APPENDIX I

Traffic Analysis

APPENDIX I-1

Transportation Impact Analysis Report

WESTPARK PROMENADE
TRAFFIC IMPACT ANALYSIS
CITY OF WILDOMAR, CALIFORNIA

MARCH 9, 2015

Prepared for:

Mr. James Kieckhafer
GOLDEN EAGLE MULTI-FAMILY PROPERTIES, LLC
6201 Oak Canyon, Suite 250
Irvine, CA 92618

Prepared by:

Scott Sato, P.E.
100 E. San Marcos Boulevard, Suite 400
San Marcos, CA 92069

TRAMES SOLUTIONS INC.

(0201-0002-04)

TABLE OF CONTENTS

SECTION PAGE

1.0 INTRODUCTION AND SUMMARY 1

A. Purpose of the TIA and Study Objectives
B. Site Location and Study Area
C. Development Project Identification
1. Project Size and Description
2. Existing Land Use
3. Proposed Land Use
4. Site Plan of Proposed Project
5. Proposed Project Opening Year
6. Proposed Project Phasing

2.0 TRAFFIC ANALYSIS METHODOLOGIES 7

A. Level of Service Definition
B. City of Wildomar Service Criteria
C. Intersection Operations Analysis Methodology
D. Traffic Signal Warrant Analysis
E. Freeway Mainline Segment Analysis
F. Freeway Ramp Analysis Methodology

3.0 AREA CONDITIONS 11

A. Study Area Intersections
B. Area Roadway System
C. Existing (2014) Traffic Volumes
D. Existing (2014) Delay and Level of Service
E. Traffic Signal Warrant Analysis
F. Transit Service

4.0 PROJECTED FUTURE TRAFFIC 23

A. Project Traffic
1. Ambient Growth Rate
2. Project Trip Generation
3. Project Trip Distribution and Assignment
4. Other Trip Generation Factors
5. Project Peak Hour Turning Movement Traffic

TABLE OF CONTENTS (Continued)

SECTION PAGE

B. Cumulative Traffic (Background)
1. Method of Projection
2. Other Approved or Proposed Development Projects
3. Other Approved Projects Trip Generation
4. Other Approved Development Trip Distribution and Assignment
5. Total Background Peak Hour Turning Movement Volumes

C. Horizon Year (2035) Conditions

5.0 TRAFFIC ANALYSIS 59

A. Existing Plus Project (E+P) Conditions
B. Existing Plus Ambient Plus Project (EAP) Conditions
C. Existing Plus Ambient Plus Project Plus Cumulative (EAPC) Conditions
D. Horizon Year (2035) Without Project Conditions
E. Horizon Year (2035) With Project Conditions

6.0 FINDINGS AND RECOMMENDATIONS 81

A. Traffic Impacts, Level of Service Analysis, and Traffic Signal Warrants
B. Recommended Off-Site Improvements
C. Circulation Recommendations
1. On-Site

LIST OF FIGURES

FIGURE		PAGE
1-A	Study Area	3
1-B	Site Plan	5
3-A	Existing (2014) Traffic Controls and Intersection Geometrics	12
3-B	City of Wildomar General Plan Circulation Element	13
3-C	City of Wildomar General Plan Roadway Cross-sections	14
3-D	Existing (2014) AM Peak Hour Volumes	16
3-E	Existing (2014) PM Peak Hour Volumes	17
3-F	Existing (2014) Average Daily Traffic Volumes (ADT)	18
4-A	Project (Residential) Trip Distribution	25
4-B	Project (Supermarket) Trip Distribution	26
4-C	Project Only AM Peak Hour Volumes	28
4-D	Project Only PM Peak Hour Volumes	29
4-E	Project Only Average Daily Traffic Volumes (ADT)	30
4-F	Project Only Pass-By AM Peak Hour Volumes	31
4-G	Project Only Pass-By PM Peak Hour Volumes	32
4-H	Cumulative Developments Location Map	34
4-I	Cumulative Developments Only AM Peak Hour Volumes	38
4-J	Cumulative Developments Only PM Peak Hour Volumes	39
4-K	Cumulative Developments Only Average Daily Traffic Volumes (ADT)	40
4-L	Existing Plus Project AM Peak Hour Volumes	41
4-M	Existing Plus Project Only PM Peak Hour Volumes	42
4-N	Existing Plus Project Average Daily Traffic Volumes (ADT)	43
4-O	Existing Plus Ambient Plus Project AM Peak Hour Volumes	44

