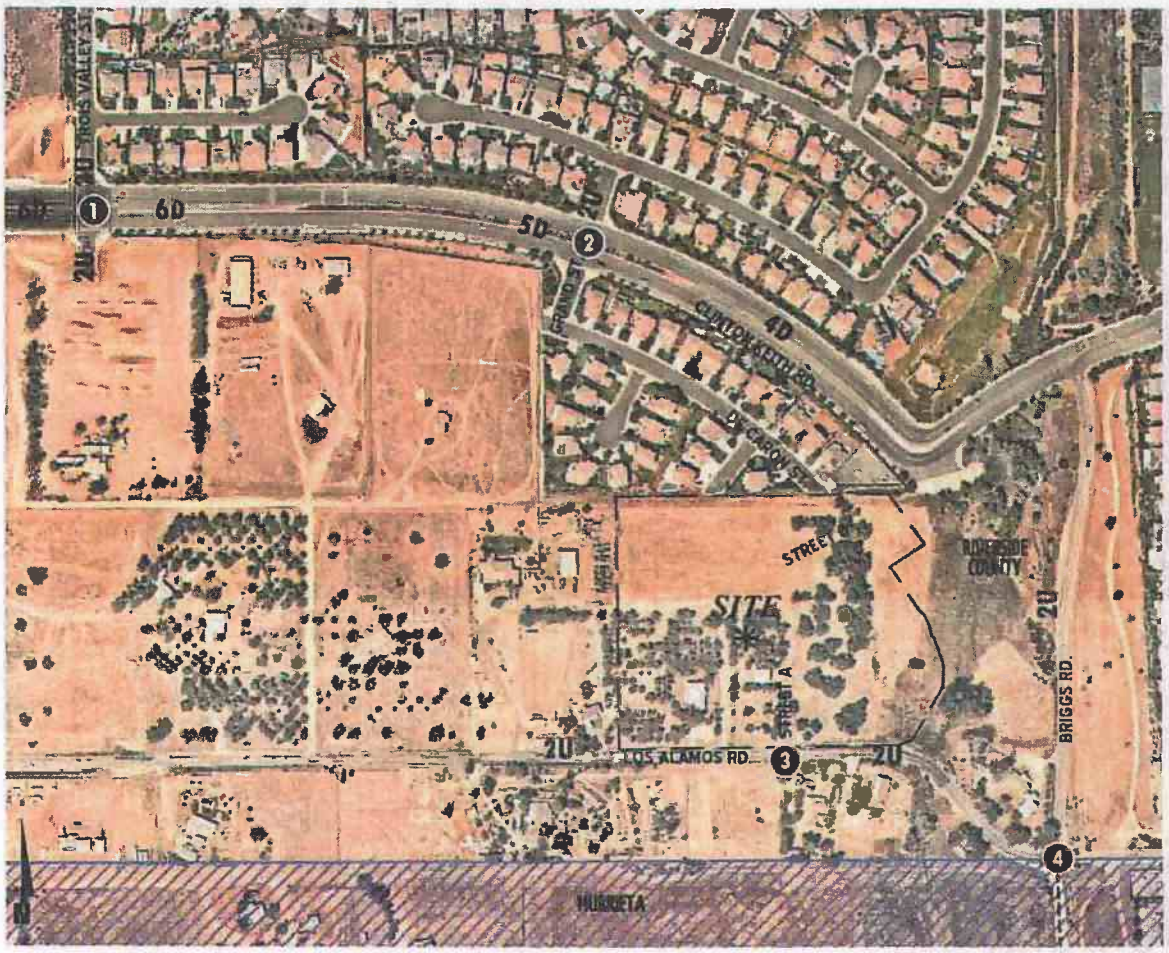
3.3 TRANSIT SERVICE

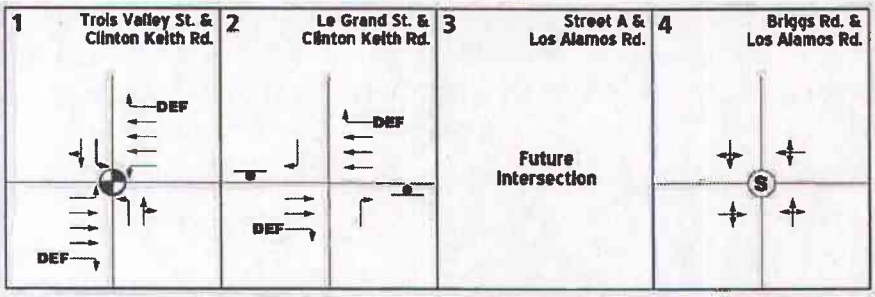
The study area is currently served by the Riverside Transit Agency (RTA) with bus services along Winchester Road (SR-79) via Route 79 and Route 217. The transit services are illustrated on Exhibit 3-5. Transit service is reviewed and updated by the RTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.4 PEDESTRIAN AND BICYCLE FACILITIES

Field observations conducted in September 2018 indicate nominal pedestrian and bicycle activity within the study area. The Riverside County Integrated Project (RCIP) Southwest Area Trails and Bikeways are shown on Exhibit 3-6 and Exhibit 3-7 shows the RCIP Southwest Area Trails and Bikeways per GPA 960. As shown, a regional trail is shown along Los Alamos Road to Leon Road, adjacent to the Project site. Existing pedestrian facilities currently exist along De Caron Street to Le Grand Street and along Clinton Keith Road. The existing pedestrian facilities within the study area are shown on Exhibit 3-8.

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





LEGEND:

- (S) = ALL WAY STOP
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- --- = DIRT ROAD
- DEF = DEFACTO RIGHT TURN

EXHIBIT 3-2: RIVERSIDE COUNTY GENERAL PLAN CIRCULATION ELEMENT

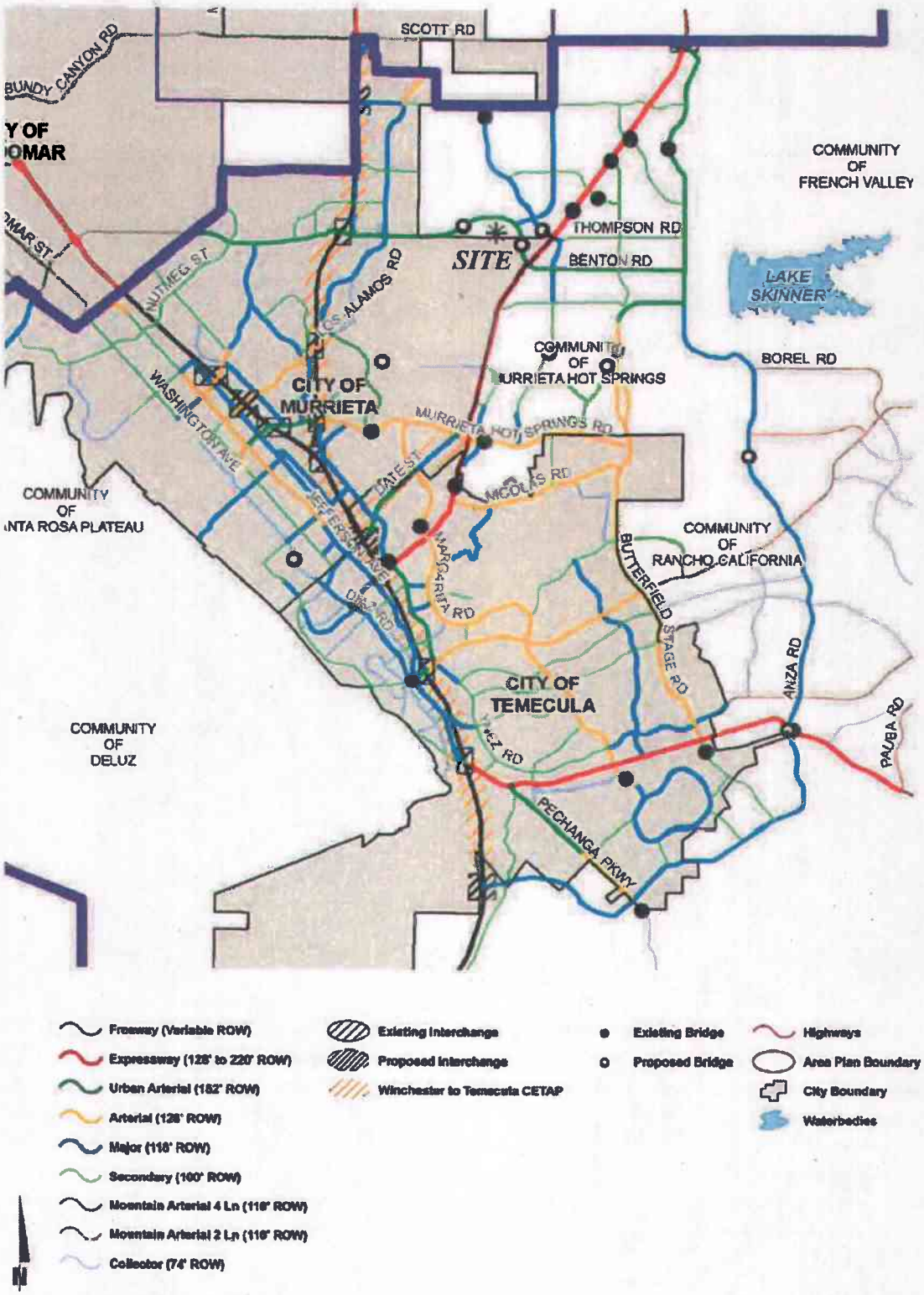


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EXHIBIT 3-3: RIVERSIDE COUNTY GENERAL PLAN CIRCULATION ELEMENT (GPA 960)

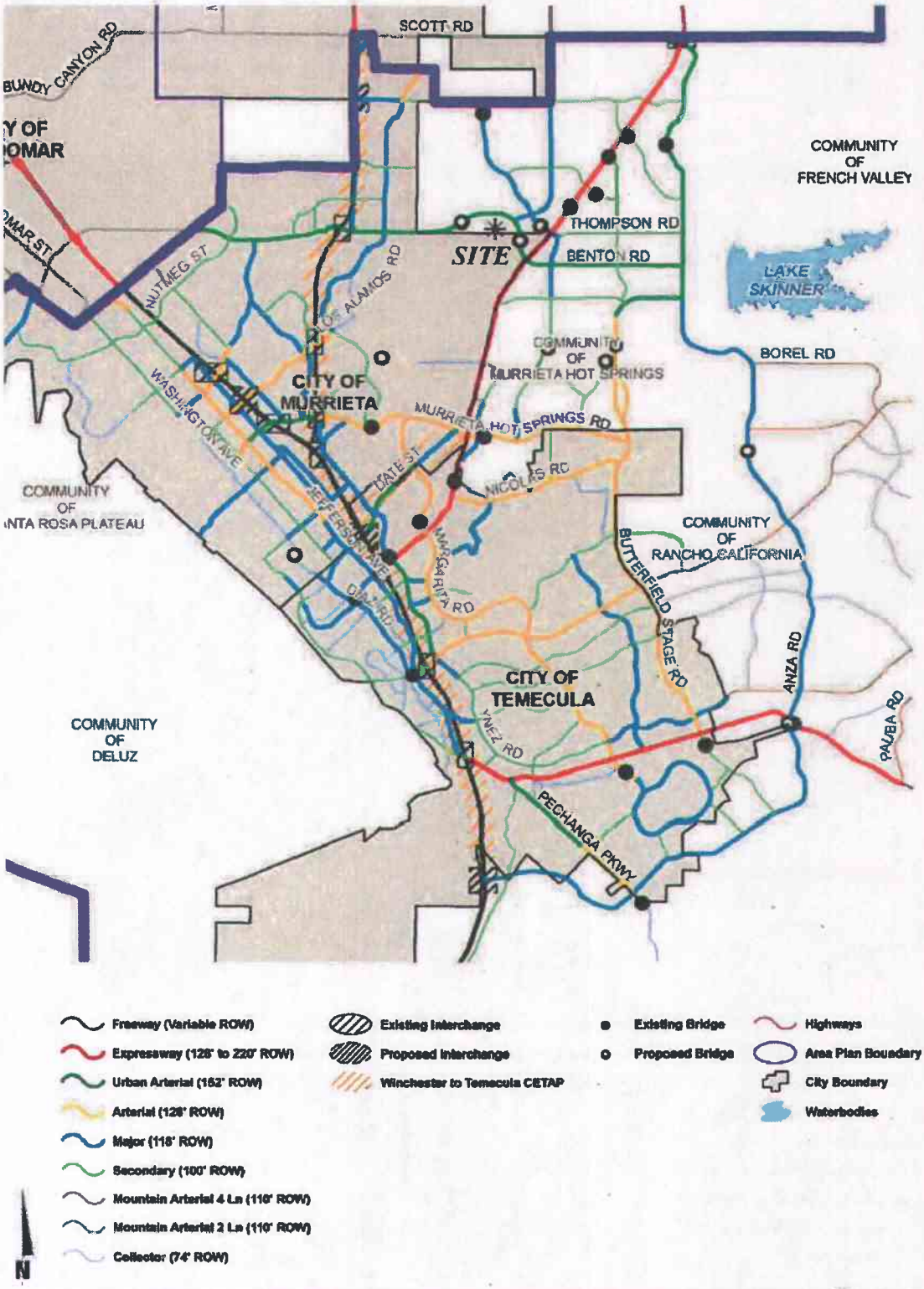

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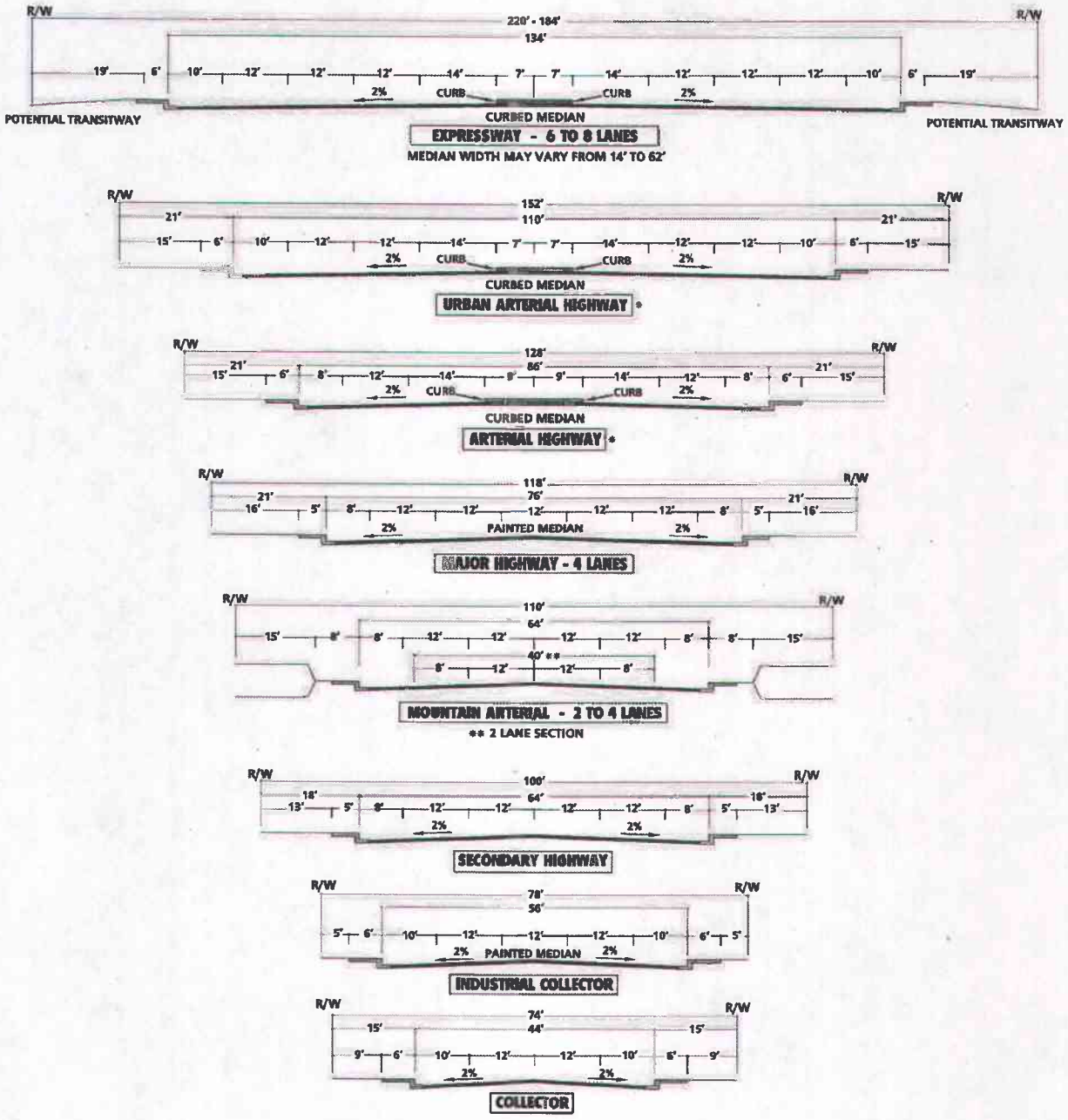
EXHIBIT 3-4: RIVERSIDE COUNTY GENERAL PLAN ROADWAY CROSS-SECTIONS



* IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.

SOURCE: COUNTY OF RIVERSIDE

N

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EXHIBIT 3-5: EXISTING TRANSIT ROUTES

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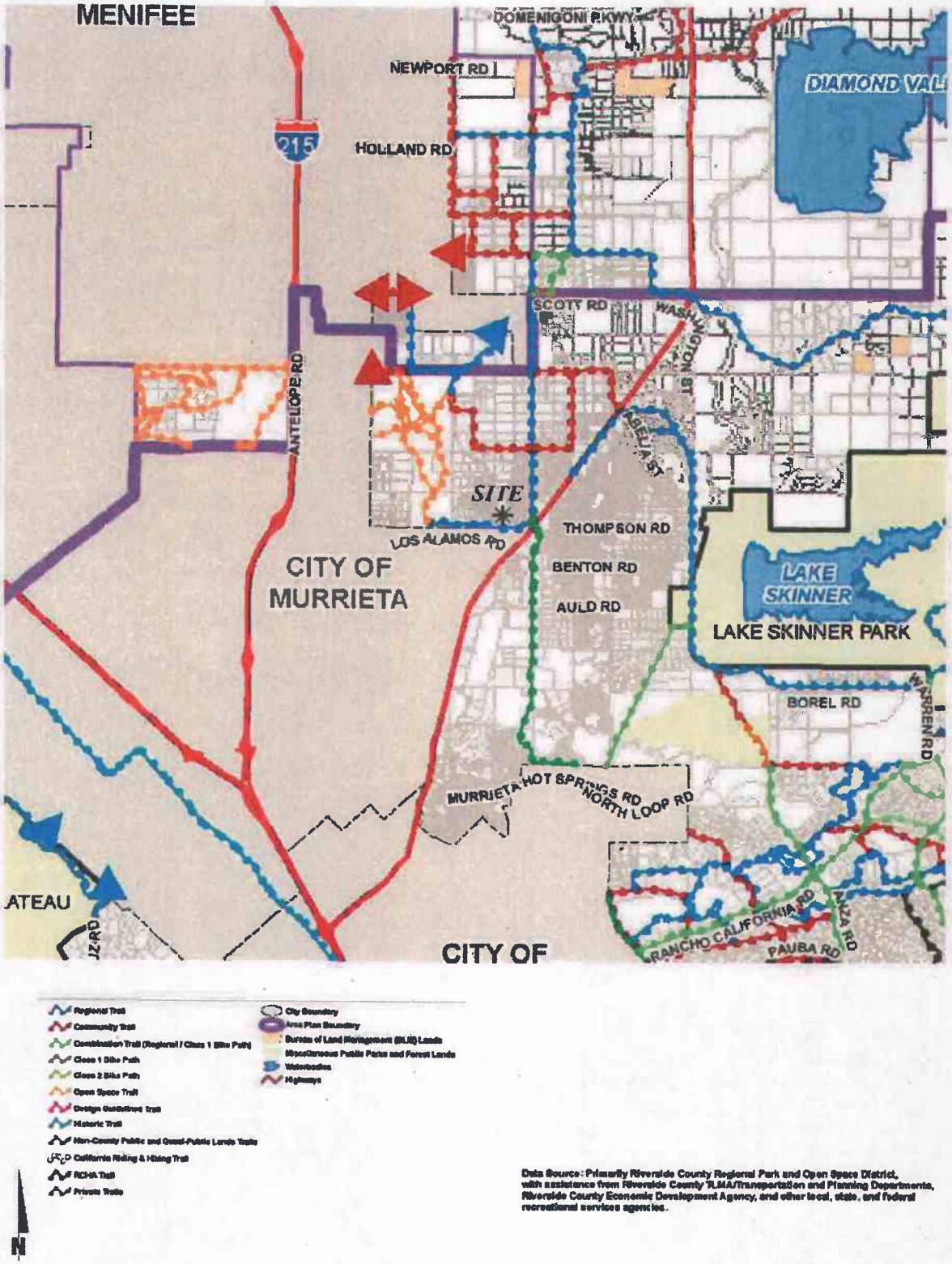
EXHIBIT 3-6: RCIP SOUTHWEST AREA TRAILS AND BIKEWAYS



Data Source: Primarily Riverside County Regional Park and Open Space District, with assistance from Riverside County TLMA/Transportation and Planning Departments, Riverside County Economic Development Agency, and other local, state, and federal recreational services agencies.