LIST OF FIGURES (Continued)

FIGURE		PAGE
4-P	Existing Plus Ambient Plus Project Only PM Peak Hour Volumes	45
4-Q	Existing Plus Ambient Plus Project Average Daily Traffic Volumes (ADT)	46
4-R	Existing Plus Ambient Plus Project Plus Cumulative AM Peak Hour Volumes	47
4-S	Existing Plus Ambient Plus Project Plus Cumulative PM Peak Hour Volumes	48
4-T	Existing Plus Ambient Plus Project Plus Cumulative Average Daily Traffic Volumes (ADT)	49
4-U	Horizon Year (2035) Without Project AM Peak Hour Volumes	50
4-V	Horizon Year (2035) Without Project PM Peak Hour Volumes	52
4-W	Horizon Year (2035) Without Project Average Daily Traffic Volumes (ADT)	53
4-X	Horizon Year (2035) With Project AM Peak Hour Volumes	54
4-Y	Horizon Year (2035) With Project PM Peak Hour Volumes	55
4-Z	Horizon Year (2035) With Project Average Daily Traffic Volumes (ADT)	56
6-A	Existing Plus Project Recommended Improvements	57
6-B	Existing Plus Ambient Plus Project Recommended Improvements	83
6-C	Existing Plus Ambient Plus Project Plus Cumulative Recommended Improvements	84
6-D	Horizon Year (2035) Without Project Recommended Improvements	86
6-E	Horizon Year (2035) With Project Recommended Improvements	87
6-F	Circulation Recommendations	91

LIST OF TABLES

TABLE		PAGE
3-1	Intersection Analysis for Existing (2014) Conditions	19
3-2	Freeway Ramp Analysis for Existing (2014) Conditions	20
3-3	Basic Freeway Segment Analysis for Existing (2014) Conditions	22
4-1	Project Trip Generation Rates	24
4-2	Project Trip Generation Summary	24
4-3	Cumulative Development Trip Generation Rates	35
4-4	Cumulative Development Trip Generation Summary	36
5-1	Intersection Analysis for Existing Plus Project Conditions	60
5-2	Freeway Ramp Analysis for Existing Plus Project Conditions	62
5-3	Basic Freeway Segment Analysis for Existing Plus Project Conditions	63
5-4	Intersection Analysis for Existing Plus Ambient Plus Project Conditions	64
5-5	Freeway Ramp Analysis for Existing Plus Ambient Plus Project Conditions	65
5-6	Basic Freeway Segment Analysis for Existing Plus Ambient Plus Project Conditions	67
5-7	Intersection Analysis for Existing Plus Ambient Plus Project Plus Cumulative Conditions	68
5-8	Freeway Ramp Analysis for Existing Plus Ambient Plus Project Plus Cumulative Conditions	69
5-9	Basic Freeway Segment Analysis for Existing Plus Ambient Plus Project Plus Cumulative Conditions	70
5-10	Intersection Analysis for Horizon Year (2035) Without Project Conditions	72
5-11	Freeway Ramp Analysis for Horizon Year (2035) Without Project Conditions	74
5-12	Basic Freeway Segment Analysis for Horizon Year (2035) Without Project Conditions	75
5-13	Intersection Analysis for Horizon Year (2035) With Project Conditions	77

LIST OF TABLES (Continued)

TABLE PAGE

5-14 Freeway Ramp Analysis for Horizon Year (2035) With Project Conditions..... 78

5-15 Basic Freeway Segment Analysis for Horizon Year (2035) With Project Conditions..... 80

LIST OF APPENDICES

Scoping Agreement ..... A

Traffic Count Worksheets ..... B

Existing (2014) Intersection Analysis Calculation Worksheets C

Existing (2014) Freeway Ramp Analysis Worksheets ..... D

Existing (2014) Basic Freeway Segment Analysis Worksheets ..... E

Traffic Signal Warrants ..... F

Cumulative Development Projects Trip Distribution Patterns..... G

Existing Plus Project Intersection Analysis Calculation Worksheets ..... H

Existing Plus Project Freeway Ramp Analysis Worksheets I

Existing Plus Project Basic Freeway Segment Analysis Worksheets ..... J

Existing Plus Ambient Plus Project Intersection Analysis Calculation Worksheets..... K

Existing Plus Ambient Plus Project Freeway Ramp Analysis Worksheets L

Existing Plus Ambient Plus Project Freeway Basic Freeway Segment Worksheets ..... M