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EXHIBIT 3-7: RCIP SOUTHWEST AREA TRAILS AND BIKEWAYS (GPA 960)

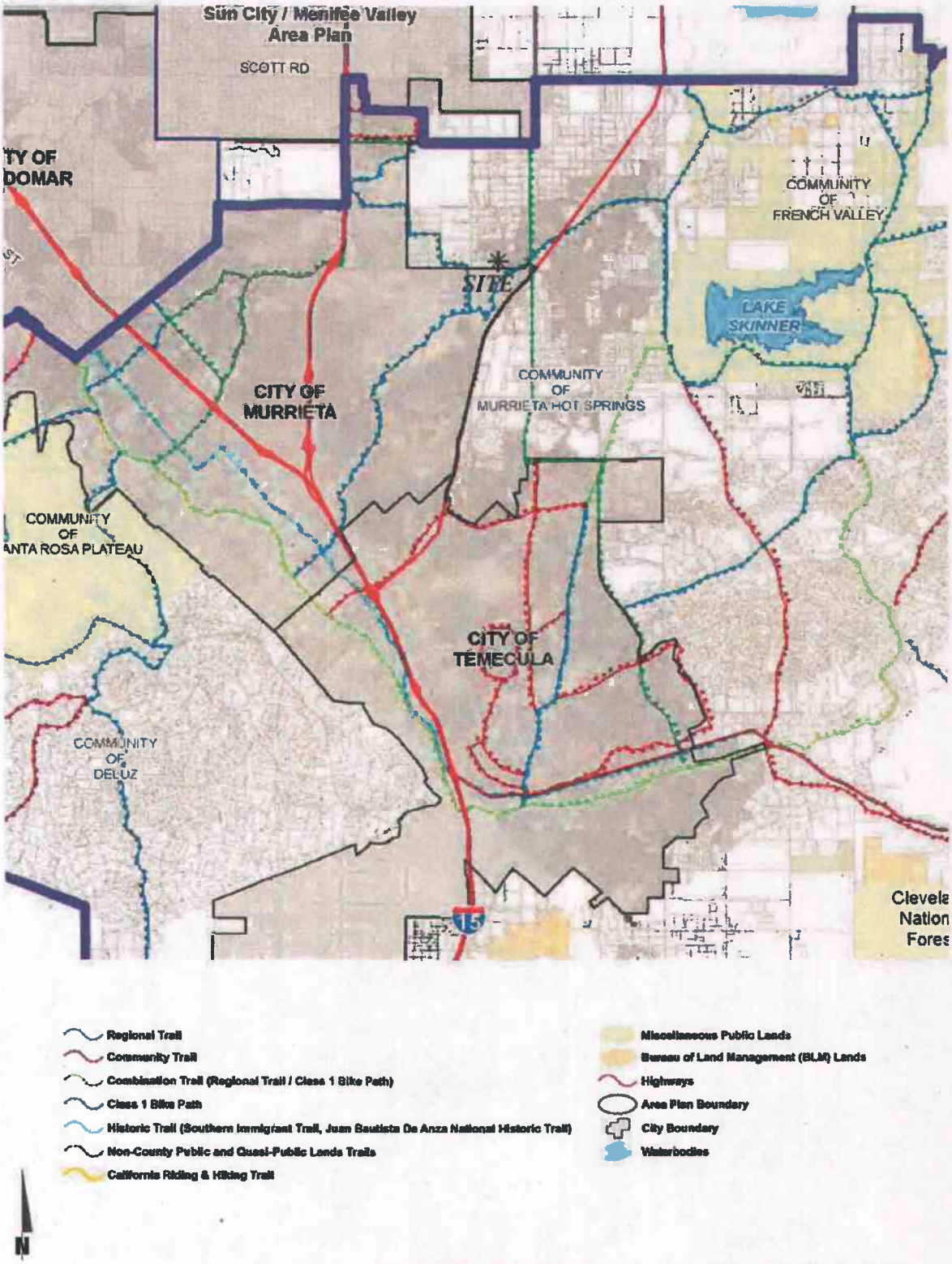

EXHIBIT 3-8: EXISTING PEDESTRIAN FACILITIES

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3.5 EXISTING TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in September 2018. 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)

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.

Manual weekday AM and PM peak hour turning movement counts were conducted in September 2018. The weekday AM and PM peak hour count data is representative of typical peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. 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. Existing weekday AM and PM peak hour intersection volumes are shown on Exhibit 3-9.

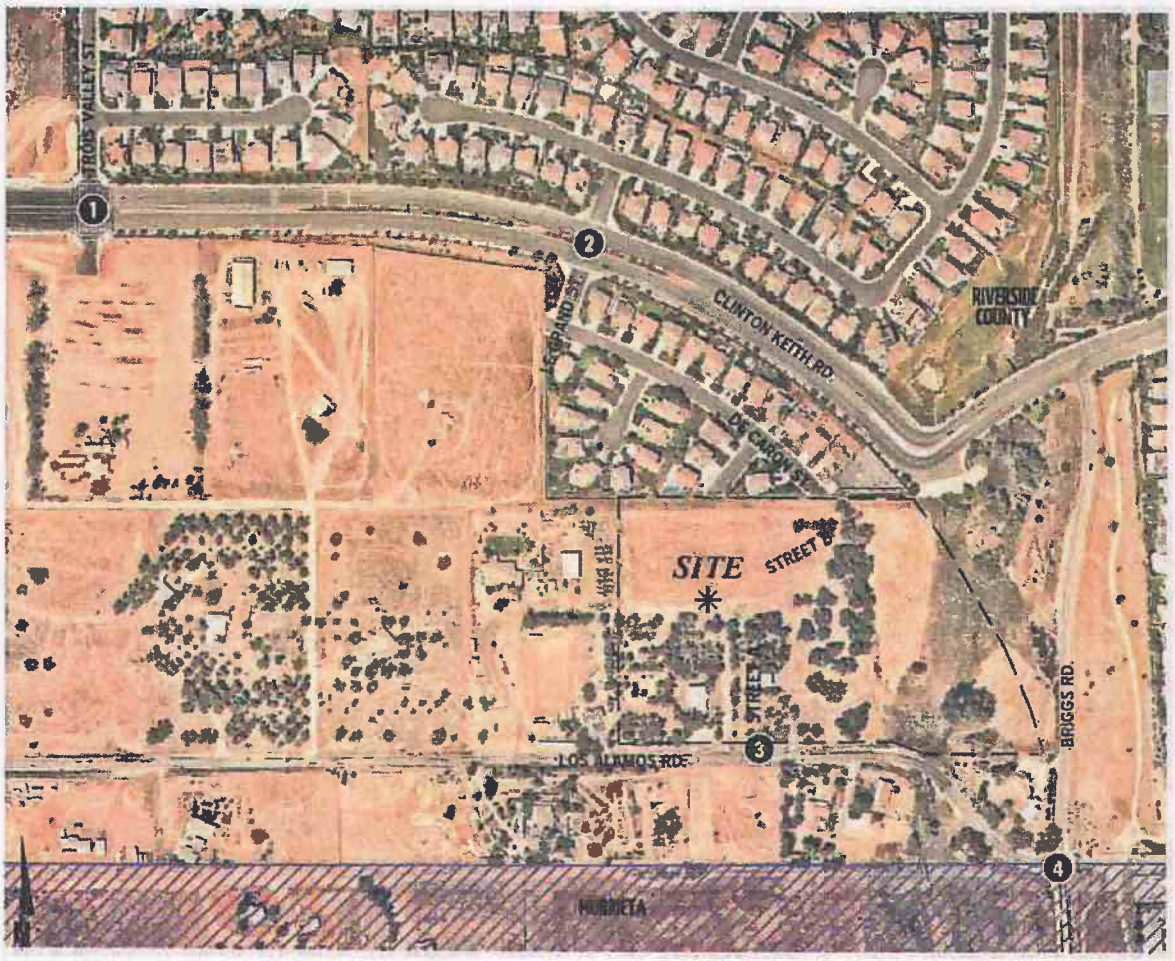
3.6 EXISTING CONDITIONS INTERSECTION OPERATIONS ANALYSIS

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 of the existing study area intersections are currently operating at an acceptable LOS during the peak hours.

Phase 1 of the Clinton Keith Road extension has been completed and is currently open to through traffic. The traffic signal has been installed and is operational at the intersection of Trois Valley Street and Clinton Keith Road. The current completion of Clinton Keith Road between Whitewood Road and Trois Valley Street results in a reduction to through traffic along Los Alamos Road.

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions are shown on Exhibit 3-10. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

EXHIBIT 3-9: EXISTING (2018) TRAFFIC VOLUMES



1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
43(25) 1(0) 6(8) / 1(8) 860(556) 6(14)	18(16) / 11(16) 849(562)	Future Intersection	124(80) 4(3) 1(2) / 1(1) 0(0) 0(1)
26(29) 717(876) 3(1) / 0(0) 0(0) 0(1)	715(871) 8(14) / 13(7)		88(155) 0(0) 10(6) / 7(21) 8(25) 0(0)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

EXHIBIT 3-10: EXISTING (2018) SUMMARY OF LOS

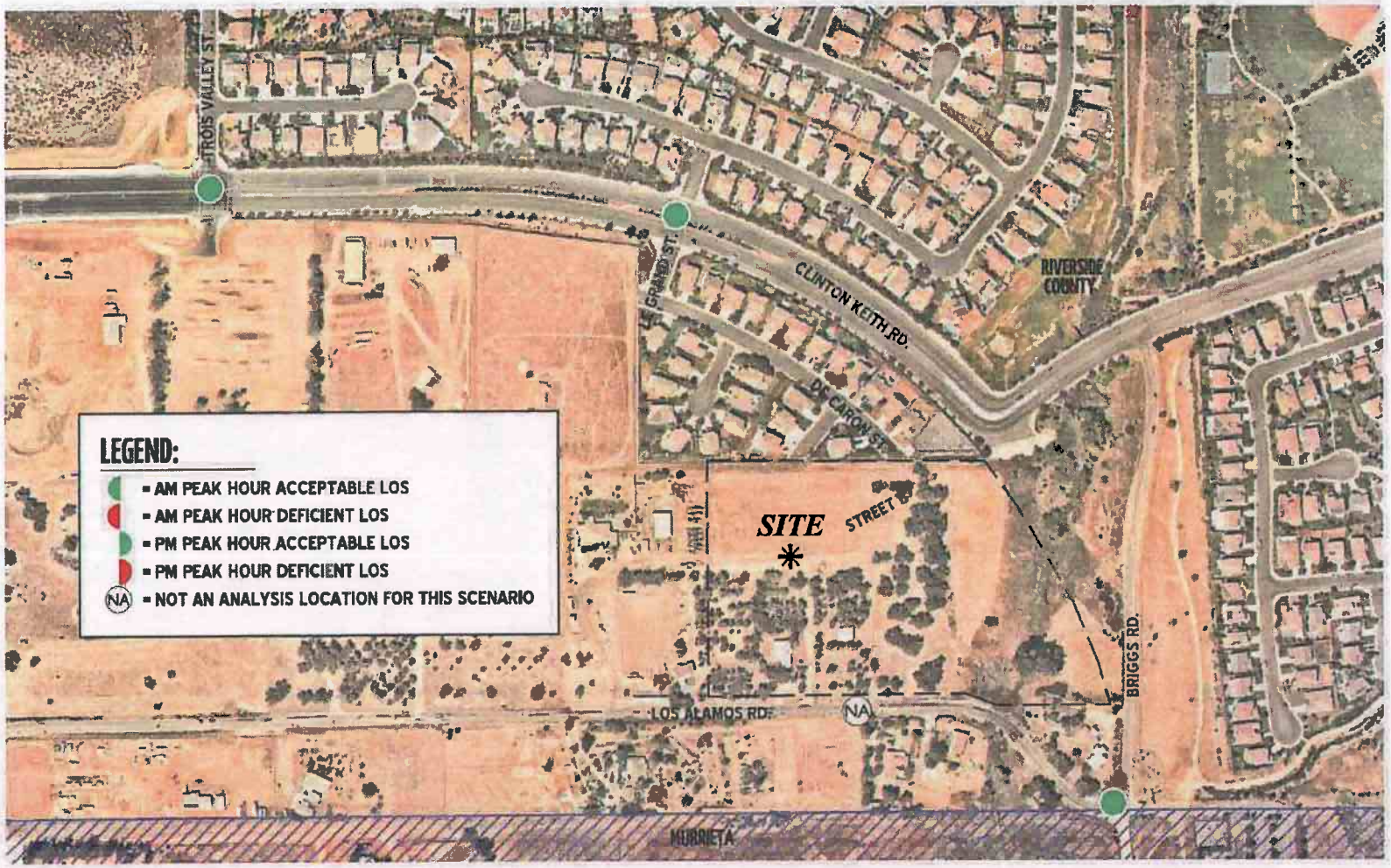


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Table 3-1

Intersection Analysis for Existing (2018) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Trois Valley St. & Clinton Keith Rd.	TS	1	1	0	1	1	0	1	3	d	1	3	d	9.1	8.9	A	A
2	Le Grand St. & Clinton Keith Rd.	CSS	0	0	1	0	0	1	0	2	d	0	3	d	13.6	12.0	B	B
3	Street A. & Los Alamos Rd.		Future Intersection															
4	Briggs Rd. & Los Alamos Rd.	AWS	0	1	0	0	1	0	0	1	0	0	1	0	7.5	8.0	A	A

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d= Defacto Right Turn Lane

[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) are shown.

[3] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop

3.7 EXISTING CONDITIONS TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. For Existing traffic conditions, no traffic signals currently appear to be warranted at the applicable unsignalized study area intersections (see Appendix 3.3).

4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. For the purposes of this analysis, potential impacts have been assessed for a single phase with an anticipated Opening Year of 2019. The Project is proposed to include the development of 48 single family detached residential dwelling units.

The Project is proposed to have access onto Los Alamos Road via Street A and a future extension of De Caron Street to the northeast. All Project driveways are proposed to be stop controlled on the minor street with free-flow along the major streets and are proposed to allow for full access. Regional access to the Project site will be provided by the I-215 Freeway (via the Scott Road interchange and/or Clinton Keith Road 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 to estimate Project traffic are shown in Table 4-1, and a summary of the Project's trip generation is also shown in Table 4-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE) for Single Family Residential (ITE Land Use Code 210) in their published Trip Generation Manual, 10th Edition, 2017. (2) The Project is estimated to generate a net total of 453 trip-ends per day on a typical weekday with approximately 36 AM peak hour trips and 48 PM peak hour trips.

4.2 PROJECT TRIP DISTRIBUTION

Exhibit 4-1 illustrates the proposed trip distribution pattern with the Phase 1/Phase 2 extension of Clinton Keith Road between Whitewood Road and Trois Valley Street. It is our understanding that an interim U-turn lane will be provided between Le Grand Street and Leon Road on Clinton Keith Road in order to allow for existing and future residents to head westbound on the new Clinton Keith Road extension. Exhibit 4-1 has been utilized for E+P and EAP traffic conditions. Exhibit 4-2 illustrates the proposed Project trip distribution patterns with the completion of the ultimate extension of Clinton Keith Road to Winchester Road (SR-79) from Leon Road. It is our understanding that U-turns will be allowed at the future signalized intersection of Leon Road and Clinton Keith Road to accommodate access westbound onto Clinton Keith Road. Exhibit 4-2 has been utilized for EAPC traffic conditions.

The Option 1 and Option 2 access alternatives are shown on both Exhibits 4-1 and 4-2.

Table 4-1

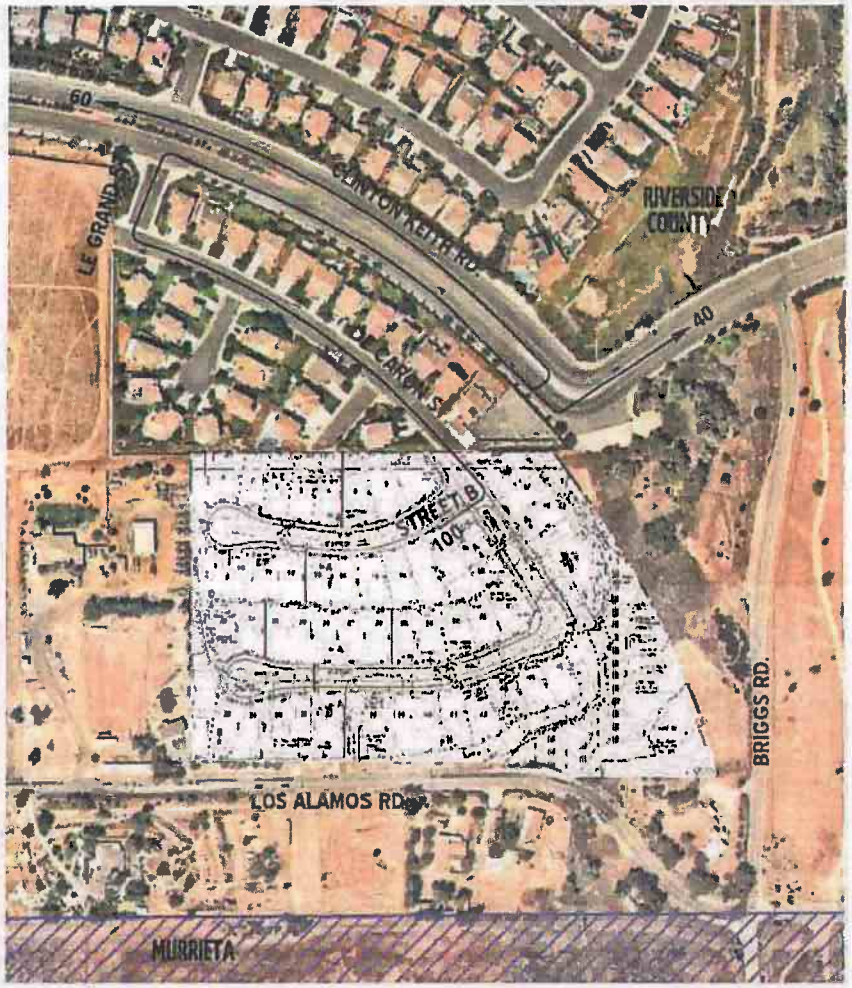
Proposed Project Trip Generation Summary

Land Use	Units[1]	ITE LU Code	AM Peak Hour			PM Peak Hour			Weekday Daily
			In	Out	Total	In	Out	Total	
Trip Generation Rates:[2]									
Single Family Detached Residential	DU	210	0.19	0.56	0.74	0.62	0.37	0.99	9.44
Land Use	Units[1]	Quantity	AM Peak Hour			PM Peak Hour			Weekday Daily
			In	Out	Total	In	Out	Total	
Trip Generation Summary:									
Los Olivos	DU	48	9	27	36	30	18	48	453

[1] DU = Dwelling Units

[2] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION (WITH PHASE 1/PHASE 2 CLINTON KEITH RD. EXTENSION)



OPTION 1

OPTION 2

LEGEND:

10 = PERCENT TO/FROM PROJECT

URBAN CROSSROADS

EXHIBIT 4-2: PROJECT TRIP DISTRIBUTION (WITH ULTIMATE CLINTON KEITH RD. EXTENSION)

OPTION 1

OPTION 2

LEGEND:

10 = PERCENT TO/FROM PROJECT
= OUTBOUND
= INBOUND

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4.3 MODAL SPLIT

Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related traffic, such reductions have not been taken into consideration in this traffic study in order to provide a conservative analysis of the Project's potential to contribute to circulation system deficiencies.

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 peak hour intersection turning movement volumes for E+P/EAP and EAPC traffic conditions are shown on Exhibits 4-3 and 4-4. Both Exhibits 4-3 and 4-4 include the traffic volumes for each access alternative.

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon a background (ambient) growth factor of 2% per year. The ambient growth factor is intended to approximate traffic growth. The total ambient growth is 2.0% for 2019 traffic conditions (growth of two percent per year over 1 year). This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has 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.

The currently adopted Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (April 2016) growth forecasts for the unincorporated areas of the County of Riverside identifies projected growth in population of 359,000 in 2012 to 499,200 in 2040, or a 139.1 percent increase over the 28-year period. (7) The change in population equates to roughly a 1.18 percent growth rate compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 145.1 percent, or 1.34 percent annual growth rate. Finally, growth in employment over the same 28-year period is projected to increase by 222.1 percent, or a 2.89 percent annual growth rate.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that 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 County of Riverside.