Existing Plus Ambient Plus Project Plus Cumulative
Intersection Analysis Calculation Worksheets..... N

Existing Plus Ambient Plus Project Plus Cumulative
Freeway Ramp Analysis Worksheets ..... O

Existing Plus Ambient Plus Project Plus Cumulative
Basic Freeway Segment Analysis Worksheets ..... P

Horizon Year (2035) Without Project
Intersection Analysis Calculation Worksheets..... Q

Horizon Year (2035) Without Project
Freeway Ramp Analysis Worksheets ..... R

Horizon Year (2035) Without Project
Basic Freeway Segment Analysis Worksheets ..... S

Horizon Year (2035) With Project
Intersection Analysis Calculation Worksheets..... T

LIST OF APPENDICES (Continued)

Horizon Year (2035) With Project
Freeway Ramp Analysis Worksheets ..... U

Horizon Year (2035) With Project
Basic Freeway Segment Analysis Worksheets V

1.0 INTRODUCTION AND SUMMARY

A. Purpose of the TIA and Study Objectives

The purpose of this traffic impact analysis (TIA) is to evaluate the traffic impacts of the proposed Westpark Promenade development. The project is proposed to be developed with approximately 191 multi-family residential units, 85,000 sf of supermarket uses, 17,354 sf of retail uses, and 16,000 sf of high turnover restaurant uses. The site is located east of the I-15 Freeway, between Depasquale Road and Clinton Keith Road in the City of Wildomar.

Study objectives include the following:

Existing (2014) Traffic. Existing traffic will be counted to determine current conditions. This constitutes the environmental setting for a CEQA analysis at the time that the hearing body reviews the project. Traffic count data shall be new or recent. In some cases, data up to one year old may be acceptable with the approval of the City of Wildomar. Any exception to this must be requested prior to approval of the scoping agreement

Existing (2014) Plus Project Traffic. Traffic generated by the proposed project will be added to existing traffic counts to identify and analyze impacts on the circulation system.

Existing + Ambient + Project (EAP 2017). Traffic conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by an appropriate growth rate to be provided by City of Wildomar staff, projected to the year that the project is estimated to be completed. Traffic generated by the proposed project will then be added, and the impacts on the circulation system will be analyzed. This will be the basis for determining project-specific impacts, mitigation, and conditions of approval.

Existing + Ambient + Project + Cumulative (EAPC 2017). Traffic generated by other approved projects in the study area shall be identified and added to the Project Completion traffic identified in Scenario 3. This may also include projects that are proposed and in the review process, but not yet fully approved. This scenario will be analyzed, and a determination made if improvements funded through an approved funding mechanism (TUMF, DIF, CFD, RBBD etc.) can accommodate the cumulative traffic at the target Level of Service (LOS) identified in the General Plan. If the “funded” improvements can provide the target LOS, payment into the fee program will be

considered as cumulative mitigation through the conditions of approval. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF facilities) should be identified as such.

Long Range Horizon Year (2035) Conditions. The traffic forecasts for the Long Range Horizon Year (2035) will be evaluated for conditions without and with the proposed project. The County's travel demand model will be sourced for the peak hour turning movement volumes since the City relies on the Riverside County forecasts for long range planning. The analysis of Long Range Horizon Year (2035) conditions is required since the project is proposing an amendment to the General Plan.