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES (WITH PHASE 1/PHASE 2 CLINTON KEITH RD. EXTENSION)

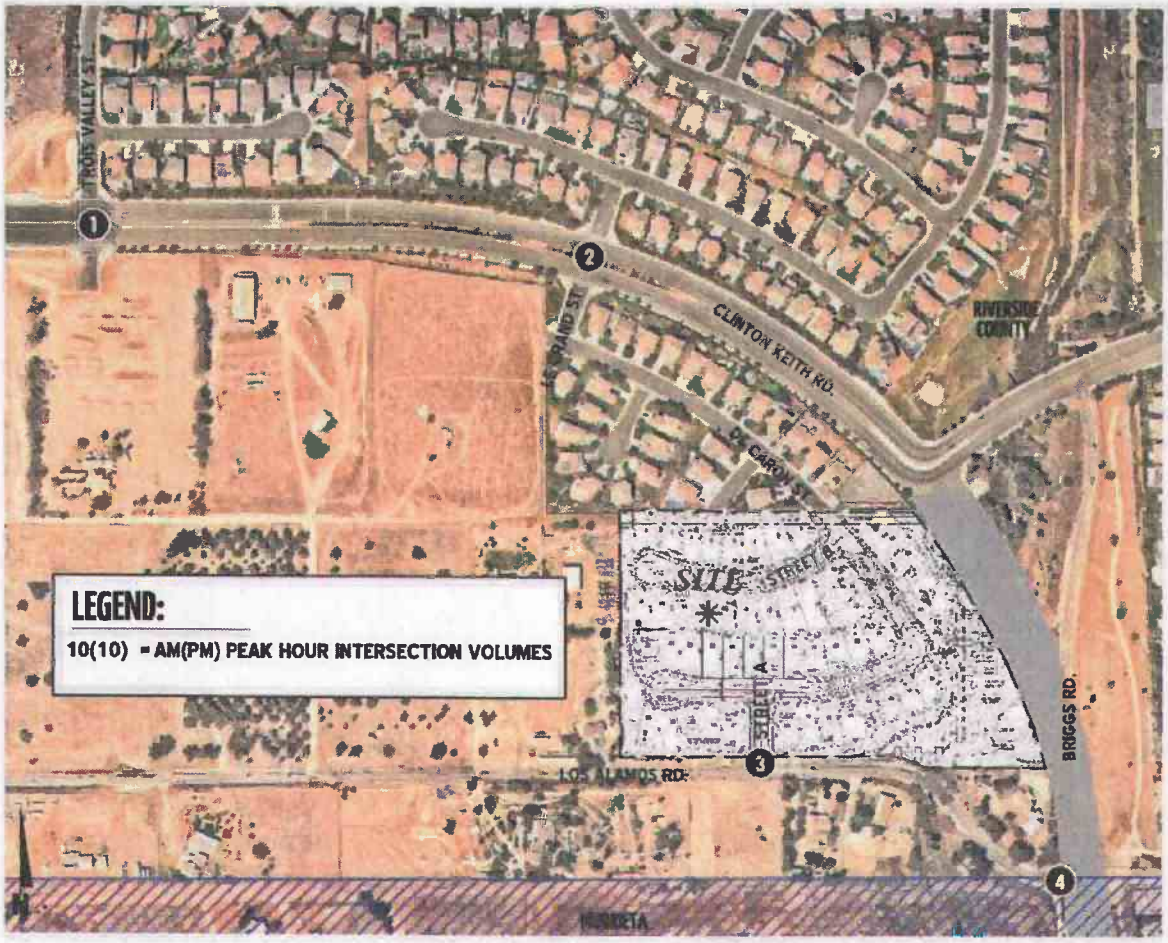
OPTION 1:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
0(0) 0(0) 0(0) → 0(0) ← 16(11) ← 4(12) 0(0) → 5(18) → 0(0) 0(0) 0(0) 0(0)	0(0) → 0(0) ← 20(23) 0(0) → 9(30) 27(18)	Intersection Does Not Exist	0(0) 0(0) 0(0) → 0(0) ← 0(0) ← 0(0) 0(0) → 0(0) → 0(0) 0(0) 0(0) 0(0)

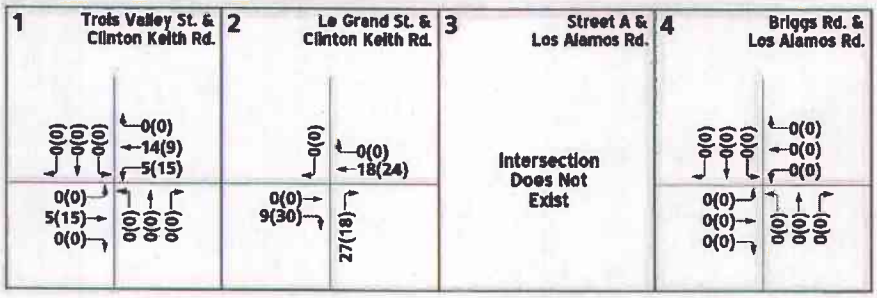
OPTION 2:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
0(0) 0(0) 0(0) → 0(0) ← 14(9) ← 4(12) 0(0) → 5(15) → 0(0) 0(0) 0(0) 0(0)	0(0) → 0(0) ← 17(21) 0(0) → 8(27) 24(16)	3(2) 0(0) → 0(0) ← 0(0) 1(3) → 0(0)	0(0) 0(0) 0(0) → 0(0) ← 0(0) ← 0(0) 0(0) → 0(0) → 0(0) 0(0) 0(0) 0(0)

EXHIBIT 4-4: PROJECT ONLY TRAFFIC VOLUMES (WITH ULTIMATE CLINTON KEITH RD. EXTENSION)



OPTION 1:



OPTION 2:

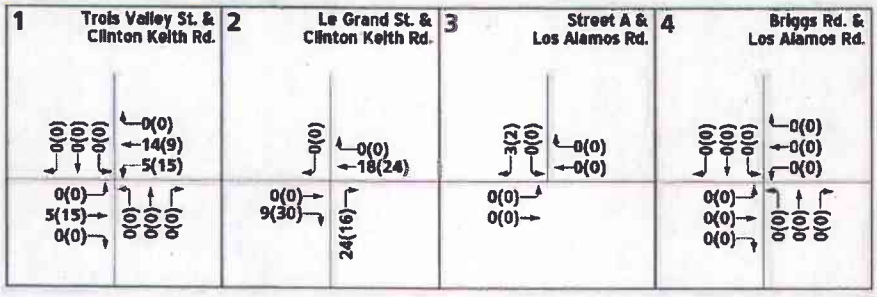


Exhibit 4-5 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown on Table 4-2. Where applicable, the traffic generated by individual cumulative projects has been manually added to the EAPC (2019) forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-2 are reflected as part of the background traffic.

4.7 TRAFFIC FORECASTS

To provide a comprehensive assessment of the deficiencies, the "buildup" analysis was performed in support of this work effort. The "buildup" method was used to approximate E+P, EAP, and EAPC traffic conditions, and is intended to identify the near-term deficiencies on both the existing and planned near-term circulation system. The EAPC traffic condition includes background traffic, traffic generated by other cumulative development projects within the study area, and traffic generated by the proposed Project.

4.8 NEAR-TERM CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the EAP (2019) and EAPC (2019) traffic conditions. An ambient growth factor of 2.0% accounts for background (area-wide) traffic increases that occur over time up to the year 2019 from the year 2018 (two percent per year growth over a 1-year period). Project traffic is added to assess EAP (2019) traffic conditions. Traffic volumes generated by cumulative development projects are then added to assess the EAPC (2019) and traffic conditions. The 2019 roadway network is similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project and the Clinton Keith Road extension between its existing western terminus and Trois Valley Street (assumed to be in place for EAP and EAPC traffic conditions only).

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- EAP (2019)
    - Existing 2018 counts
    - Ambient growth traffic (2.0%)
    - Project traffic
- EAPC (2019)
    - Existing 2018 counts
    - Ambient growth traffic (2.0%)
    - Cumulative Development Project traffic
    - Project traffic

EXHIBIT 4-5: CUMULATIVE DEVELOPMENT LOCATION MAP

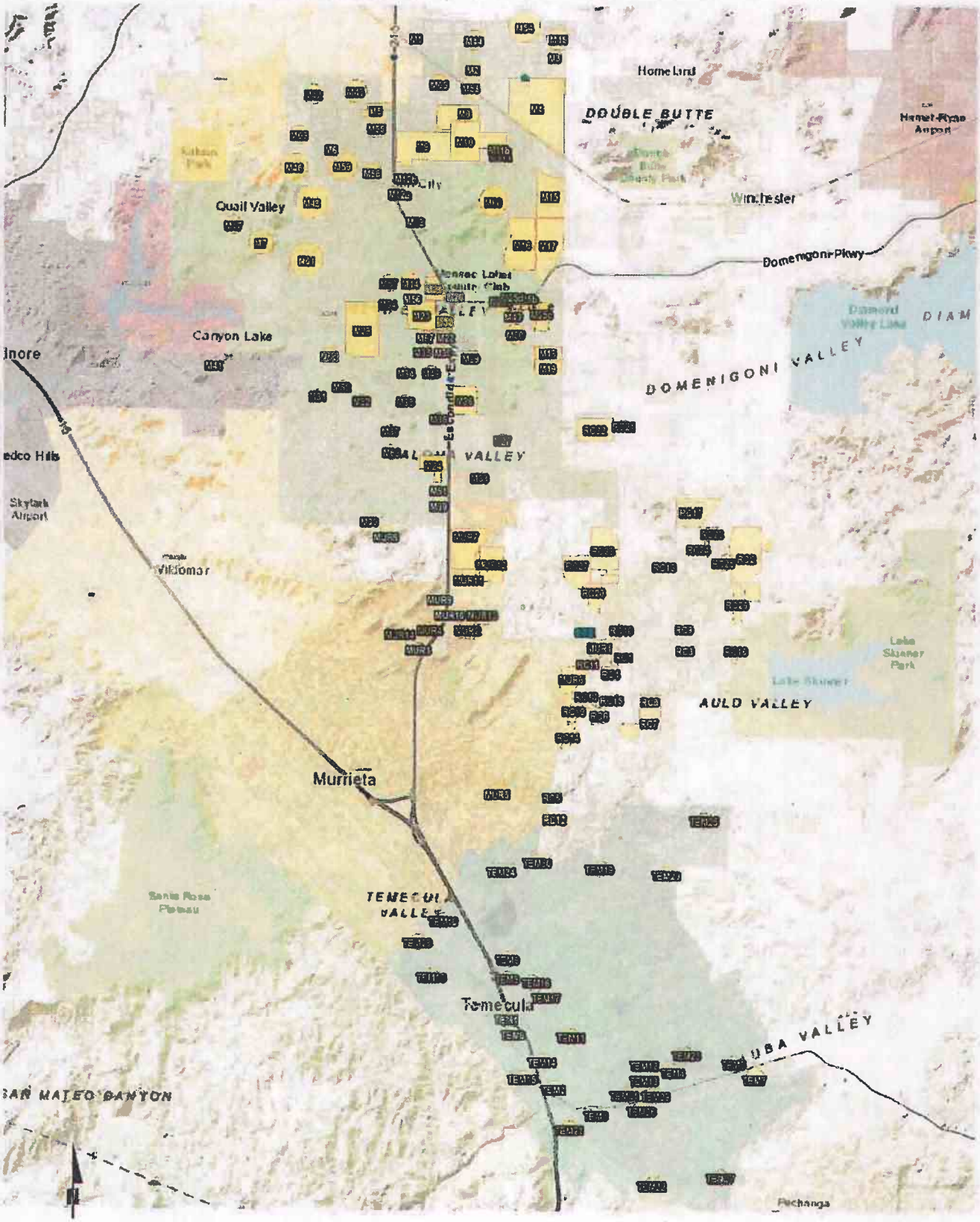


Table 4-2
Table 1 of 5

List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
COUNTY OF RIVERSIDE				
RC1	CUP 03467	Home Improvement Store	137.627	TSF
		Fast Food w/ Drive-Thru	12.042	TSF
		Bank w/ Drive-Thru	4.014	TSF
		Shopping Center	134.972	TSF
		Gas Station	12	VFP
RC2	Belle Terre (SP 382)	Single Family Housing	1282	DU
RC3	TR 33170	Condominium	186	DU
	TR 34689	Single Family Housing	19	DU
	TR 3S161	Single Family Housing	54	DU
RC4	PP 23146	Office	346.000	TSF
	TR 32323	Single Family Housing	38	DU
RC5	PP 22147	Medical Office	10.750	TSF
	PP 22352	Business Park	177.742	TSF
RC6	French Valley Airport	Business Park	694.629	TSF
		Apartments	240	DU
		Condominium	211	DU
RC7	TR 31871	Single Family Housing	258	DU
	TR 36376	Single Family Housing	446	DU
RC8	TR 34324	Condominium	127	DU
	TR 32011	Single Family Housing	33	DU
RC9	TR 33307	Single Family Housing	55	DU
RC10	CUP 03593	Gas Station	6.200	TSF
		Commercial Retail	26.500	TSF
		Storage	128.600	TSF
	TR 33751	Single Family Housing	11	DU
RC11	PP 20875	Fast Food w/ Drive-Thru	2.000	TSF
RC12	PP 20574	Medical Office	29.400	TSF
RC13	PP 24903	Church	15.273	TSF
RC14	PM 35212[2]	Hotel	200	RM
		Fitness Club	20.000	TSF
		Medical Office	77.000	TSF
		Office	160.000	TSF
		Research & Development	188.000	TSF
		High-Turnover Restaurant	14.500	TSF
		Fast Food w/ Drive-Thru	8.000	TSF
RC15	PP 19414	Office	78.410	TSF
RC16	TTM No. 35770	Single Family Housing	156	DU
RC17	Keller Crossing Specific Plan	Single Family Housing	98	DU
		Continuing Care Retirement Community	225	DU
		General Office	250.000	TSF
		Shopping Center	400.000	TSF
RC18	Fausto Office Building	Single Tenant Office Building	7.850	TSF
RC19	French Valley Walmart & Commercial/Business Center (PP 21750, PM 34669)[3]	Free-Standing Discount Store/Superstore	205.00	TSF
		Shopping Center	113.30	TSF
		Bank with Drive-Thru	5.50	TSF
		High Turnover (Sit-Down) Restaurant	6.50	TSF
		Fast Food Restaurant w/ Drive-Thru	4.00	TSF

Table 4-2
Table 2 of 5

List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
COUNTY OF RIVERSIDE				
RC20	Specific Plan 312 A-1	Single Family Housing	1,671	DU
		Parks	32.1	AC
RC21	Perris Union HSD High School	High School	2800	STU
RC22	La Ventana Ranch	Single Family Housing	535	DU
		Community Park	15.0	AC
		Passive Park	2.0	AC
RC23	TR36722	SFDR	146	DU
RC24	TR36687	SFDR	71	DU
RC25	TR33423M1	SFDR	132	DU
RC26	TR30837	SFDR	320	DU
RC27	TR30433	SFDR	508	DU
RC28	Spencer's Crossing	SFDR	753	DU
		Active Parks	5.6	AC
		Elementary School	600	STU
CITY OF MENIFEE				
M1	UPS Expansion	General Light Industrial	30.000	TSF
M2	TR 34118	Single Family Residential	169	DU
M3	TR34600	Single Family Residential	153	DU
M4	TR 31811	Single Family Residential	559	DU
	TR 31812	Senior Adult Detached Housing	742	DU
M5	TR 30182	Single Family Residential	84	DU
	TR 33419	Single Family Residential	140	DU
	TR 35143	Single Family Residential	15	DU
M6	TR 32314	Single Family Residential	33	DU
M7	TM 28859	Single Family Residential (50% Complete)	246	DU
M9	Fleming Ranch Specific Plan	Single Family Residential	1,169	DU
		Apartments	556	DU
		Active Parks	16.1	AC
		City Parks	11.5	AC
		Elementary School	1,050	STU
		Business Park	163.000	TSF
M10	TR 29835	Single Family Residential	543	DU
	TR 31098	Single Family Residential	264	DU
M11a	CUP 03549	Shopping Center	81.700	TSF
M11b	Village at Junipero	Apartments	240	DU
M12a	TR 33446	Condo/Townhomes	180	DU
M12b	Menifee North Shopping Center	Free-Standing Discount Store	200.000	TSF
		Bank w/ Drive-Thru	5.500	TSF
		Fast-food w/ Drive-Thru	6.700	TSF
		Fast-food w/o Drive-Thru	5.500	TSF
		Coffee Shop w/ Drive-Thru	2.000	TSF
		Retail	7.500	TSF
M13	PP 19469R1	Senior Apartments	221	DU
M14	American Tire Depot (CUP 2013-157)	Auto Shop	7.171	TSF
M15	TR 34180	Single Family Residential (75% Complete)	484	DU
		Elementary School (75% Complete)	950	STU
	TR 34406	Single Family Residential (100 Lots Complete)	817	DU
		Shopping Center	228.690	TSF
M16	TR 31455	Single Family Residential	60	DU
	TR 31582	Single Family Residential (25% Complete)	280	DU

Table 4-2
Table 3 of 5

List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF MENIFEE				
M17	TR 32186	Single Family Residential (75% Complete)	101	DU
	TR 32100	Single Family Residential	170	DU
	TR 32101	Single Family Residential	197	DU
	TR 32102	Single Family Residential	272	DU
M18	Nautical Cove Residential	Single Family Residential	235	DU
M19	Menifee Heights - TR32277	Single Family Residential	359	DU
		Active Parks	10.2	AC
M20	Menifee Lakes Shopping Center (PP 2009-052)	Shopping Center	120.848	TSF
		Gas Station & Market / Car Wash	12	VFP
		Hotel	71	ROOM
M21	SP 248 Newport Hub	Shopping Center (50% Occupied)	229.700	TSF
		General Office	97.580	TSF
		General Light Industrial (50% Occupied)	241.760	TSF
		Motel	100	ROOM
M22	Pechanga Commercial Site (PP 2010-123)	Shopping Center	208.160	TSF
M23	Menifee Town Center Specific Plan	Shopping Center	509.370	TSF
		Hotel	200	ROOM
		General Office	65.340	TSF
		Single Family Residential	577	DU
		Condo/Townhomes	475	DU
M24	Junction at Menifee	Shopping Center	526.800	TSF
	Menifee Shopping Center	Shopping Center	238.180	TSF
	Shops at Scott	Shopping Center (50% Complete)	82.000	TSF
		Fast-Food Restaurant w/ Drive-Thru (50% Complete)	9.000	TSF
M25a	TPM 2009-168 (PM 36720)	Retail	112.167	TSF
M25b	Newport Menifee Retail Shopping Center	Fast-food w/ Drive-Thru	7.000	TSF
		Supermarket	45.272	TSF
		Bank w/ Drive-Thru	5.000	TSF
		Pharmacy w/ Drive-Thru	14.576	TSF
		High Turnover (Sit-Down) Restaurant	7.360	TSF
		Retail	58.883	TSF
M25c	The Lakes TR 30422 (SP 247 Amendment 1)	Single Family Residential	992	DU
M25d	Arco Gas Station	Gas Station & Market	16	VFP
M26	TR 32628	Single Family Residential	364	DU
	TR 28206	Single Family Residential (50% Complete)	148	DU
M27	Cantalena Specific Plan	Single Family Residential	353	DU
		Apartments	851	DU
M28*	TR 28786	Single Family Residential	72	DU
	TR 28787	Single Family Residential	67	DU
	TR 28788	Single Family Residential	119	DU
	TR 28789	Single Family Residential	131	DU
	TR 28790	Single Family Residential	110	DU
	TR 28791	Single Family Residential	80	DU
	TR 28792	Single Family Residential	85	DU
	TR 28793	Single Family Residential	77	DU
	TR 28794	Single Family Residential	65	DU
	TR 30812	Single Family Residential	29	DU
M29	Del Oro (Holland Road Residential)	Single Family Residential	68	DU
		Apartments	238	DU
		Senior Housing	100	DU
M30	TR2015-053 / TR 36684	Single Family Residential	10	DU

Table 4-2
Table 4 of 5

List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
		CITY OF MENIFEE		
M31	TR 29636	Single Family Residential (75% Complete)	75	DU
M32	TR 30142	Single Family Residential (113 Lots Complete)	537	DU
M33	Antelope Square	Shopping Center	14.000	TSF
M34	TR 30465	Single Family Residential	8	DU
M35	TR 33883	Single Family Residential	51	DU
M36	PP 18014	Mini-warehouse	191.260	TSF
M37	TR 31194	Single Family Residential	483	DU
	TR 33511	Single Family Residential	71	DU
M38	TR 36303	Single Family Residential	97	DU
M39	Commerce Point (PP 21452 & PP 22280)	General Light Industrial	872.350	TSF
	PP 18570	Warehousing	109.940	TSF
	PP 20021	Warehousing	4.500	TSF
M40	Rite Aid	Pharmacy w/ Drive-Thru	17.185	TSF
		Fast Food w/ Drive-Thru	3.285	TSF
M41	Audie Murphy Ranch SP	Single Family Residential (500 Lots Complete)	2,355	DU
	Canyon Cove	Single Family Residential	198	DU
M42	TTM 34037	Single Family Residential	128	DU
M43	TTM 31856	Single Family Residential	79	DU
M44	TTM 35876	Single Family Residential	17	DU
M45	TTM 33738	Single Family Residential	52	DU
M46	Cimarron Ridge (TTM 36657 / PM 36658)	Single Family Residential	756	DU
M47	Quail Hill (TTM 32794)	Single Family Residential	152	DU
M48	Stonegate (TM31456)	Single Family Residential	177	DU
M49	PA 2014-218 / TR 2015-108	Single Family Residential	80	DU
M50	Stater Bros. (2014-091 / PM36728)	Commercial Retail	121.277	TSF
M51	All Star Storage (PP 2015-156)	Storage	242.150	TSF
M52	His Light (PUP 2009-077)	Church	47.030	TSF
M53	Motte Town Center	Industrial	97.564	TSF
M54	TR31536	Single Family Residential	44	DU
M55	McLaughlin Village (PAR 2015-133)	Townhomes	126	DU
M56	PP 2014-003	Commercial Retail	100.024	TSF
M57	CUP 2015-157	Self-Service Carwash w/ Drive Thru	11.783	TSF
M58	Menifee Village	Commercial Retail	231.600	TSF
M59	Thorton Terraces (TTM 2014-225)	Townhomes	19	DU
M60	Chapparal Apartments/Condos (PP 2014-040)	Apartment/Condos	5,572	DU
M61	Oak Tree Industries (TTM 29015)	Single Family Residential	18	DU
M62	Alaska - Meritage Homes	Single Family Residential	86	DU
M63	TR 2014-073	Single Family Residential	30	DU
M64	Shops at Newport	Shopping Center	3.490	TSF
		Restaurant	6.467	TSF
M65	Trumble Office and Warehouse (PP 2011-003, EOT 205-208)	Industrial	61.730	TSF
M66	Valley Blvd. Tract (TR 2015-211)	SFDR	75	DU
M67	Regent - South 35 (TR 2015-239)	SFDR	149	DU
M68	2015-246 PAR	Fast Food	2.400	TSF
M69	Impact Church Expansion (2015-249 PP)	Church Expansion		
		CITY OF MURRIETA		
MUR1	Murrieta Marketplace (DP-2011-3129)	Commercial Retail	548.055	TSF
MUR2	Pacific Landing (DP2008-2668)	Apartments	400	DU
MUR3	CVS	Pharmacy w/ Drive-Thru	14.576	TSF
MUR4	Sierra Lane	Commercial Center	28.709	TSF
MUR5	Murrieta 196 (DP2013-3335)	Apartments	196	DU
MUR6	Adobe Springs (Tentative Parcel Map No. 36779)	SFDR	287	DU
MUR7	Murrieta Fields II (TR32718)	SFDR	10	DU
MUR8	Murrieta Hills (SPO-012-3164) (Phase 1)	SFDR	300	DU
MUR9	The Orchard (DPO-03-161)	Shopping Center	215.850	TSF
MUR10	Vineyard Shopping Center (DPO-2012-3260)	Shopping Center	78.489	TSF
		Hotel	91.000	RM
MUR11	Phase 1 Kaiser (DP-2014-348)	Medical Office	80.000	TSF
	Physician Hospital (Phase 2)	Hospital & Medical Office Building	124	Beds
MUR12	Golden CRies Tract 28532 (SCO-004-066)	Single Family Residential	486.000	DU
MUR13	Health South Rehab Hospital (DP-2015-571)	Hospital	50	Beds
MUR14	Mitchell Crossing (DP-2014-864) (Mella Homes)	Multifamily Residential	331	DU
		Specialty Retail	50.000	TSF

Table 4-2
Table 5 of 5

List of Cumulative Developments

#	Project Name	Land Use[1]	Quantity	Units[2]
CITY OF TEMECULA				
TEM1	PA14-0058	Hotel	54	RMS
TEM2	PA14-2707	Commercial	13.248	TSF
TEM3	PA14-0155	Restaurant	11.722	TSF
TEM4	PA14-2696	Nursing Center	67.146	TSF
TEM5	TTM No.36483 (PA14-0087)	SFDR	175	DU
TEM6	PA14-0188	Commercial Expansion	6.657	TSF
TEM7	PA14-2796	Commercial	10.000	TSF
TEM8	PA14-0175	Tire Store	7.450	TSF
TEM9	PA14-2899	Auto Dealership	5.809	TSF
TEM10	LR10-0014	Commercial	2,633.424	TSF
		SFDR	4,375	DU
TEM11	PA10-0213	SFDR	7	DU
TEM12	APN 959-050-011 (PA11-0261, PA14-0107)	Offices	37.928	TSF
TEM13	PA13-0166	Medical Center	12.545	TSF
TEM14	Rancho Baptist (PA14-0009)	Church Expansion	2.074	TSF
TEM15	APNs: 922-110-013, 922-110-014(PA13-0156, PA13-0155, PA14-0058)	Condo/Townhomes	140	DU
TEM16	River Springs (PA14-0023, PA14-0028)	School Expansion	27.500	TSF
TEM17	PA14-0024	Senior Living	84	DU
TEM18	PA14-0008	Light Industrial	10.917	TSF
TEM19	TTM No. 36479 (PA12-0133)	SFDR	83	DU
TEM20	TTM No. 36295 (PA10-0145)	SFDR	45	DU
TEM21	Temecula Creek SP (PA08-0118) Related Cases PA08-0119, PA08-0120, PA08-0121 (APNs 922-220-002; 003; 008; 031; and 922-230-002; 003; 004, 007; 008)	Golf Course	18	HOLES
		Hotel	227	RMS
		Spa/Banquet Facility	153.837	TSF
		SFDR/Condos/Townhomes	409.000	DU
TEM22	TEIR Pechanga Resort Expansion	Hotel	550	RMS
		Events Center	126.000	TSF
		Spa/Fitness Center	23.000	TSF
		Resort Pool/Stage	12.750	TSF
		Events Lawn	25.000	TSF
TEM23	TTM No. 36212 (PA11-0178)	Condo/Townhomes	186	DU
TEM24	PA11-0082	Commercial	11.713	TSF
TEM25	Rompaugh Ranch (PA14-0051, PA14-0219)	SFDR	1,500	DU
TEM26	PA12-0178	Offices	29.211	TSF
TEM27	PA13-0207, PA13-0206	SFDR	76	DU
TEM28	PA11-0305	Waterpark	17.0	AC
TEM29	PA12-0194	Medical Office	11.982	TSF
TEM30	PA13-0290	Auto Parts Store	7.352	TSF
TEM31	UHS Temecula Regional Hospital (PA10-0194, PA07-0200)	Hospital	320	Beds

1 SFDR = Single Family Detached Residential

2 AC = Acres; DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions; STU = Students

3 Source: Rancon Medical Education Center (Plot Plan 21603), Albert A. Webb Associates, April 2012.

4 Source: Cornerstone Pre-School Expansion TIA (Revised), Urban Crossroads, Inc., September 2012.

5

6 Source: Porto Romano SP TIA (Revised), Urban Crossroads, Inc., May 2007.

7 Source: Lake Elsinore TAG Property TIA (Revised), Urban Crossroads, Inc., August 2008.

8 Source: The Diamond Specific Plan TIA, Urban Crossroads, Inc., April 2009.

5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations and traffic signal warrant analyses. The E+P scenario has been provided for informational purposes.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions consist 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 E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project traffic. Exhibit 5-1 shows the E+P weekday AM and weekday PM peak hour intersection turning movement volumes for both access alternatives.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results indicate that the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, in addition to those previously identified under Existing (2018) traffic conditions. Similar to Existing traffic conditions, the impact at Briggs Road and Los Alamos Road is anticipated to be temporary and would operate at acceptable LOS with the completion of the Phase 1/Phase 2 improvements for Clinton Keith Road between Whitewood Road and Trois Valley Street.

Exhibit 5-2 summarizes the weekday AM and PM peak hour study area intersection LOS under E+P traffic conditions for Option 1 and on Exhibit 5-3 for Option 2, consistent with the summary provided in Table 5-1. The intersection operations analysis worksheets are included in Appendix 5.1 (Option 1) and Appendix 5.2 (Option 2) of this TIA. Measures to address deficiencies for E+P traffic conditions are discussed in Section 5.5 *Deficiencies and Recommended Improvements*.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

For E+P conditions, there are no study area intersections anticipated to warrant a traffic signal (see Appendix 5.3).

EXHIBIT 5-1: E+P TRAFFIC VOLUMES

OPTION 1:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
43(25) 1(0) 6(8) ← 1(8) 876(567) 10(26)	18(16) ← 11(16) 869(585)	Intersection Does Not Exist	124(80) 4(3) 1(2) ← 1(1) 0(0) 0(1)
26(29) 722(894) 3(1) → 0(0) 0(0) 0(1)	715(871) 17(44) → 40(25)		88(155) 0(0) 10(6) → 7(21) 8(25) 0(0)

OPTION 2:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
43(25) 1(0) 6(8) ← 1(8) 874(565) 10(26)	18(16) ← 11(16) 866(583)	3(2) 0(0) ← 0(0) 131(101)	124(80) 4(3) 1(2) ← 1(1) 0(0) 0(1)
26(29) 722(891) 3(1) → 0(0) 0(0) 0(1)	715(871) 16(41) → 37(23)	1(3) 98(161) →	88(155) 0(0) 10(6) → 7(21) 8(25) 0(0)

EXHIBIT 5-2: E+P (OPTION 1) SUMMARY OF LOS

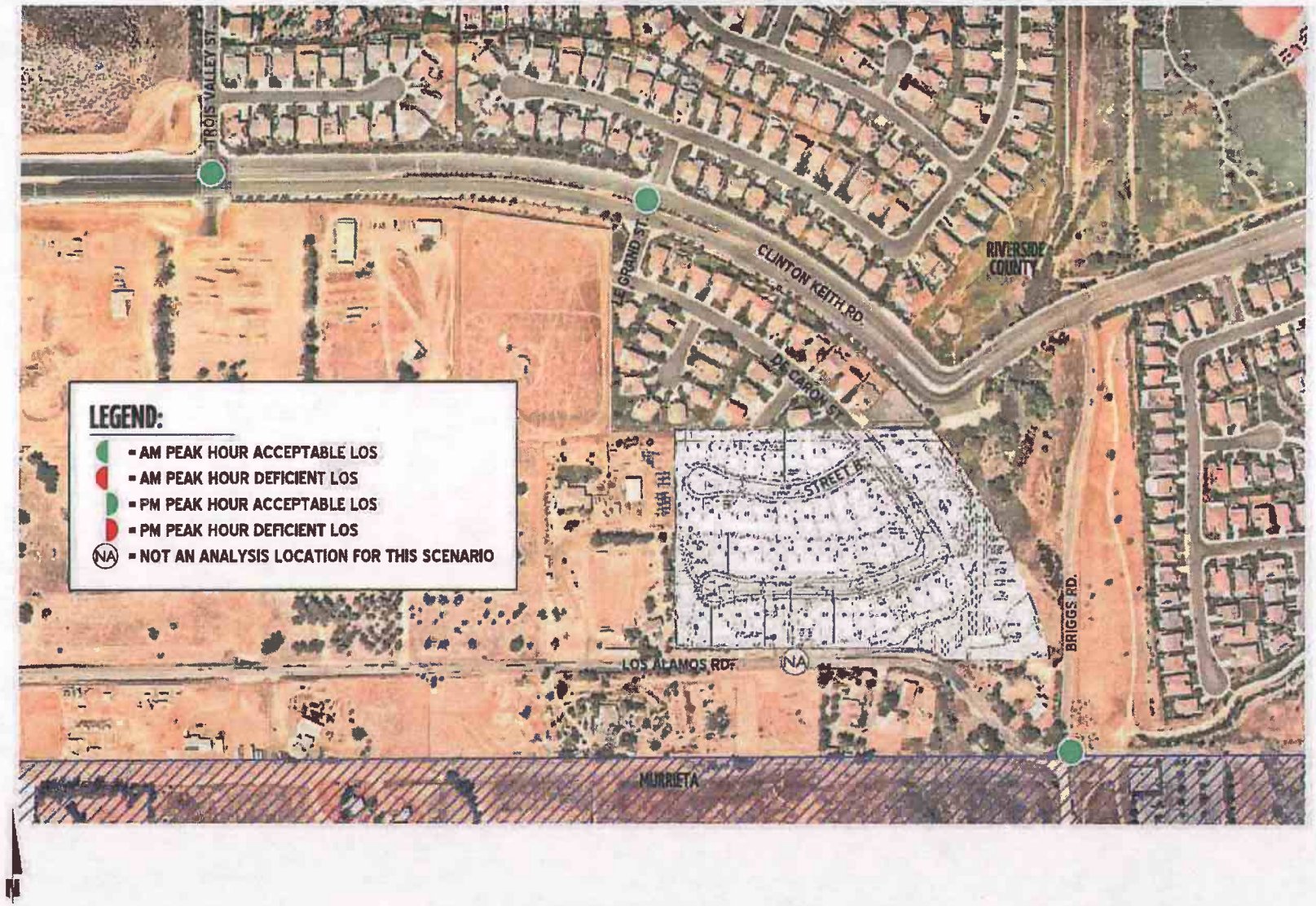


EXHIBIT 5-3: E+P (OPTION 2) SUMMARY OF LOS

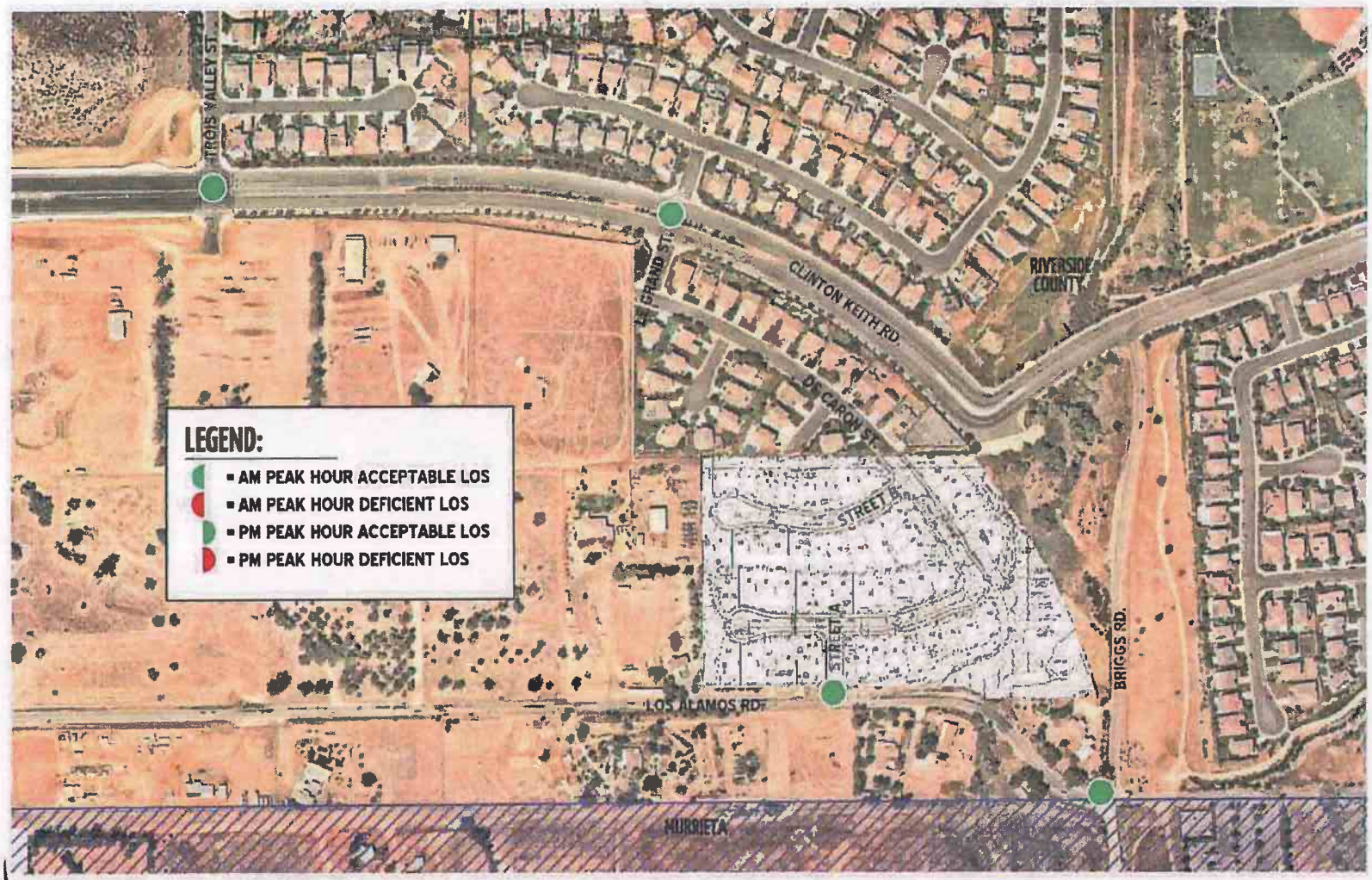


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Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2018)				E+P - Option 1				E+P - Option 2			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Trois Valley St. & Clinton Keith Rd.	TS	9.1	8.9	A	A	9.1	9.0	A	A	9.1	9.0	A	A
2	Le Grand St. & Clinton Keith Rd.	CSS	13.6	12.0	B	B	13.8	12.3	B	B	13.8	12.3	B	B
3	Street A. & Los Alamos Rd.	CSS	Future Intersection				Not Applicable				9.0	8.8	A	A
4	Briggs Rd. & Los Alamos Rd.	AWS	7.5	8.0	A	A	7.5	8.0	A	A	7.5	8.0	A	A

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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) are shown.

[2] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

5.5 DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

The study area intersections are anticipated to operate at acceptable LOS for E+P traffic conditions (for both access alternatives). As such, improvements have not been recommended.

6 EAP (2019) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAP traffic forecasts, and the resulting intersection operations and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAP conditions are consistent with 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 EAP conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- An interim U-turn lane will be provided between Le Grand Street and Leon Road along Clinton Keith Road to allow for westbound access on Clinton Keith Road.

6.2 EAP (2019) TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 2.0% and the addition of Project traffic. The weekday AM and PM peak hour volumes which can be expected for EAP (2019) traffic conditions are shown on Exhibit 6-1 for both access alternatives.

6.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAP traffic conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. The intersection analysis results are summarized in Table 6-1, which indicates that the study area intersection is anticipated to operate at an acceptable LOS under EAP (2019) traffic conditions.

Exhibit 6-2 summarizes the weekday AM and PM peak hour study area intersection LOS under EAP (2019) traffic conditions for Option 1 and on Exhibit 6-3 for Option 2, consistent with the summary provided in Table 6-1. The intersection operations analysis worksheets for EAP (2019) conditions are included in Appendix 6.1 (Option 1) and Appendix 6.2 (Option 2) of this TIA.

EXHIBIT 6-1: EAP (2019) TRAFFIC VOLUMES

OPTION 1:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
44(26) 1(0) 6(8) ← 1(8) 893(578) 10(26)	18(16) ← 11(16) 886(596)	Intersection Does Not Exist	126(82) 4(3) 1(2) ← 1(1) 0(0) 0(1)
27(30) 736(912) 3(1) → 0(0) 0(0) 0(1)	729(888) 17(44) → 40(25)		90(158) 0(0) 10(6) → 7(21) 8(26) 0(0)

OPTION 2:

1 Trois Valley St. & Clinton Keith Rd.	2 Le Grand St. & Clinton Keith Rd.	3 Street A & Los Alamos Rd.	4 Briggs Rd. & Los Alamos Rd.
44(26) 1(0) 6(8) ← 1(8) 891(576) 10(26)	18(16) ← 11(16) 883(594)	3(2) 0(0) ← 0(0) 134(103)	126(82) 4(3) 1(2) ← 1(1) 0(0) 0(1)
27(30) 736(909) 3(1) → 0(0) 0(0) 0(1)	729(888) 15(41) → 37(23)	1(3) 100(164) →	90(158) 0(0) 10(6) → 7(21) 8(26) 0(0)

EXHIBIT 6-2: EAP (2019)(OPTION 1) SUMMARY OF LOS

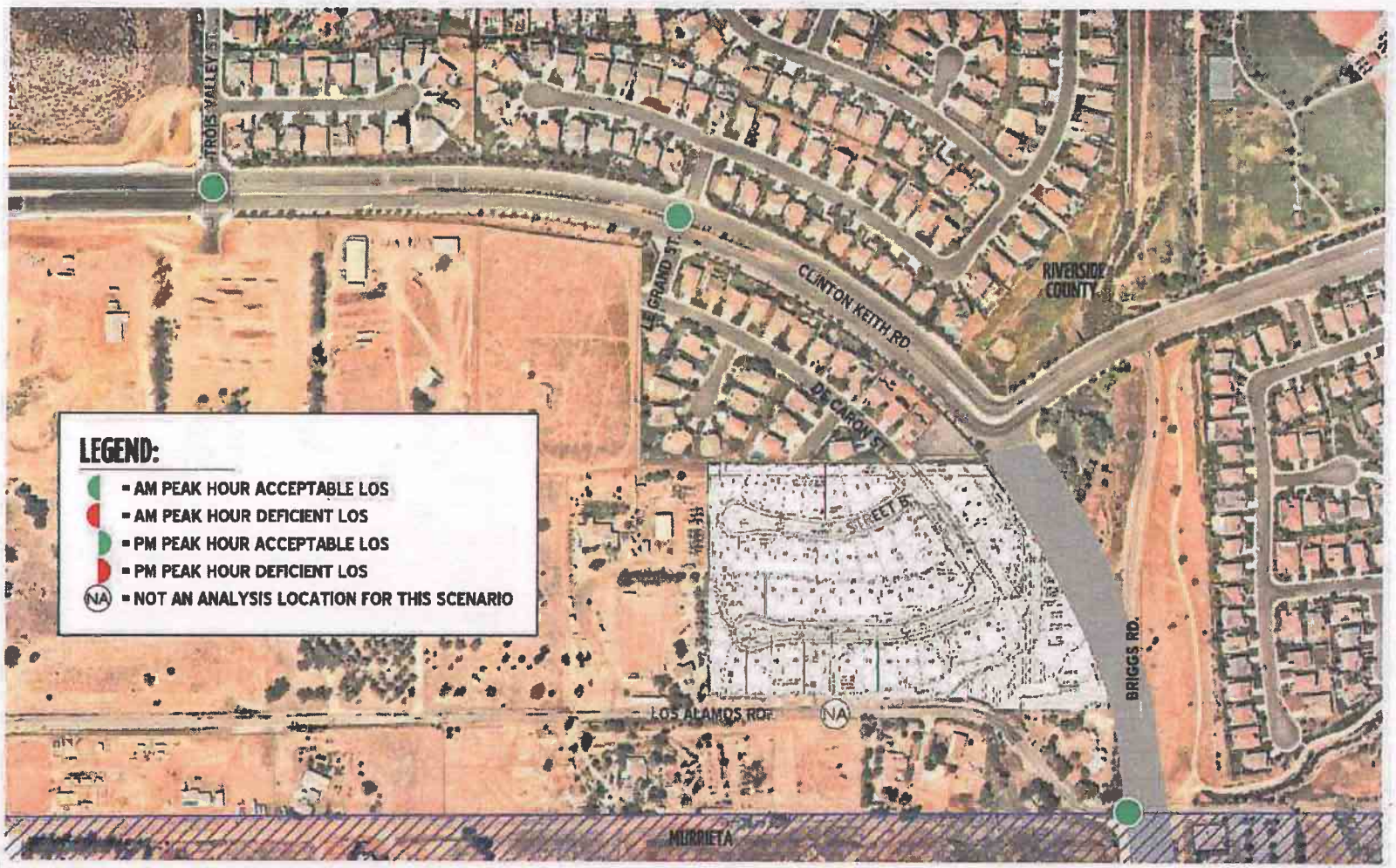

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EXHIBIT 6-3: EAP (2019)(OPTION 2) SUMMARY OF LOS

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URBAN CROSSROADS

Table 6-1

Intersection Analysis for EAP (2019) Conditions

#	Intersection	Traffic Control[2]	Existing (2018)				EAP (2019) - Option 1				EAP (2019) - Option 2			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Trois Valley St. & Clinton Keith Rd.[3]	TS	9.1	8.9	A	A	9.1	9.0	A	A	9.1	9.0	A	A
2	Le Grand St. & Clinton Keith Rd.	CSS	13.6	12.0	B	B	13.9	12.4	B	B	13.9	12.4	B	B
3	Street A. & Los Alamos Rd.	CSS	Future Intersection				Not Applicable				9.0	8.8	A	A
4	Briggs Rd. & Los Alamos Rd.	AWS	7.5	8.0	A	A	7.5	8.0	A	A	7.5	8.0	A	A

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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) are shown.

[2] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

6.4 Traffic Signal Warrants Analysis

There are no study area intersections anticipated to warrant a traffic signal for EAP (2019) traffic conditions (see Appendix 6.3).

6.5 EAP Deficiencies and Recommended Improvements

The study area intersections are anticipated to operate at an acceptable LOS for EAP (2019) traffic conditions. As such, improvements have not been recommended.

7 EAPC (2019) TRAFFIC CONDITIONS

This section discusses the methods used to develop EAPC traffic forecasts, and the resulting intersection operations and traffic signal warrant analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAPC conditions are consistent with the following improvements discussed below. The improvements listed below have been confirmed with County of Riverside staff or the Project Applicant.

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements at 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 EAPC conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).
- The ultimate Clinton Keith Road extension between its existing terminus at Whitewood Road to Winchester Road (SR-79) is assumed to be in place starting with EAPC (2019) traffic conditions.
- Signalization of the intersection of Leon Road and Clinton Keith Road is anticipated to accommodate eastbound U-turn traffic for vehicles ultimately heading westbound on Clinton Keith Road.

7.2 EAPC (2019) TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 2.0% plus traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project traffic. The weekday AM and PM peak hour volumes which can be expected for EAPC (2019) traffic conditions are shown on Exhibit 7-1 for both access alternatives.

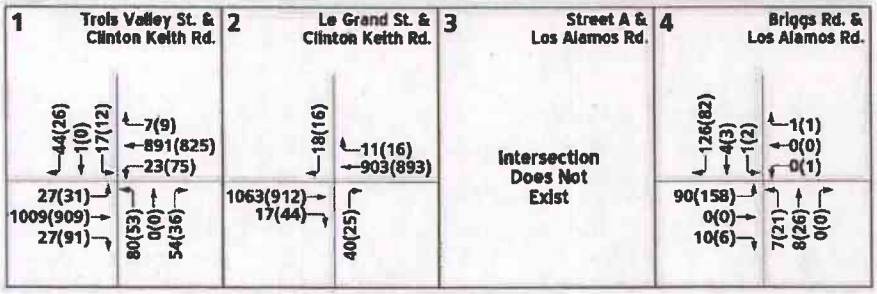
7.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC traffic conditions with roadway and intersection geometrics consistent with Section 7.1 *Roadway Improvements*. The intersection analysis results are summarized in Table 7-1, which indicates that the study area intersections are anticipated to operate at an acceptable LOS under EAPC (2019) traffic conditions. EAPC (2019) traffic conditions also assumes the completion of Clinton Keith Road between Leon Road and Winchester Road (SR-79).

Exhibit 7-2 summarizes the weekday AM and PM peak hour study area intersection LOS under EAPC (2019) traffic conditions for Option 1 and on Exhibit 7-3 for Option 2, consistent with the summary provided in Table 7-1. The intersection operations analysis worksheets for EAPC (2019) conditions are included in Appendix 7.1 (Option 1) and Appendix 7.2 (Option 2) of this TIA.

EXHIBIT 7-1: EAPC (2019) TRAFFIC VOLUMES

OPTION 1:



OPTION 2:

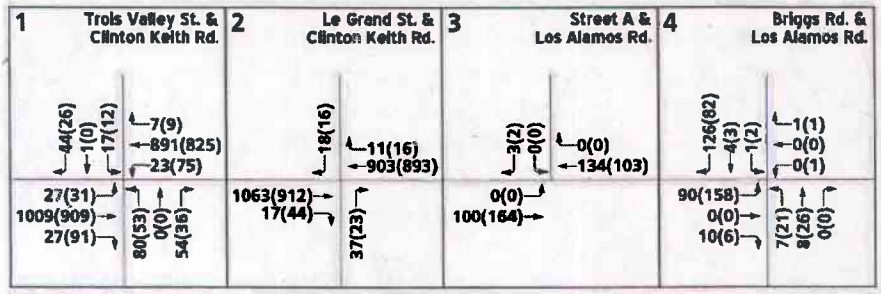


EXHIBIT 7-2: EAPC (2019) (OPTION 1) SUMMARY OF LOS

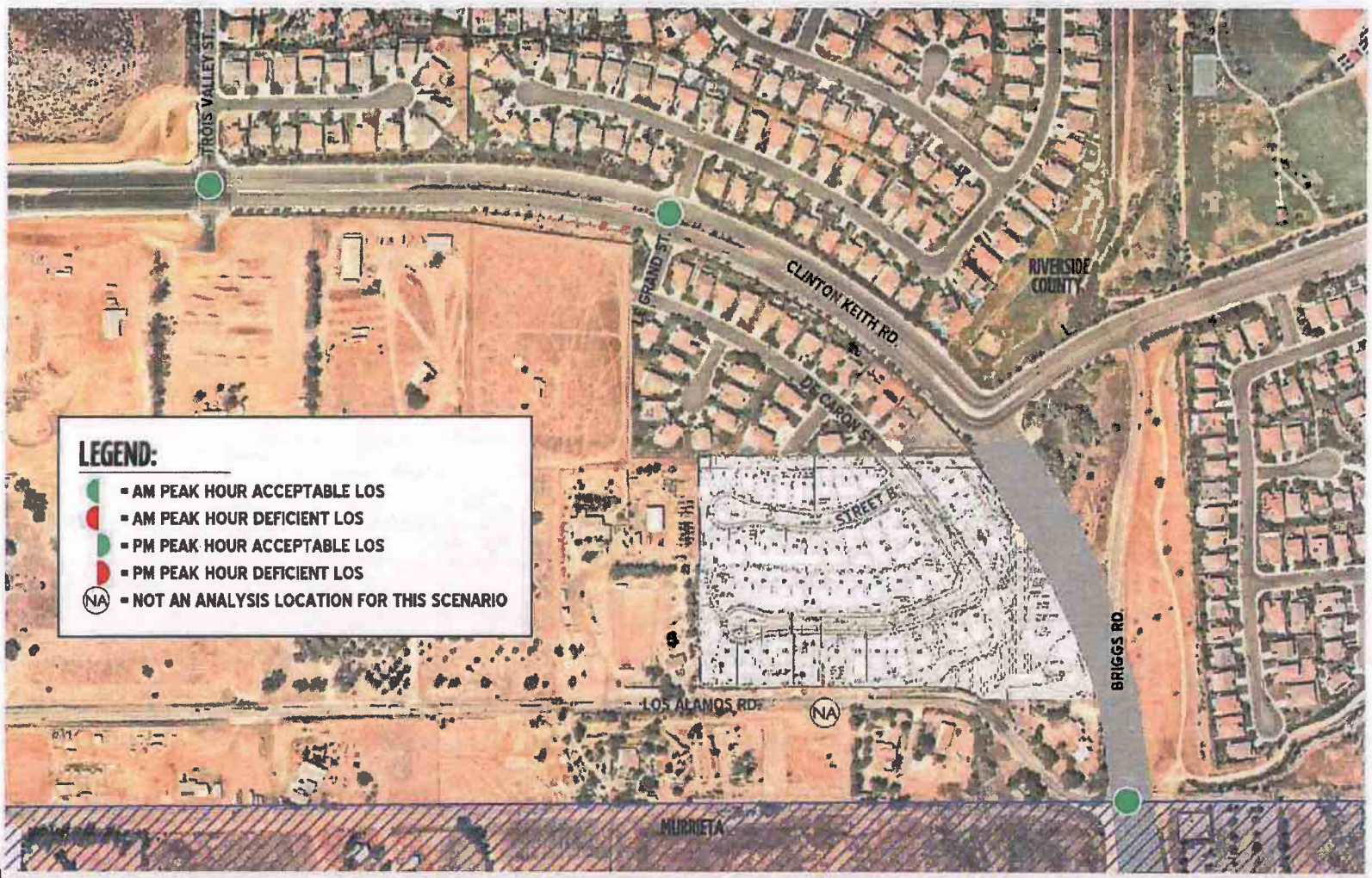


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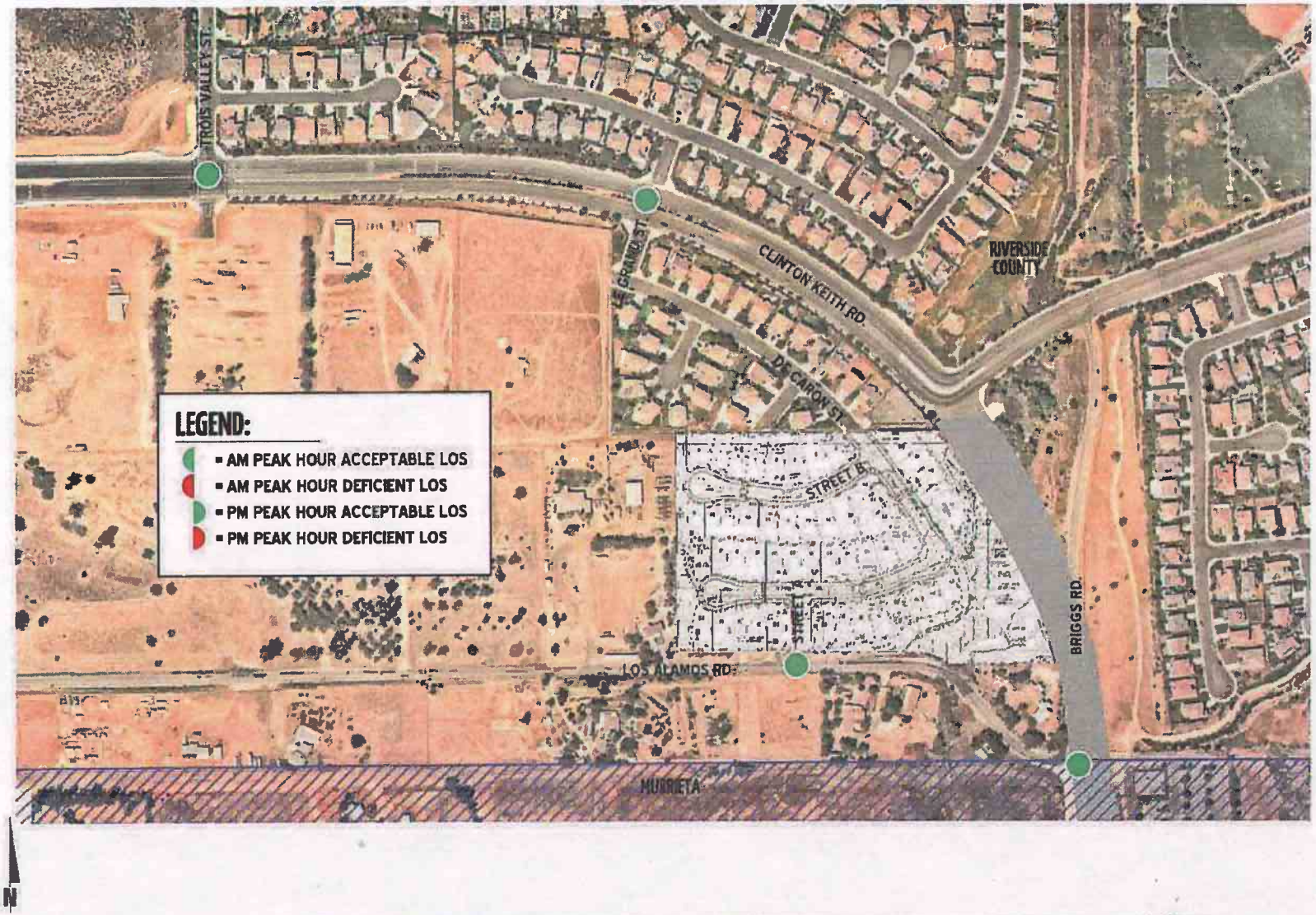
EXHIBIT 7-3: EAPC (2019) (OPTION 2) SUMMARY OF LOS



URBAN CROSSROADS

Table 7-1

Intersection Analysis for EAPC (2019) Conditions

#	Intersection	Traffic Control[2]	EAPC (2019) - Option 1				EAPC (2019) - Option 2			
			Delay [1] (secs.)		Level of Service		Delay [1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Trois Valley St. & Clinton Keith Rd.	TS	11.3	11.8	B	B	11.3	11.8	B	B
2	Le Grand St. & Clinton Keith Rd.	CSS	14.6	13.5	B	B	14.5	13.5	B	B
3	Street A. & Los Alamos Rd.	CSS	Not Applicable				9.0	8.8	A	A
4	Briggs Rd. & Los Alamos Rd.	AWS	7.5	8.0	A	A	7.5	8.0	A	A

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[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) are shown.

[2] TS = Traffic Signal; CSS = Cross-street Stop; AWS = All-Way Stop; CSS = Improvement

7.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

For EAPC (2019) traffic conditions, there are no study area intersections anticipated to warrant a traffic signal (see Appendix 7.3).

7.5 EAPC DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

The study area intersections are anticipated to operate at an acceptable LOS for EAPC (2019) traffic conditions. As such, improvements have not been recommended.

8 REFERENCES

1. **Riverside County Transportation Department.** *Traffic Impact Analysis Preparation Guide.* County of Riverside : s.n., Updated April 2008.
2. **Institute of Transportation Engineers.** *Trip Generation.* 10th Edition. 2017.
3. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2011 Program Update.* Fall 2011.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. Washington, D.C. : National Academy of Sciences, 2016. 978-0-309-16077-3.
5. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.
6. **Federal Highway Administration.** California Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2017.
7. **Southern California Association of Governments.** *2016 Regional Transportation Plan.* April 2016.

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RIVERSIDE COUNTY
PLANNING DEPARTMENT

Charissa Leach P.E.
Assistant TLMA Director

Memorandum

3.1

DATE: April 2, 2019

TO: Riverside County Planning Commission

FROM: Dionne Harris, Project Planner

RE: **April 3, 2019 Planning Commission Agenda Item 3.1 – Change of Zone No. 7937 and Tentative Tract Map No. 37294.**

The following public comments were submitted to the County of Riverside regarding the above-referenced project and the below condition of approval is being recommended to be included for consideration by the Planning Commission for this project.

Condition 50 – Transportation - Right-of-Way for Clinton Keith Road Extension:

The County is actively working on the Clinton Keith Road Extension Project. The necessary full-width right-of-way is 148-feet in the area adjacent to the tentative map. In coordination with the County's road project, the applicant shall dedicate the gaps and gores for public road purposes to achieve the full-width right-of-way needed. Additionally, any slope easements and temporary construction easements adjacent to the dedicated gaps and gores shall be provided or as approved by the Director of Transportation.

NOTE: Portions of the property described in Exhibit "A" and Exhibit "B" in the final judgement recorded as Instrument No. 2018-0485969 may be needed to satisfy the condition above.

- Letter dated March 13, 2019 titled "EA 43021 and related documents in the file concerning water wells, groundwater and hydrology"
- Letter dated March 14, 2019 titled "EA 43201"
- Letter dated March 17, 2019 titled "Comments on EA 43201 re Cumulative Impacts"
- Letter dated March 31, 2019 titled "EA 43201 Cumulative Impacts Reply to Response to Comments, prepared by ProActive Engineering"
- Letter dated March 31, 2019 titled "EA 43201 re Hydrology Reply to Response to Comments, prepared by ProActive Engineering"
- Letter dated March 31, 2019 titled "EA 43201 re MSHCP Consistency Reply to Response to Comments, prepared by Hernandez Environmental Services"

None of the information in the letters or responses constitute the type of significant new information that requires recirculation of EA 43201 for further public comment under CEQA Guidelines Section 15073.5 Recirculation of a Negative Declaration Prior to Adoption. None of this new material indicates that the

project will result in a significant new environmental impact not previously disclosed in EA 43201. Additionally, none of this material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15073.5

The public comments and responses to comments are included in the public record and are available to the lead-agency decision-makers for their review and consideration prior to making their decision pursuant to CEQA Guidelines Section 15074(b) Consideration and Adoption of a Negative Declaration or Mitigated Negative Declaration. No changes are required to EA 43201 as a result of the comments; however, the information provided in the comment letters and the responses to the comments have been incorporated into the public record.

March 31, 2019

Ms. Dionne Harris, M. Arch
Urban Regional Planner II
County of Riverside Department of Planning
4080 Lemon Street, 12th Floor
Riverside, CA 92502

RE: EA 43201 re Hydrology
Reply to Response to Comments, prepared by ProActive Engineering

Dear Ms. Harris:

I have reviewed the letter prepared by ProActive Engineering (3/28/19), in response to my comment letter (3/13/19) concerning water wells, groundwater and hydrology. Having considered Applicant's response and project information you have previously provided, I do not believe that a Mitigated Negative Declaration can be justified for this project, on multiple grounds.

Below are my original comments (in italic), ProActive's responses (in bold), and my reply to each of them (in boxes).

1.Applicant has failed to follow simple guidance on requirements for Project approvals from the Riverside County Planning Department, communicated on July 26, 2017. Most glaring are listed CONDITIONS OF APPROVAL that Applicant has failed to comply with:

Response: This comment is not a CEQA-related matter. The Applicant is not required to meet Conditions of Approval prior to approval of the Project. Conditions of Approval must be met prior to issuance of construction permits or certain construction milestones.

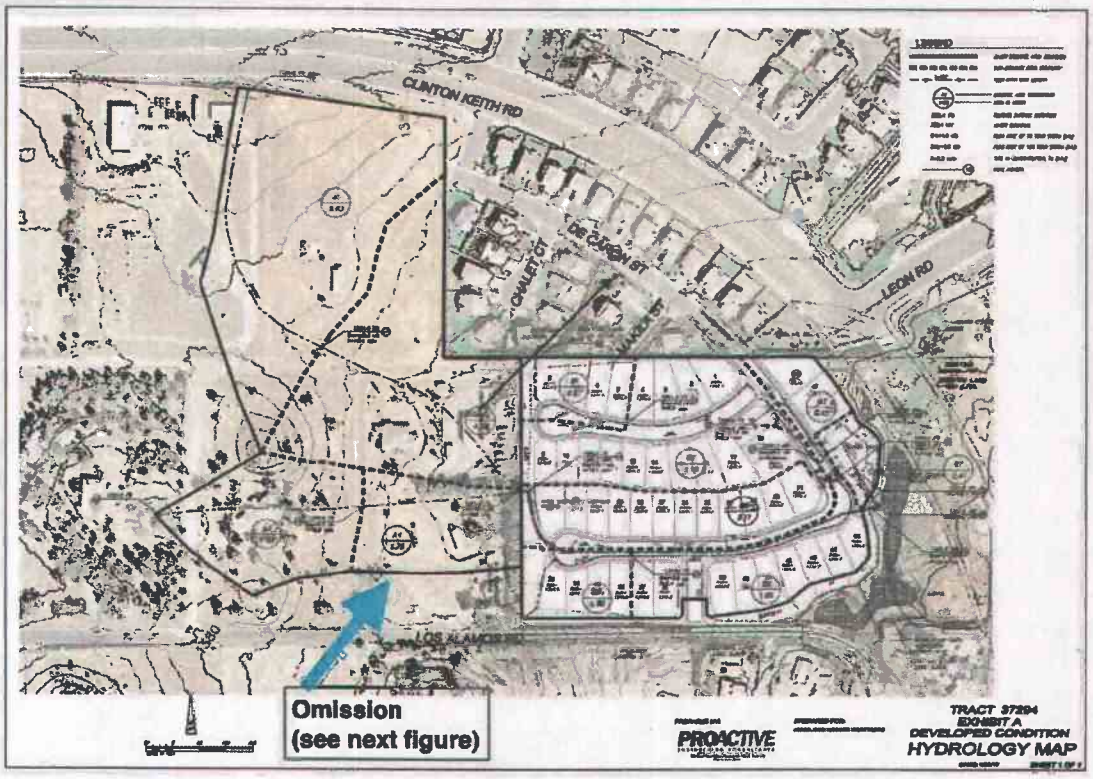
Reply: The comment stands. County directed Applicants, through Conditions of Approval (July 26, 2017, referenced above), to gather information required for CEQA review. CEQA requires accurate and complete description of the project site and its environs, so that the County has information sufficient to make valid decisions on potential impacts and appropriate mitigations. The issue is that Conditions of Approval cannot compensate for errors and omissions in EA 43201 regarding the existing conditions, and therefore do not allow the County to certify a Mitigated Negative Declaration for this project.

1A: The FLOOD comments on Page 7 describe how the "stormwater runoff from"...."approximately 20 acres" flows into the project from the west. Yet EA 43021 cites a Drainage Report that fails to correctly identify the boundaries of this western watershed –instead analyzing drainage from only a portion of the true western watershed, and OMITTING drainage from parts of 4 multi-acre parcels south of Los Alamos Road (southwest of the project site) that contribute to flooding on properties north of Los Alamos Road. This material error is grounds for rejecting the Mitigated Negative Declaration.

Response: The drainage report and topography in the area reflect that commenters statement is incorrect. As stated in the drainage report, the Project site accepts these existing flows from the west and conveys them through the property. Based on the existing topography, the property fronting the Project site south of Los Alamos Road slopes in a southeast direction routing runoff away from the existing culvert north of Los Alamos Road. The project does not impact these flows in any drainage flow direction. No change to the Environmental Assessment/ Initial Study/Mitigated Negative Declaration (CEQA document) is required.

Reply: The comment stands.

Watershed analysis presented by County Staff to Planning Commission in support of Mitigated Negative Declaration is defective (omits existing sub-watershed)



Reply (continued):

Sub-watershed south of Los Alamos Road is missing from the Hydrology Map

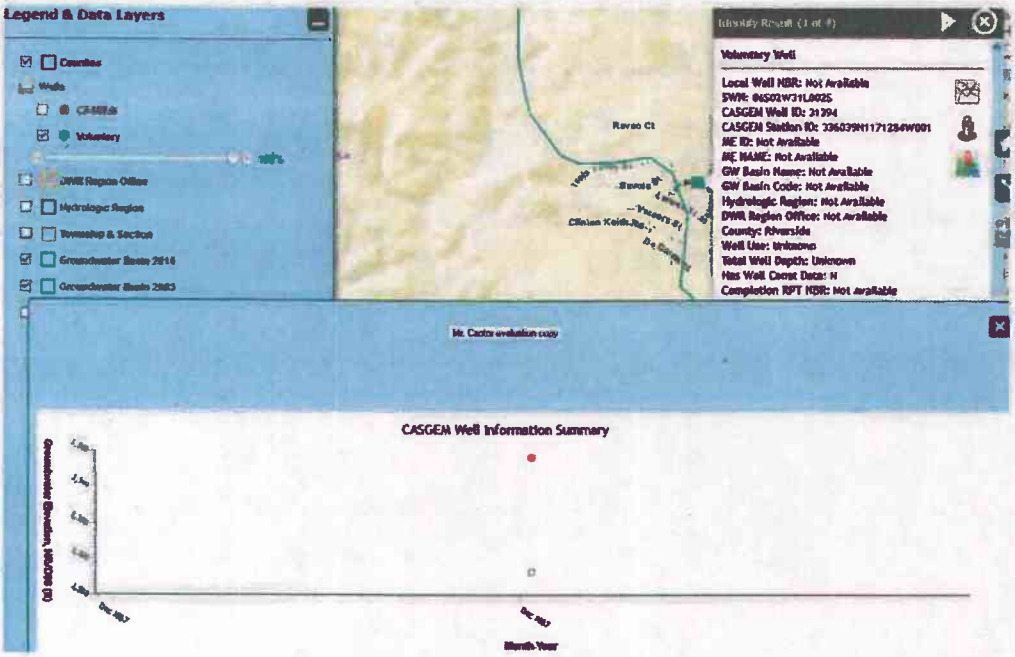
1B: The HEALTH comments on Page 2 list a requirement to "properly locate and plot locations of all existing wells and onsite wastewater treatment systems for this project". Applicant declares in Tentative Tract Map No. 37294 before the Commission that "no existing water wells are located on-site or within sphere of influence" (Note 21) and "no known existing wells are on the property, or within 200 feet of property boundary" (Note 29). These are FALSE STATEMENTS, which if accepted by the County, threaten groundwater quality in the Murrieta/Temecula Groundwater Basin, in violation of State law - because there are multiple existing active and abandoned wells, and septic systems, on and neighboring the project site. Many of these wells are plainly visible from public roads; the most recent wells in the County can be identified on the County-maintained website. Therefore, the Planning Commission needs to support the County's responsibility to comply with State law by rejecting the proposed Mitigated Negative Declaration.

Response: The cited statements are Conditions of Approval. This is not a CEQA-related comment. Prior to construction of the Project, the Applicant will need to comply with these conditions. As stated in Condition 060- Environmental Health #1, the Applicant will need to

properly abandon and remove any wells and septic systems on the property. That Condition acknowledges the presence of existing wells on the property.

Reply: The comment stands. The existence of at least 4 wells on neighboring properties and within 200 feet of the project site remain unidentified; therefore the potential impacts of the proposed project on groundwater resources have not been addressed, as required by CEQA

The Conditions of Approval belie the fact that the County has a very poor record related to the existence and disposition (abandonment and destruction) of water wells in our area. For example, in Tract 29484 (immediately north of EA 43201), State Waterboard online records show a well existed in the present day "Terrain St." (including depth of groundwater):



County was asked for evidence that water wells on Tract 29484 were identified and disposed of according to State Law as administered by the County. No such evidence was provided; the indemnity the County relies on regarding compliance with Conditions of Approval was.

2. The failure by the Applicant to address the Condition of Approval concerning existing water wells and septic tanks, described above in 1B, is compounded by unjustified judgments made in EA 43021 that the project will have a "Less than Significant Impact" on water quality (25g, page 40). In fact, California's Water Laws clearly explain how wells must be constructed, abandoned etc. by exacting standards executed only by specially licensed professionals for the express purpose of minimizing degradation of groundwater quality – and so, the inexcusably false representations made by the Applicant regarding wells and septic systems are, in and of themselves, a substantial threat to groundwater quality. This consideration justifies rejecting the proposed Mitigated Negative Declaration.

Response: As stated above, the Applicant will need to properly abandon and remove any existing wells and septic systems on the property. The Phase 1 ESA and the Conditions of Approval acknowledge the presence of existing wells on the property. No change to the CEQA document is required.

Reply: The comment stands, as stated in the reply above. We urge the County to update their information database, so that accurate information on existing wells and septic systems are publicly and readily available. The missing well/septic records increase the likelihood that developers and County will not fulfill the Conditions of Approval; this risk to important groundwater resources beneath and around the project site should be acknowledged and addressed, prior to consideration of the Mitigated Negative Declaration.

3. The Indemnification Agreement (see item 5 on Page 2 of the July 26, 2017 letter, referenced above, in item 1) improperly delegates the County's responsibility for management/oversight of wells in the County - since such delegation improperly protects the government at the expense of the governed, and institutionalizes a financial incentive to violate State Law. The basic issue is that the County has the permanent duty to protect valuable groundwater resources by recognizing misdemeanors such as failure to abandon water wells according to the State's legal standards. The County needs to demonstrably require continued protection of public groundwater resources comprising the Murrieta/ Temecula Groundwater Basin that hundreds of thousands of residents in the 3rd Supervisorial District benefit from. The County cannot pass on this responsibility to the perpetrator via an indemnity, since this abuse of discretion would necessitate the remedy of an appeal to the Water Board for the Board to assume direct management of well resources in the threatened area, presumably funded by fees the County collects for this purpose. I look forward to the Commission's and County Counsel's judgement on this matter, particularly since this threat is also relevant to wells on recently acquired public lands in our neighborhood, administered by RCTLMA and RCA.

Response: This is not a CEQA-related comment. Applicant will need to confer with County Counsel on the interpretation of the Indemnity Agreement. As stated above, the Applicant is required to properly abandon and remove any existing wells and septic systems on the property pursuant to applicable state and local laws and the project's Conditions of Approval. Because these laws are mandated, groundwater resources will not be impacted. No change to the CEQA document is required.

Reply: The Comment stands, for reasons laid out in 1B and 2, above.

4. On page 3 of EA 43021 Applicants fail to identify a single environmental impact in the sphere of Hydrology/Water Quality that "would be potentially affected by this Project, involving at least one impact that is a potentially significant impact or less than significant with mitigation incorporated." This is an unjustified failure, made possible through a foundation of omitted hydrological features, evident by critical review of the Applicant's defective submission that: "The site consists of relatively flat and gently sloping terrain with some hummocky mounds in the southeast portion of the site. In addition, the site contains one drainage feature that flows from north to south across the easternmost portion of the site" (EA 43021, page 2). In fact there are several drainage features that control movement of stormwater across and out of the project site - features that should have been described and considered in the Initial Study, including those identified in the following figure (discussed in text 4A through 4D):

Response: This statement is a reference to a "brief description" of the property and the surroundings as an introduction to the Environmental Assessment. This general section was not intended to include all the factors that were reviewed in the various hydrology and drainage studies used to make the determinations under the CEQA document. The CEQA document, which is comprised of the Initial Study/Environmental Assessment and all technical studies, including the drainage and hydrology studies, contains multiple detailed descriptions of the property. No change to the CEQA document is required.

Reply: The comment stands. The "brief description" is inaccurate. The technical studies contain material errors in their description of the project site and its environs (e.g. comment 1A, reply, above).

4A. Missing from the Initial Study, but evident in Flood Control Topo Maps and plainly visible from surrounding roads, exists a significant detention basin south of the eastern-most line of olive trees (labeled "Pond"), which detains water from approximately 30 acres of watershed (i.e. the historic agricultural and current residential portions of the project site plus the 20 acres of watershed draining onto the project that are misunderstood by Applicant in point 1A, above).

Response: See response to #4, above. The Applicant has submitted various drainage and hydrology studies that clearly show that the project is not affecting flows in or out of the Project area. All the "features" of the property are taken into account in these studies. Some limited, inconsequential ponding may occur on the property during large storm events but that does not make it a drainage feature and is solely due to the limited improvements on the property. Contrary to the commenter's statement, a "pond" is not a "detention basin" facility; the Project site and any areas that may pond are insubstantial, small localized depressions (approximately 6,000 square feet and 1.2 feet deep) that have no effect on the Project area's drainage or hydrology. In addition, this area was not determined to be riparian or jurisdictional in nature and is not considered a drainage feature. No change to the CEQA document is required.

Reply: Comment stands. Response is positive in that it identifies a drainage feature, and the analysis in the response regarding whether this is significant or insignificant is the stuff of environmental review according to CEQA. The consequence of existing features such as depressions, topography, soil and impermeable structures is that they integrate to help determine how much water entering the existing project site penetrates the ground on the project site, rather then running off the project site. EA 43201 and technical reports fail to explain to the public and County Planning Commission the fact that the standard Flood Control methodology Applicant was directed to perform is not suitable for the EA 43201 project site. This project proposes to transform a rural/agricultural/flooded landscape (where percolation is critically important) into a tract where the site is rendered impermeable. The methodology is appropriate for the future condition (urban setting, no percolation on site). However, the hydrology report and EA 43201 discount (does not study or analyze) how the project will affect the existing condition (as required under CEQA) whereby runoff from the project site submerges Los Alamos Road, due to restricted percolation on site; it is this failure of omission that enables Applicant and County to falsely claim no project effect on hydrology. The unique character and location of the project is such that failure to explicitly determine the effects of the project on flooding at Los Alamos Road

would be negligent, given that the County is fully aware of this County road hazard within the Flood Hazard Area.
The United States Geological Survey alerts us (see https://water.usgs.gov/edu/watercyclerunoff.html) to the limitations of hydrology reports that treat rural areas using urban hydrological tools:

"Many people probably have an overly-simplified idea that precipitation falls on the land, flows overland (runoff), and runs into rivers, which then empty into the oceans. That is "overly simplified" because rivers also gain and lose water to the ground. Still, it is true that much of the water in rivers comes directly from runoff from the land surface, which is defined as surface runoff."

"Surface runoff is affected by both meteorological factors and the physical geology and topography of the land. Only about a third of the precipitation that falls over land runs off into streams and rivers and is returned to the oceans. The other two-thirds is evaporated, transpired, or soaks (infiltrates) into groundwater."

"Human activities can affect runoff
As more and more people inhabit the Earth, and as more development and urbanization occur, more of the natural landscape is replaced by impervious surfaces, such as roads, houses, parking lots, and buildings that reduce infiltration of water into the ground and accelerate runoff to ditches and streams. In addition to increasing imperviousness, removal of vegetation and soil, grading the land surface, and constructing drainage networks increase runoff volumes and shorten runoff time into streams from rainfall and snowmelt. As a result, the peak discharge, volume, and frequency of floods increase in nearby streams."

"Urban development and flooding
Urbanization can have a great effect on hydrologic processes, such as surface-runoff patterns. Imagine it this way: in a natural environment, think of the land in the watershed alongside a stream as a sponge (more precisely, as layers of sponges of different porosities) sloping uphill away from the stream. When it rains some water is absorbed into the sponge (infiltration) and some runs off the surface of the sponge into the stream (runoff). Assume a storm lasting one hour occurs and one-half of the rainfall enters the stream and the rest is absorbed by the sponges. Now, gravity is still at play here, so the water in the sponges will start moving in a general downward direction, with most of it seeping out and into the streambanks during the next day or two."

"Next, imagine that roads and buildings have replaced most of the watershed surface. When that one inch of rainfall occurs, it can't infiltrate these impervious surfaces and will runoff directly into the stream, and very quickly, too! The result is a very quick and short-lived urban flood, rather than a gradual rise and fall in the river."

Furthermore, while the applicant's study of the 100 year flood scenario is essential, the hazard of submerged Los Alamos Road created by run-off from the EA 43201 project site exists many times a year, as witnessed by County employees and thousands of local residents. As explained by the USGS above, urbanization upstream of Los Alamos Road has increased so that less rain is

required to flood the roadway below the EA 43201 project site. By proposing to reduce the existing percolation of water into the EA 43201 project site, negative impacts on downstream flooding are likely to occur more frequently, during even moderate rainfall events.

4B. Missing from the Initial Study, but plainly visible from surrounding roads, is a substantial earthwork that runs north to south (labeled "berm"); the most substantial portion of the berm is evident in Flood Control Topo maps, to the east of the pond. The berm works in concert with the pond to, first, steer all stormwater collected from the aforementioned 30 acre watershed southward towards Los Alamos Road via a narrow channel (converging with creek water at the 18 inch culvert under Los Alamos Road under non-flooding conditions) and, second, by separating this stormwater from the Warm Springs Creek tributary and wetlands east of the berm.

Response: See response to comment 4A above.

Reply: Comment stands. See reply to comment 4A above.

4C. The Initial Study fails to recognize that Los Alamos Road at the SE corner of the project serves to detain stormwater on the project site, since the culvert is grossly undersized relative to creek flow even during and after average rainfall events, creating a significant detention basin north of Los Alamos Road, which frequently extends across the roadbed (see figure above; hence the "subject to flooding" roadway sign next to the project site).

Response: The project has been designed so that the post-development flows leaving the site will be 90% or less of the pre-development flows, which should actually reduce the amount of downstream flooding. From a traffic standpoint, this project may actually improve safety conditions in the area by providing an emergency route to circumvent the current off-site flooding condition on Los Alamos Road due to the existing undersized culvert. This condition has no effect on the Project and the Project will not affect this condition. No change to the CEQA document is required.

Reply: Comment stands. See reply to comment 4A above.

4D. The applicant proposes to encroach on the floodplain of the creek at the eastern end of the project with housing tracts and a detention basin, but fails to describe how these proposed elements will displace a significant existing detention basin, identified in the figure above ("Wetland"), and thereby unreasonably avoids acknowledging obvious environmental impacts, notably increasing flooding downstream at Los Alamos Road and beyond.

Response: See response above. Additionally, a HEC-RAS study was completed for the Project and incorporated into the CEQA document that incorporates neighboring drainage conditions including the analysis conducted by Riverside County's Clinton Keith Road Extension project team. The Applicant's consultants specifically reviewed the Clinton Keith Road Extension analysis and determined that there will be no significant effect to upstream or downstream

properties. Further, the HEC-RAS Study has been reviewed and approved by RCFCWCD. No change to the CEQA document is required.

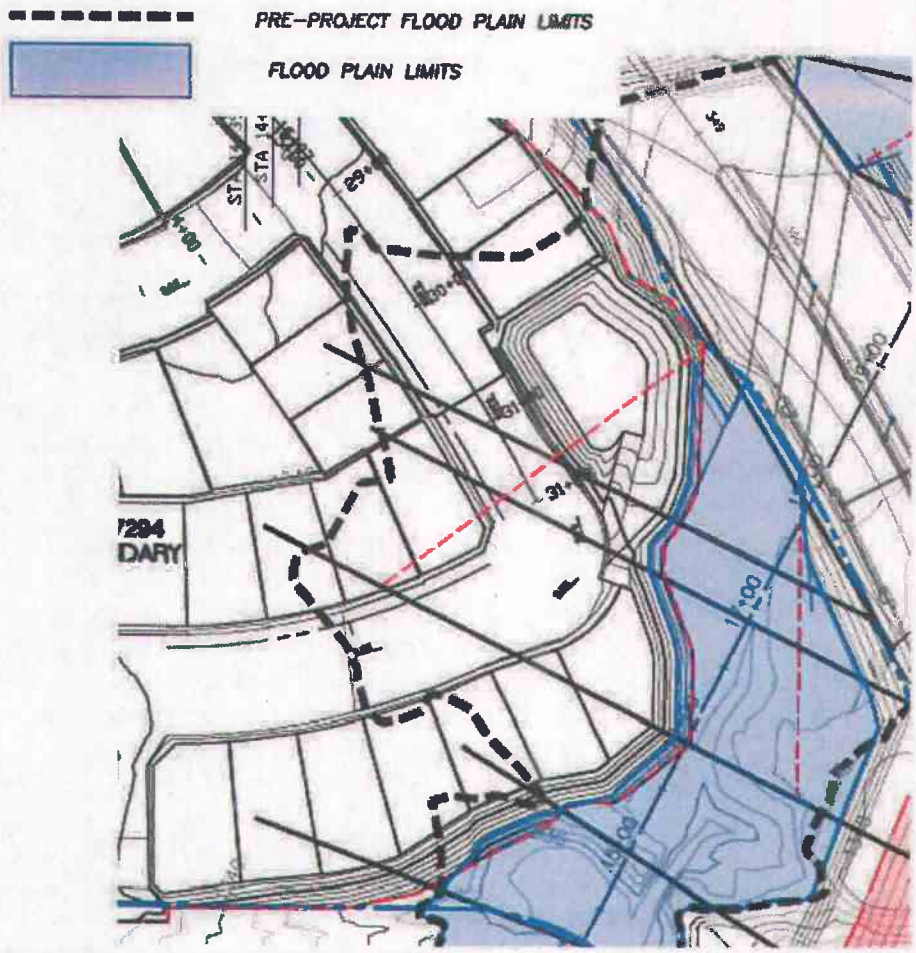
Reply: Comment stands. See reply to comment 4A above. Further, study and analysis of percolation (pre- and post-project) is essential if the County is to make a valid determination of threats to public safety due to increased flooding downstream at Los Alamos Road and beyond.

5. On page 40 of EA 43021, in checklist 25e) Applicants certify that the proposed project will have a less than significant impact by placing housing "within a ... flood hazard delineation map". Consideration of the RCFCWCD - Public Flood Hazard Determination map for the project shows that approximately 20% of the project's proposed housing units, parts of proposed Streets A and C and the proposed new detention basin are all placed in a flood hazard area. The Initial Study fails to describe the flood hazard and what structures are proposed to be placed in the flood hazard area shown on the RCFCWCD - Public Flood Hazard Determination map. The Initial Study should have clearly addressed this material issue, hence the Applicant's determination under 25d on Page 40 is defective. Therefore, the application for Mitigated Negative Declaration should be rejected.

Response: No structures are proposed to be built within the floodplain. The drainage and HEC-RAS studies completed for the project clearly defined the floodplain and provide a substantially more accurate depiction of the floodplain than the general RCFCWCD public flood hazard determination map. Based on the HEC-RAS mapped floodplain, the CEQA document confirms that the "proposed building pads are above the 100-year storm water surface elevation, which would be verified during the County's standard review and permitting process." Further, the CEQA document directly addresses flood zone issues in Section 26. No change to the CEQA document is required.

Reply: The comment stands. Applicants do propose to place structures within the existing flood plain and flood hazard area.

Reply continued: The County, in its analysis, needs to maintain a clear distinction between existing conditions (pre-project) and the proposed future condition. Applicants will place housing within a flood hazard area.



6. The Initial Study is further defective because it fails to acknowledge how the flood hazard identified by RCFCWCD (see previous section 5) has increased since 2006, due to urban development on most of the upstream watershed, which covers hundreds of acres. For example, the US Geological Survey Fact Sheet 076-03 ("Effects of Urban Development on Floods") describes how "roads and buildings in flood-prone areas are exposed to increased flood hazard, including inundation and erosion, as new development continues", and "floodplain managers need new peak streamflow data to update flood frequency analyses and flood maps in areas with recent urbanization".

Response: See response to #5 above. The project's drainage and HEC-RAS studies were completed in 2018 and include the most current watershed and hydrology information for the area. These studies have been reviewed and approved RCFCWCD. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A, above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

7. The initial study fails to describe and consider the near-surface groundwater on the site, as documented by the California Geological Survey in the following figure (2018 seismic hazard zone report for the Murrieta Quadrangle, Plate 1.2, showing depth to groundwater (contours, in feet) and groundwater measurement locations (dots))

Response: The project's Geotechnical Investigation report evaluates groundwater depths. The report concludes that groundwater depth is not an issue within the proposed development footprint. Shallow groundwater does not affect the project's drainage or water quality structures. New water quality regulations require the project to retain stormwater runoff and such drainage structures do not rely on infiltration. No change to the CEQA document is required.

Reply: The comment stands. Commissioners, Supervisors, house builders and buyers should be apprised of the changing hydrological conditions in the existing flood zone on the project site (east of the olives), due to construction in the flood zone, and effects of urbanization upstream of the project. Commissioners, Supervisors, house builders and buyers should be apprised of the absence of current groundwater data (e.g. the failure of the County to preserve well drilling reports that record water depths and geological strata), and that much "current" data on groundwater is derived from USGS surveys in the 1960s. Acknowledgement of the limitations of technical data aimed at informing County decision-makers is a necessary and essential component of the data itself, particularly in the face of massive and rapid urbanization during an historic drought, as applies to EA 43201.

7A. These California Geological Survey data show that the flood hazard zone identified by RCFCWCD in section 5 (above) is especially vulnerable to flash flooding, because very little rain falling on the site and/or the upstream watershed is required to severely diminish percolation before a severely increased proportion of rainfall in the watershed must pass across the project site, exacerbating the flooding hazard.

Response: The project's drainage and HEC-RAS report evaluated this condition. Additionally, the project's drainage reports account for upstream conditions. The project will not alter upstream or downstream flows. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A, above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

7B. Despite severe drought conditions during the past several years, the historically high groundwater levels in the area (including the project site) have increased (i.e. groundwater closer to the ground surface) due to two powerful, development-driven hydrological inputs - both from the two watersheds comprising several square miles, which converge above and below the ground surface at the confluence of the two RCFCWCD hazard zones shown in Section 5 (above), and which have been almost entirely covered with urban tracts since 2006. First, greatly accelerated transport of rainfall towards the projects and environs, due to a decrease in entry of rainfall in the urbanized upstream watershed. Second, input of imported EMWD water into the Murrieta/Temecula Groundwater Basin throughout the two upstream watersheds from irrigation using EMWD water reclaimed from urban sewage, and from irrigation using EMWD's drinking-quality water applied by individual homeowners.

Response: The project has provided detailed drainage analysis demonstrating no impacts. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A, above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Thank you for your help and consideration.
Sincerely yours,

Cecelia Webster
30255 Los Alamos Road
Murrieta, CA 92563

PROACTIVE
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April 2, 2019

Ms. Dionne Harris, M. Arch
Urban Regional Planner II
County of Riverside Department of Planning
4080 Lemon Street, 12th Floor
Riverside, CA

RE: Comments on TTM 37294 "EA 43021 re hydrology – Reply to Response to Comments, Prepared by Proactive Engineering" from Cecilia Webster dated 3/31/19

Dear Ms. Harris:

Thank you for providing the additional letter submitted to the planning department on March 31, 2019 by Ms. Webster regarding the Los Olivos project (EA43201 – TR37294). As the engineer of record, attached are my responses and clarifications to Ms. Webster's continued comments. Additionally, I will be submitting a response on the additional "cumulative impacts" comment letter. That letter should be reviewed in conjunction with these more technical responses.
Below are Ms. Webster's initial comments in *italics*, our initial responses in **bold**, Ms. Webster's additional comments is *red italics*, and our additional responses in **blue bold**:

1. Applicant has failed to follow simple guidance on requirements for Project approvals from the Riverside County Planning Department, communicated on July 26, 2017. Most glaring are listed CONDITIONS OF APPROVAL that Applicant has failed to comply with:

Our Initial Response: This comment is not a CEQA-related matter. The Applicant is not required to meet Conditions of Approval prior to approval of the Project. Conditions of Approval must be met prior to issuance of construction permits or certain construction milestones.

Reply: The comment stands. County directed Applicants, through Conditions of Approval (July 26, 2017, referenced above), to gather information required for CEQA review. CEQA requires accurate and complete description of the project site and its environs, so that the County has information sufficient to make valid decisions on potential impacts and appropriate mitigations. The issue is that Conditions of Approval cannot compensate for errors and omissions in EA 43201 regarding the existing conditions, and therefore do not allow the County to certify a Mitigated Negative Declaration for this project.

Second Response: Accurate and complete information was used for CEQA review. There is no indication that there are errors or omissions in any reports.

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1A: The FLOOD comments on Page 7 describe how the "stormwater runoff from"…. "approximately 20 acres" flows into the project from the west. Yet EA 43021 cites a Drainage Report that fails to correctly identify the boundaries of this western watershed – instead analyzing drainage from only a portion of the true western watershed, and OMITTING drainage from parts of 4 multi-acre parcels south of Los Alamos Road (southwest of the project site) that contribute to flooding on properties north of Los Alamos Road. This material error is grounds for rejecting the Mitigated Negative Declaration.

Our Initial Response: The drainage report and topography in the area reflect that commenter's statement is incorrect. As stated in the drainage report, the Project site accepts these existing flows from the west and conveys them through the property. Based on the existing topography, the property fronting the Project site south of Los Alamos Road slopes in a southeast direction routing runoff away from the existing culvert north of Los Alamos Road. The project does not impact these flows in any drainage flow direction. No change to the Environmental Assessment/Initial Study/Mitigated Negative Declaration (CEQA document) is required.

Reply: The comment stands. (included depiction of watershed)

Second Response: The commenter is still incorrect. As we discussed with them in a meeting last week, the drainage south of Los Alamos Road does not flow north to the other side of Los Alamos. She is using general mapped topography with 4' contour intervals for the area whereas the project conducted an actual topography survey (1' contours). The drainage from the south flows down Los Alamos Road and not across. This can be clearly seen using both her 4' contours and our 1' contours (see attached exhibit). The contours indicate a "crown" in the center of Los Alamos Road (also verified in the field). The small strip of land on the north side of Los Alamos Road that Ms. Webster notes drains easterly toward a high point and then back south to Los Alamos Road as can be seen from our 1' contours. The project will be required to intercept all offsite flows tributary to the westerly project boundary. Flows will be conveyed by a storm drain system and will not be comingled with onsite flows. As a result, intercepting any additional flows will not change the conclusions associated with CEQA since the project is simply collecting and conveying flows based on an existing condition and will discharge the flows to the downstream natural discharge area.

The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No change to the CEQA document is required.

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1B: The HEALTH comments on Page 2 list a requirement to "properly locate and plot locations of all existing wells and onsite wastewater treatment systems for this project". Applicant declares in Tentative Tract Map No. 37294 before the Commission that "no existing water wells are located on-site or within sphere of influence" (Note 21) and "no known existing wells are on the property, or within 200 feet of property boundary" (Note 29). These are FALSE STATEMENTS, which if accepted by the County, threaten groundwater quality in the Murrieta/Temecula Groundwater Basin, in violation of State law - because there are multiple existing active and abandoned wells, and septic systems, on and neighboring the project site. Many of these wells are plainly visible from public roads; the most recent wells in the County can be identified on the County-maintained website. Therefore, the Planning Commission needs to support the County's responsibility to comply with State law by rejecting the proposed Mitigated Negative Declaration.

Response: The cited statements are Conditions of Approval. This is not a CEQA-related comment. Prior to construction of the Project, the Applicant will need to comply with these conditions. As stated in Condition 060- Environmental Health #1, the Applicant will need to properly abandon and remove any wells and septic systems on the property. That Condition acknowledges the presence of existing wells on the property.

Reply: The comment stands. The existence of at least 4 wells on neighboring properties and within 200 feet of the project site remain unidentified; therefore the potential impacts of the proposed project on groundwater resources have not been addressed, as required by CEQA. The Conditions of Approval belie the fact that the County has a very poor record related to the existence and disposition (abandonment and destruction) of water wells in our area. For example, in Tract 29484 (immediately north of EA 43201), State Waterboard online records show a well existed in the present day "Terrain St." (including depth of groundwater): [depiction omitted]
County was asked for evidence that water wells on Tract 29484 were identified and disposed of
according to State Law as administered by the County. No such evidence was provided; the
indemnity the County relies on regarding compliance with Conditions of Approval was.

Second Response: Our initial response still stands. This is a Condition of Approval that the project will have to meet. The well shown on Terrain Street by the commenter is not on the project nor would the project affect such well as it is over 1000 feet away from the project boundary. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No change to the CEQA document is required.

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2. The failure by the Applicant to address the Condition of Approval concerning existing water wells and septic tanks, described above in 1B, is compounded by unjustified judgments made in EA 43021 that the project will have a "Less than Significant Impact" on water quality (25g, page 40). In fact, California's Water Laws clearly explain how wells must be constructed, abandoned etc. by exacting standards executed only by specially licensed professionals for the express purpose of minimizing degradation of groundwater quality – and so, the inexcusably false representations made by the Applicant regarding wells and septic systems are, in and of themselves, a substantial threat to groundwater quality. This consideration justifies rejecting the proposed Mitigated Negative Declaration.

Response: As stated above, the Applicant will need to properly abandon and remove any existing wells and septic systems on the property. The Phase 1 ESA and the Conditions of Approval acknowledge the presence of existing wells on the property. No change to the CEQA document is required.

Reply: The comment stands, as stated in the reply above. We urge the County to update their information database, so that accurate information on existing wells and septic systems are
publicly and readily available. The missing well/septic records increase the likelihood that developers and County will not fulfill the Conditions of Approval; this risk to important groundwater resources beneath and around the project site should be acknowledged and addressed, prior to consideration of the Mitigated Negative Declaration.

Second Response: Our initial response still stands. The County records have no bearing on our project. A Phase I ESA indicted the existing septic system and well onsite that will need to be properly removed and abandoned. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No change to the CEQA document is required.

3. The Indemnification Agreement (see item 5 on Page 2 of the July 26, 2017 letter, referenced above, in item 1) improperly delegates the County's responsibility for management/oversight of wells in the County - since such delegation improperly protects the government at the expense of the governed, and institutionalizes a financial incentive to violate State Law. The basic issue is that the County has the permanent duty to protect valuable groundwater resources by recognizing misdemeanors such as failure to abandon water wells according to the State's legal standards. The County needs to demonstrably require continued protection of public groundwater resources comprising the Murrieta/Temecula Groundwater Basin that hundreds of thousands of residents in the 3rd Supervisorial District benefit from. The County cannot pass on this responsibility to the perpetrator via an indemnity, since this abuse of discretion would necessitate the

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remedy of an appeal to the Water Board for the Board to assume direct management of well resources in the threatened area, presumably funded by fees the County collects for this purpose. I look forward to the Commission's and County Counsel's judgement on this matter, particularly since this threat is also relevant to wells on recently acquired public lands in our neighborhood, administered by RCTLMA and RCA.

Response: This is not a CEQA-related comment. Applicant will need to confer with County Counsel on the interpretation of the Indemnity Agreement. As stated above, the Applicant is required to properly abandon and remove any existing wells and septic systems on the property pursuant to applicable state and local laws and the project's Conditions of Approval. Because these laws are mandated, groundwater resources will not be impacted. No change to the CEQA document is required.

Reply: The Comment stands, for reasons laid out in 1B and 2, above.

Second Response: Our initial response still stands. This is not a CEQA issue. No change to the CEQA document is required.

4. On page 3 of EA 43021 Applicants fail to identify a single environmental impact in the sphere of Hydrology/Water Quality that "would be potentially affected by this Project, involving at least one impact that is a potentially significant impact or less than significant with mitigation incorporated". This is an unjustified failure, made possible through a foundation of omitted hydrological features, evident by critical review of the Applicant's defective submission that: "The site consists of relatively flat and gently sloping terrain with some hummocky mounds in the southeast portion of the site. In addition, the site contains one drainage feature that flows from north to south across the easternmost portion of the site" (EA 43021, page 2). In fact there are several drainage features that control movement of stormwater across and out of the project site - features that should have been described and considered in the Initial Study, including those identified in the following figure (discussed in text 4A through 4D):

Response: This statement is a reference to a "brief description" of the property and the surroundings as an introduction to the Environmental Assessment. This general section was not intended to include all the factors that were reviewed in the various hydrology and drainage studies used to make the determinations under the CEQA document. The CEQA document, which is comprised of the Initial Study/Environmental Assessment and all technical studies, including the drainage and hydrology studies, contains multiple detailed descriptions of the property. No change to the CEQA document is required.

Reply: The comment stands. The "brief description" is inaccurate. The technical studies
contain material errors in their description of the project site and its environs (e.g. comment 1A,

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reply, above).

Second Response: Our initial response still stands. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. **Although helpful information for background knowledge about the area, additional information and descriptions about past experiences with existing conditions in the area do not result in or require substantial revisions to the analysis or results of the analysis prepared for the project. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No further analysis is required and no change to the CEQA document is required.**

4A. Missing from the Initial Study, but evident in Flood Control Topo Maps and plainly visible from surrounding roads, exists a significant detention basin south of the eastern-most line of olive trees (labeled "Pond"), which detains water from approximately 30 acres of watershed (i.e. the historic agricultural and current residential portions of the project site plus the 20 acres of watershed draining onto the project that are misunderstood by Applicant in point 1A, above).

Response: See response to #4, above. The Applicant has submitted various drainage and hydrology studies that clearly show that the project is not affecting flows in or out of the Project area. All the "features" of the property are taken into account in these studies. Some limited, inconsequential ponding may occur on the property during large storm events but that does not make it a drainage feature and is solely due to the limited improvements on the property. Contrary to the commenter's statement, a "pond" is not a "detention basin" facility; the Project site and any areas that may pond are insubstantial, small localized depressions (approximately 6,000 square feet and 1.2 feet deep) that have no effect on the Project area's drainage or hydrology. In addition, this area was not determined to be riparian or jurisdictional in nature and is not considered a drainage feature. No change to the CEQA document is required.

Reply: Comment stands. Response is positive in that it identifies a drainage feature, and the analysis in the response regarding whether this is significant or insignificant is the stuff of
environmental review according to CEQA. The consequence of existing features such as depressions, topography, soil and impermeable structures is that they integrate to help determine how much water entering the existing project site penetrates the ground on the project site, rather then running off the project site. EA 43201 and technical reports fail to explain to the public and County Planning Commission the fact that the standard Flood Control methodology Applicant was directed to perform is not suitable for the EA 43201 project site. This project proposes to transform a rural/agricultural/flooded landscape (where percolation is critically important) into a tract where the site is

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rendered impermeable. The methodology is appropriate for the future condition (urban setting, no percolation on site). However, the hydrology report and EA 43201 discount (does not study or analyze) how the project will affect the existing condition (as required under CEQA) whereby runoff from the project site submerges Los Alamos Road, due to restricted percolation on site; it is this failure of omission that enables Applicant and County to falsely claim no project effect on hydrology. The unique character and location of the project is such that failure to explicitly determine the effects of the project on flooding at Los Alamos Road would be negligent, given that the County is fully aware of this County road hazard within the Flood Hazard Area. The United States Geological Survey alerts us (see https://water.usgs.gov/edu/watercyclerunoff.html) to the limitations of hydrology reports that treat rural areas using urban hydrological tools:

"Many people probably have an overly-simplified idea that precipitation falls on the land,
flows overland (runoff), and runs into rivers, which then empty into the oceans. That is "overly simplified" because rivers also gain and lose water to the ground. Still, it is true that
much of the water in rivers comes directly from runoff from the land surface, which is defined
as surface runoff."

"Surface runoff is affected by both meteorological factors and the physical geology and topography of the land. Only about a third of the precipitation that falls over land runs off
into streams and rivers and is returned to the oceans. The other two-thirds is evaporated, transpired, or soaks (infiltrates) into groundwater."

"Human activities can affect runoff
As more and more people inhabit the Earth, and as more development and urbanization occur, more of the natural landscape is replaced by impervious surfaces, such as roads, houses, parking lots, and buildings that reduce infiltration of water into the ground and accelerate runoff to ditches and streams. In addition to increasing imperviousness, removal
of vegetation and soil, grading the land surface, and constructing drainage networks increase runoff volumes and shorten runoff time into streams from rainfall and snowmelt. As
a result, the peak discharge, volume, and frequency of floods increase in nearby streams."

"Urban development and flooding
Urbanization can have a great effect on hydrologic processes, such as surface-runoff patterns. Imagine it this way: in a natural environment, think of the land in the watershed alongside a stream as a sponge (more precisely, as layers of sponges of different porosities)
sloping uphill away from the stream. When it rains some water is absorbed into the sponge

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(infiltration) and some runs off the surface of the sponge into the stream (runoff). Assume a storm lasting one hour occurs and one-half of the rainfall enters the stream and the rest is absorbed by the sponges. Now, gravity is still at play here, so the water in the sponges will start moving in a general downward direction, with most of it seeping out and into the streambanks during the next day or two."

"Next, imagine that roads and buildings have replaced most of the watershed surface. When that one inch of rainfall occurs, it can't infiltrate these impervious surfaces and will runoff directly into the stream, and very quickly, too! The result is a very quick and short-lived urban flood, rather than a gradual rise and fall in the river."

Furthermore, while the applicant's study of the 100 year flood scenario is essential, the hazard of submerged Los Alamos Road created by run-off from the EA 43201 project site exists many times a year, as witnessed by County employees and thousands of local residents. As explained by the USGS above, urbanization upstream of Los Alamos Road has increased so that less rain is required to flood the roadway below the EA 43201 project site. By proposing to reduce the existing percolation of water into the EA 43201 project site, negative impacts on downstream flooding are likely to occur more frequently, during even moderate rainfall events.

<u>Second Response</u>: Our initial response still stands. The various drainage and hydrology reports fully explain the analysis used. As stated in our earlier response above the small localized depression Ms. Webster refers to could potentially hold 6000-7000 cubic feet of storm runoff. Our detention basin is designed to hold 6,952 cubic feet of storage (as noted in our WQMP report), so our basin will allow groundwater infiltration similar to that of the localized depression. At our meeting, we offered to speak with the commenter's engineer or hydrologist. To date, I have not had anyone contact me to explain our technical studies. Additionally, as discussed in my other comments and with the commenter in person, the project will detain its own stormwater per current regulations via a water detention basin. The project is not impacting flooding conditions. Additionally, commenter seems to be making additional anecdotal comments that seem to only indicate existing conditions around or near the project. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No further analysis is required and no change to the CEQA document is required.

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4B. Missing from the Initial Study, but plainly visible from surrounding roads, is a substantial earthwork that runs north to south (labeled "berm"); the most substantial portion of the berm is evident in Flood Control Topo maps, to the east of the pond. The berm works in concert with the pond to, first, steer all stormwater collected from the aforementioned 30 acre watershed southward towards Los Alamos Road via a narrow channel (converging with creek water at the 18 inch culvert under Los Alamos Road under non-flooding conditions) and, second, by separating this stormwater from the Warm Springs Creek tributary and wetlands east of the berm.

Response: See response to comment 4A above.

Reply: Comment stands. See reply to comment 4A above.

Second Response: Our initial response still stands as explained further by Second Response to 4A above. No further analysis is required and no change to the CEQA document is required.

4C. The Initial Study fails to recognize that Los Alamos Road at the SE corner of the project serves to detain stormwater on the project site, since the culvert is grossly undersized relative to creek flow even during and after average rainfall events, creating a significant detention basin north of Los Alamos Road, which frequently extends across the roadbed (see figure above; hence the "subject to flooding" roadway sign next to the project site).

Response: The project has been designed so that the post-development flows leaving the site will be 90% or less of the pre-development flows, which should actually reduce the amount of downstream flooding. From a traffic standpoint, this project may actually improve safety conditions in the area by providing an emergency route to circumvent the current off-site flooding condition on Los Alamos Road due to the existing undersized culvert. This condition has no effect on the Project and the Project will not affect this condition. No change to the CEQA document is required.

Reply: Comment stands. See reply to comment 4A above.

Second Response: Our initial response still stands as explained further by Second Response to 4A above. Further, no effect caused by the project is identified. No further analysis is required and no change to the CEQA document is required.

4D. The applicant proposes to encroach on the floodplain of the creek at the eastern end of the project with housing tracts and a detention basin, but fails to describe how these proposed elements will displace a significant existing detention basin, identified in the figure above ("Wetland"), and thereby unreasonably avoids acknowledging obvious

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environmental impacts, notably increasing flooding downstream at Los Alamos Road and beyond.

Response: See response above. Additionally, a HEC-RAS study was completed for the Project and incorporated into the CEQA document that incorporates neighboring drainage conditions including the any analysis conducted by Riverside County's Clinton Keith Road Extension project team. The Applicant's consultants specifically reviewed the Clinton Keith Road Extension analysis and determined that there will be no significant affect to upstream or downstream properties. Further, the HEC-RAS Study has been reviewed and approved by RCFCWCD. No change to the CEQA document is required.

Reply: Comment stands. See reply to comment 4A above. Further, study and analysis of percolation (pre- and post-project) is essential if the County is to make a valid determination of threats to public safety due to increased flooding downstream at Los Alamos Road and beyond.

Second Response: Our initial response still stands as explained further by Second Response to 4A above. Additionally, as discussed at length with the commenter, the studies include percolation rates but percolation of small portion of a flood plain has little effect on flooding especially in significant storm events (when major storms hit the ground is saturated from early parts of the storm. As the storm increases in intensity the saturated ground accepts little or no runoff. Additionally, the site's detention of it own stormwater negates any concern on such minor effect of percolation. No change to the CEQA document is required. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No further analysis is required and no change to the CEQA document is required.

5. On page 40 of EA 43021, in checklist 25e) Applicants certify that the proposed project will have a less than significant impact by placing housing "within a ... flood hazard delineation map". Consideration of the RCFCWCD - Public Flood Hazard Determination map for the project shows that approximately 20% of the project's proposed housing units, parts of proposed Streets A and C and the proposed new detention basin are all placed in a flood hazard area. The Initial Study fails to describe the flood hazard and what structures are proposed to be placed in the flood hazard area shown on the RCFCWCD - Public Flood Hazard Determination map. The Initial Study should have clearly addressed this material issue, hence the Applicant's determination under 25d on Page 40 is defective. Therefore, the application for Mitigated Negative Declaration should be rejected.

Response: No structures are proposed to be built within the floodplain. The drainage and HEC-RAS studies completed for the project clearly defined the

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floodplain and provide a substantially more accurate depiction of the floodplain than the general RCFCWCD public flood hazard determination map. Based on the HEC-RAS mapped floodplain, the CEQA document confirms that the "proposed building pads are above the 100-year storm water surface elevation, which would be verified during the County's standard review and permitting process." Further, the CEQA document directly addresses flood zone issues in Section 26. No change to the CEQA document is required.

Reply: The comment stands. Applicants do propose to place structures within the existing flood plain and flood hazard area. [depiction of house siting in drainage channel] The County, in its analysis, needs to maintain a clear distinction between existing conditions (pre-project) and the proposed future condition. Applicants will place housing within a flood hazard area.

Second Response: Our initial response still stands. The existing flood plain currently shown by the Riverside County GIS system is based on the DWR flood plain which is calculated using approximate methods. As a result, a hydraulic study was performed using the USACOE HEC-RAS program to assess the pre-project condition and the post-project condition in a more detailed fashion. The upstream control to the flood plain is the existing Leon Road Culvert which regulates the width and the expansion of the flood plain. The existing flood plain shown is composed of two zones which are classified as effective flood plain and ineffective floodplain. The study prepared shows the overall flood plain. The proposed developed was designed in a manner that encroached into the ineffective flood plain area which does not impact the conveyance of the existing watercourse. Moreover, the area is not within a designated floodway that provides limitation to development encroaching into an existing flood plain. Based on the post-project model the proposed encroachment does not adversely impact downstream or upstream property owners and the proposed slope design was assessed for potential erosive velocities. The study performed indicated that the velocities were adjacent to the slopes were within an acceptable range and not considered erosive. The proposed design and pad elevations provided in the design will ensure that future homes will not be impacted by the flood plain. No further analysis is required and no change to the CEQA document is required since the study assess the potential flood plain hazard and demonstrated that there will be no adverse impacts to the downstream and upstream property owners.

6. The Initial Study is further defective because it fails to acknowledge how the flood hazard identified by RCFCWCD (see previous section 5) has increased since 2006, due to urban development on most of the upstream watershed, which covers hundreds of acres. For example, the US Geological Survey Fact Sheet 076-03 ("Effects of Urban Development on Floods") describes how "roads and buildings in flood-prone areas are exposed to increased flood hazard, including inundation and erosion, as new

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development continues", and "floodplain managers need new peak streamflow data to update flood frequency analyses and flood maps in areas with recent urbanization".

Response: See response to #5 above. The project's drainage and HEC-RAS studies were completed in 2018 and include the most current watershed and hydrology information for the area. These studies have been reviewed and approved RCFCWCD. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A, above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Second Response: Our initial response still stands. The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No further analysis is required and no change to the CEQA document is required.

7. The initial study fails to describe and consider the near-surface groundwater on the site, as documented by the California Geological Survey in the following figure (2018 seismic hazard zone report for the Murrieta Quadrangle, Plate 1.2, showing depth to groundwater (contours, in feet) and groundwater measurement locations (dots))

Response: The project's Geotechnical Investigation report evaluates groundwater depths. The report concludes that groundwater depth is not an issue within the proposed development footprint. Shallow groundwater does not affect the project's drainage or water quality structures. New water quality regulations require the project to retain stormwater runoff and such drainage structures do not rely on infiltration. No change to the CEQA document is required.

Reply: The comment stands. Commissioners, Supervisors, house builders and buyers should be apprised of the changing hydrological conditions in the existing flood zone on the project site (east of the olives), due to construction in the flood zone, and effects of urbanization upstream of the project. Commissioners, Supervisors, house builders and buyers should be apprised of the absence of current groundwater data (e.g. the failure of the County to preserve well drilling reports that record water depths and geological strata), and that much "current" data on groundwater is derived from USGS surveys in the 1960s. Acknowledgement of the limitations of technical data aimed at informing County decision-makers is a necessary and essential component of the data itself, particularly in the face of massive and rapid urbanization during an historic drought, as applies to EA 43201.

Second Response: Our initial response still stands. The commenter provides no evidence that there is missing hydrological information about the project site or

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its environs. No further analysis is required and no change to the CEQA document is required.

7A. These California Geological Survey data show that the flood hazard zone identified by RCFCWCD in section 5 (above) is especially vulnerable to flash flooding, because very little rain falling on the site and/or the upstream watershed is required to severely diminish percolation before a severely increased proportion of rainfall in the watershed must pass across the project site, exacerbating the flooding hazard.

Response: The project's drainage and HEC-RAS report evaluated this condition. Additionally, the project's drainage reports account for upstream conditions. The project will not alter upstream or downstream flows. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A, above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Second Response: The commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. Further, no new, avoidable significant effect is identified. No further analysis is required and no change to the CEQA document is required.

7B. Despite severe drought conditions during the past several years, the historically high groundwater levels in the area (including the project site) have increased (i.e. groundwater closer to the ground surface) due to two powerful, development-driven hydrological inputs - both from the two watersheds comprising several square miles, which converge above and below the ground surface at the confluence of the two RCFCWCD hazard zones shown in Section 5 (above), and which have been almost entirely covered with urban tracts since 2006. First, greatly accelerated transport of rainfall towards the projects and environs, due to a decrease in entry of rainfall in the urbanized upstream watershed. Second, input of imported EMWD water into the Murrieta/Temecula Groundwater Basin throughout the two upstream watersheds from irrigation using EMWD water reclaimed from urban sewage, and from irrigation using EMWD's drinking-quality water applied by individual homeowners.

Response: The project has provided detailed drainage analysis demonstrating no impacts. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A,

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above). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Second Response: The commenter provides no substantial evidence that **there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. Further, no new, avoidable significant effect is identified. No further analysis is required and no change to the CEQA document is required.**

I am available for any clarification or further questions that you may have.

Sincerely,

Tom Braun, MS, PE
Principal

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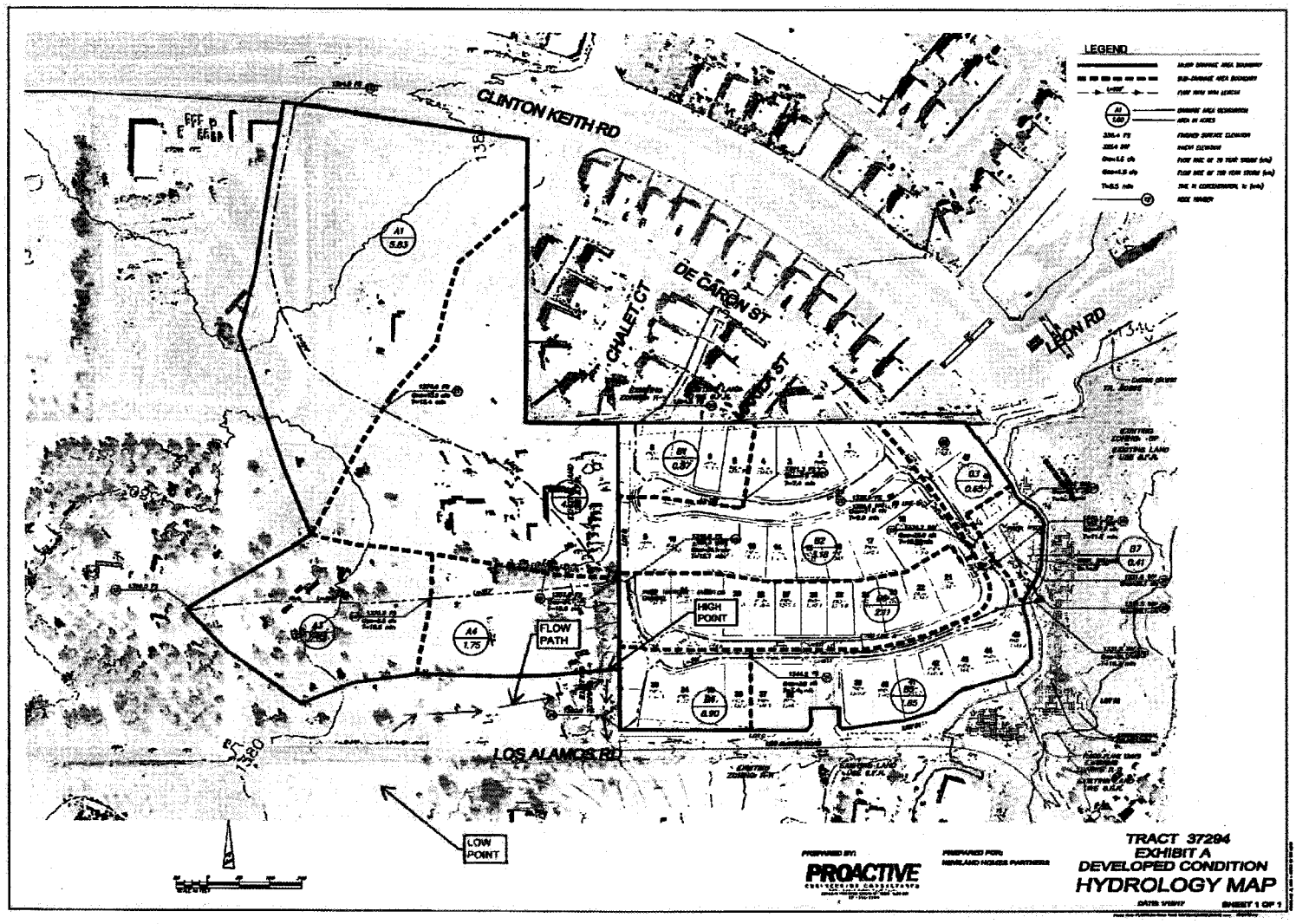
LEGEND
CLINTON KEITH RD
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CHALET CT
LEON RD
LOS ALAMOS RD
HIGH POINT
FLOW PATH
LOW POINT
A1
5.83
A4
1.75
PROACTIVE
TRACT 37294
EXHIBIT A
DEVELOPED CONDITION
HYDROLOGY MAP

March 31, 2019

Ms. Dionne Harris, M. Arch
Urban Regional Planner II
County of Riverside Department of Planning
4080 Lemon Street, 12th Floor
Riverside, CA

RE: EA 43201 Cumulative Impacts
Reply to Response to Comments, prepared by ProActive Engineering

Dear Ms. Harris:

I have reviewed the letter prepared by ProActive Engineering (3/28/19), in response to my comment letter (3/17/19) concerning Cumulative Impacts. The exchanges contained in this letter should be viewed together with the detailed exchanges re Hydrology, because the problems addressed overlap, and more detailed and foundational matters are to be found in that letter. Having considered Applicant's response and project information you have previously provided, I do not believe that a Mitigated Negative Declaration can be justified for this project, on multiple grounds.

Below are my original comments (in italic), ProActive's responses (in bold), and my reply to each of them (in boxes):

Comment: A. The project site receives stormwater from an ~1600 acre watershed (over 2.5 square miles). Approximately half of this watershed (over 800 acres) has been developed as residential housing (MDR), beginning in 2005.

Response: The project's drainage and hydrology studies considered existing upstream development and has determined that the project is not threatened by such hydrological conditions nor does the project have a significant effect on such drainage upstream or downstream. The project is also mitigating for increased runoff and other hydrological issues of concern by implementing current hydromodification requirements of the Regional Water Quality Control Board. No change to the CEQA document is required.

Reply: Comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A in the Hydrology correspondence). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Comment: B. Environmental review commissioned by The County in 2013 addressed the increased drainage flows onto the EA 43201 project site, since it is right next to the proposed extension of Clinton Keith Road (south of Leon Road); the Addendum to Supplemental EIR 398 states that "water flows have increased from upstream development" (page 5 of July 2013 habitat assessment prepared for Clinton Keith Comments on EA 43201 re Cumulative Impacts Road Extension Project, approved by the Board of Supervisors June 2, 2015, in file 03-28part20.pdf).

Response: As stated, the project's studies include the findings of the Clinton-Keith Road Extension project analyses. The Applicant and the project's hydrology engineers have worked closely with County Flood Control staff to scope and integrate the findings of the project's studies and those conducted for the adjacent parcel related to the approved Clinton-Keith Road Extension. These studies have found that the project would not contribute to increased surface water runoff flows. No change to the CEQA document is required.

Reply: Comment stands. The technical studies contain material errors in their description of the project site and its environs (e.g. replies to comments 1A and 4A in the Hydrology correspondence). These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Comment: C. On the 17th of January, 1993 (prior to any urbanization of the watershed described in A, above) a resident of the project site for EA 43201 (30400 Los Alamos Road) was found drowned just downstream from the project site, in the detention basin south of Los Alamos Road, west of Briggs Road and just north of the confluence of the project's creek with French Valley Creek. (See attached Certificate of Death);

Response: Commented noted. This is not a CEQA-related matter. No applicable response as not applicable to project.

Reply: The existence of a life-threatening hazard due to run-off flooding from the project site must acknowledged and analyzed as part of the ***mandatory findings of significance regarding environmental effects that will cause substantial adverse effects of human beings.*** Thousands of local residents from surrounding communities are exposed to this environmental effect of the flooding runoff from the project site, as they travel on submerged Los Alamos Road next to the EA43201 project site.

Comment: D. Flooding of the site of death in C, above, has increased since 2005 due to upstream development, and the project proposed in EA 43201 will further exacerbate the lethal danger by increasing flooding in the flood hazard zone.

Response: The Commenter's statement is not accurate. As demonstrated in the drainage studies this project will not increase flooding upstream or downstream. The project includes a detention basin which will limit developed drainage flows to less than existing flows. The project site is out of the flood hazard zone. No change to the CEQA document is required.

Reply: Comment stands. The technical studies contain material errors in their description of the project site and its environs, addressed in the Hydrology correspondence. These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Comment: E. While Riverside County Flood control has responded to the 1993 SW Riverside County flood disaster to mitigate the flood hazard in Temecula, by joining with Federal authorities in impressive flood control projects, Flood Control's activities in the watershed relevant to the EA

43201 project site have only made flooding on the project site and our neighborhood worse. The Initial Study defers, to some future time, how Flood Control will improve its mitigation performance on this project to achieve "less than significant" impacts on flooding of the EA 43201 project site and downstream (claimed in Mandatory Findings of Significance item 53, page 77). In light of Flood Control's failure to mitigate dangerous flooding impacts of its various projects upstream on the project site and my neighborhood, mitigations for flooding hazards associated with the project should be identified prior to adoption of a Mitigated Negative Declaration.

Response: The future extension to Clinton-Keith Road is and will have to mitigate any impacts it may have to the current drainage conditions. As discussed above, the project's studies include the findings of the Clinton-Keith Road Extension project analyses. No deferral of analysis or mitigation occurs because the Clinton-Keith Road Extension project includes required mitigation that will be implemented as the extension of Clinton Keith Road. The proposed residential project also incorporates mitigation that must be implemented as part of the project's construction. Applicant's Drainage and HEC-RAS studies were completed in 2018 and include current watershed and hydrology information for the area. These studies have been reviewed and approved by RCFCWCD. As stated above, the project does not affect on- or offsite flooding conditions and the project is not in a flood hazard zone. No change to the CEQA document is required.

Reply: We agree that the CKR project will have to mitigate any impacts it may have to the current drainage conditions. The County will perform additional environmental review to add to the original EIR, the supplemental EIR and the addendum to the supplemental EIR. The EIR process allows for more complete and current analysis of conditions that include the EA 43201 project site (Drainage 15). The CKR environmental review is much less likely to contain material errors and omissions, such as exist in the file for the EA 43201 project being considered by the Planning Commission on April 3rd, 2019.

Comment: F. The increased physical threat that flooding poses to property (mostly vehicles) and life is combined with the fact that ever higher numbers of Riverside County residents drive across submerged roadways just south of the EA 43201 project, representing an additional cumulative impact.

Response: The project's design includes a detention basin to limit future developed flows to no more than existing conditions. The project is therefore not contributing any offsite flooding impacts. Also, the project street layout will allow for an alternate route for local residents to Clinton Keith Road that can be utilized if Los Alamos Road is impacted by a flood event. No change to the CEQA document is required.

Reply: The comment stands. The technical studies contain material errors in their description of the project site and its environs, addressed in the Hydrology correspondence. These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Comment: G. Applicants fail to consider the cumulative impact that the increased water on the EA 43201 project site has on vegetative growth in the wetland, which has been explosive in the recent past (during a drought throughout California), will likely continue with vigor, and will cause

increased depths of flood water on the site, and increased flooding further downstream. Flood waters will be displaced by living and dead vegetation, and by mineral particles in accumulating soil - particles from air and water trapped in the vegetative growth. This displacement serves to reduce the amount of water held in the floodplain, causing an increase in flooding on either side of the creek-bed and downstream as plant growth continues each year. Vegetation and accumulating associated silt in the project site's floodplain will also impede site drainage via the culvert on Los Alamos Road, causing increased flooding across the public road. The culvert draining the project site at LosAlamos Road, is not designed to meet the requirements for passing 100-year peak flows and its design makes no accommodation for expected sediment and organic debris transport blocking the drainage; there is no consideration of this condition which contributes to the flooding hazard at Los Alamos Road and points south.

Response: The process described by Ms. Webster is a natural and normal process of natural drainage courses: Seeds get deposited during low flows, plants grow, and some get uprooted during high storm flows. The cycle continues each year. As demonstrated in the County reviewed and approved drainage studies, the project will not increase storm runoff or flooding potential. The project has reviewed the hydrology and drainage studies prepared for the area, including those from upstream development, and the Clinton Keith Road Extension Study. The project's drainage studies show that project has no direct impacts that are inconsistent with the policies identified with Riverside County Flood Control or the County of Riverside. Los Alamos Road is not a Circulation Element road within the County of Riverside General Plan and was therefore not required to be designed to handle peak flows in a 100 year event. The project's hydrology and drainage studies have taken into account this condition, and the studies show that the project will not be impacted by offsite flooding or exacerbate these conditions. As stated above, the development of the Project will actually provide an additional emergency vehicle escape route that will allow vehicles on Los Alamos Road to access Clinton Keith through the tract in the event that Los Alamos Road becomes unpassable during a storm event. As stated above, the project's design includes a detention basin to limit future developed flows to less than existing conditions. The project will not cause erosion that will impact the adjacent riparian area or impact drainage functions that the riparian area serves. NPDES requirements would not permit the project to affect the riparian area or offsite drainage functions as described in the comment. In regards to vegetation concerns, maintenance of the existing Los Alamos culvert is within the jurisdiction of the County. No change to the CEQA document is required.

Reply: The technical studies contain material errors in their description of the project site and its environs, addressed in the Hydrology correspondence. These must be addressed in the CEQA documents prior to consideration of the Mitigated Negative Declaration.

Thank you for your help and consideration.
Sincerely yours,

Cecelia Webster
30255 Los Alamos Road
Murrieta, CA 92563

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April 1, 2019

Ms. Dionne Harris, M. Arch
Urban Regional Planner II
County of Riverside Department of Planning
4080 Lemon Street, 12th Floor
Riverside, CA

RE: EA 43201 Cumulative Impacts Letter from Cecilia Webster dated 3/31/19 for TTM 37294

Dear Ms. Harris:

We have reviewed the additional reply letter dated March 31, 2019 from Cecilia Webster regarding "EA 43201 Cumulative Impacts: Reply to Responses to Comments prepared by ProActive Engineering". As previously indicated, my firm, Proactive Engineering, is the engineering consultant of record for the project. As this new response letter does not include any new information or concerns that need to be specifically addressed, this letter will respond to the continued comments as a whole. Overall, commenter provides no substantial evidence that there are material errors about the project site or its environs in the Initial Study/EA or the project technical studies. No change to the CEQA document is required.

I stand by my previous responses. Last week, I and a handful of other consultants, spent almost two hours with Ms. Webster and her husband addressing their concerns. We went over all her comments at length. We informed them of their misconceptions of hydrology, drainage and the project. Most of the new responses simply state "the technical studies contain material errors in their description of the project site and its environs" but no evidence is given to refute our original responses or responses given at our meeting. Further, neither the original comment letter nor the additional response letter provides any substantial evidence that there are material errors about the project site or its environs in the technical studies.

It seems clear that she has concerns with existing hydrology conditions that exist today near the project, but as we indicated in our letter and the subsequent meeting this project is not creating any new impacts to those existing conditions. There seems to be a misunderstanding between existing impacts and cumulative impacts. Nowhere in the response letter does it identify a new significant impact to be evaluated under CEQA. Although helpful information for background knowledge about the area, anecdotal

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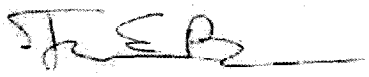
experiences with existing conditions in the area do not result in or require substantial revisions to the analysis or results of the analysis prepared for the project.

Further, we discussed how this project will rectify a life and safety issue that currently exists today by providing an alternate route during the periods Los Alamos Road floods. That alone seems to address Ms. Webster's main concerns with existing hydrology conditions.

As previously indicated, I am available to meet with Ms. Webster or her engineer regarding these responses and our studies.

Sincerely,



Tom Braun, MS, PE
Principal

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