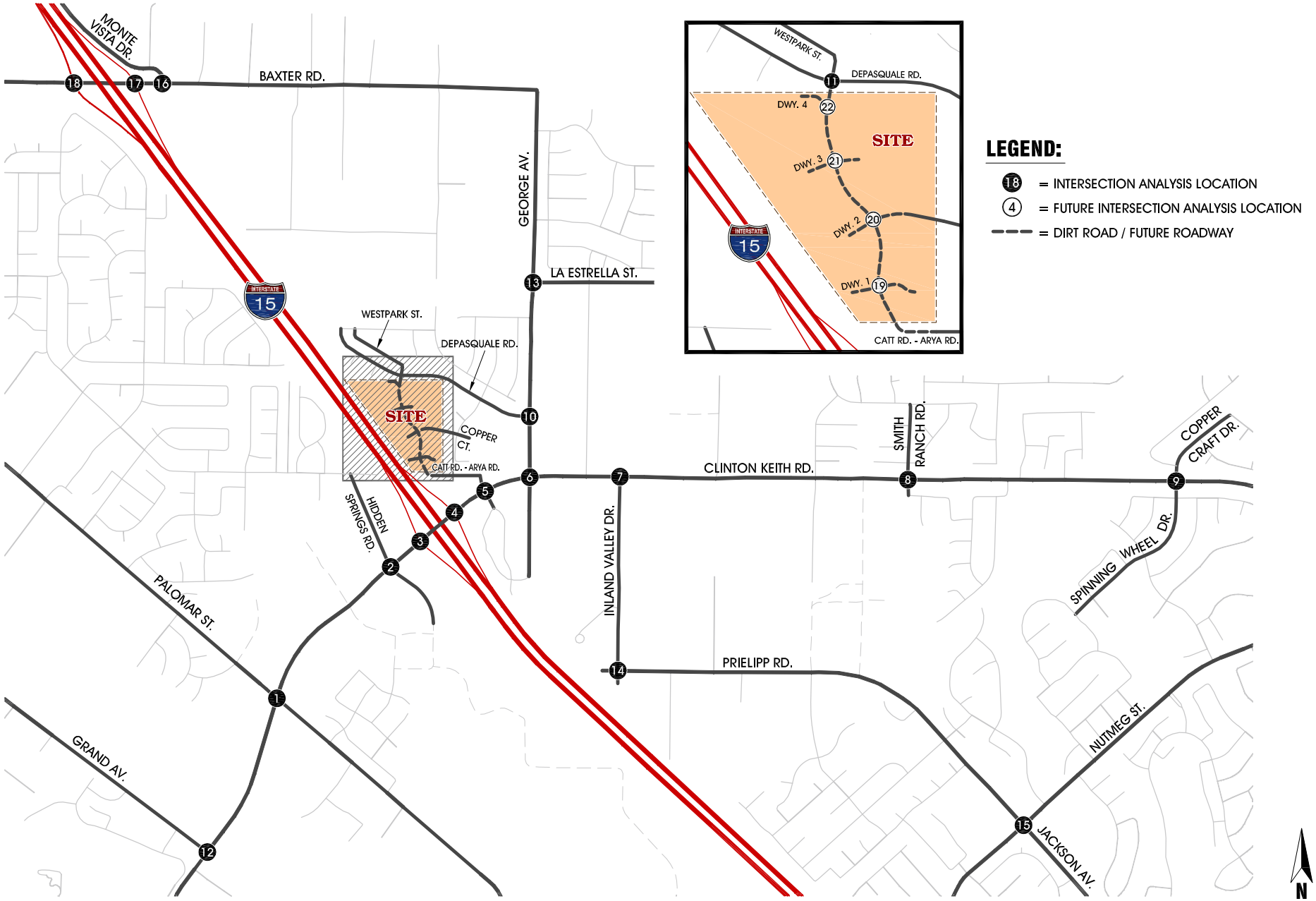
B. Site Location and Study Area

The site is located east of the I-15 Freeway, between Depasquale Road and Clinton Keith Road in the City of Wildomar. Figure 1-A illustrates the site location and the traffic analysis study area.

In general, the study area shall include any intersection of Collector or higher classification street with another Collector roadway or higher classification street, at which the proposed project will add 50 or more peak hour trips. Pursuant to the attached scoping agreement (see Appendix "A") and discussions with City of Wildomar staff, the study area includes the following intersections:

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road
2.	Hidden Springs Road / Clinton Keith Road
3.	I-15 SB Ramps / Clinton Keith Road
4.	I-15 NB Ramps / Clinton Keith Road
5.	Catt Road - Arya Road / Clinton Keith Road
6.	George Avenue / Clinton Keith Road
7.	Inland Valley Drive / Clinton Keith Road
8.	Smith Ranch Road / Clinton Keith Road
9.	Copper Craft Drive / Clinton Keith Road
11.	Westpark Street / Depasquale Road
12.	Grand Avenue / Clinton Keith Road
13.	George Avenue / La Estrella Street
14.	Inland Valley Drive / Prielipp Road
15.	Nutmeg Street / Jackson Avenue
16.	Monte Vista Drive / Baxter Road
17.	I-15 NB Ramps / Baxter Road

FIGURE 1-A
STUDY AREA



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

STUDY AREA INTERSECTIONS (Continued)
18. I-15 SB Ramps / Baxter Road
19. Driveway 1 / Westpark Street - *(Future)*
20. Driveway 2 / Westpark Street - *(Future)*
21. Driveway 3 / Westpark Street - *(Future)*
22. Driveway 4 / Westpark Street - *(Future)*

C. Development Project Identification

1. Project Size and Description

The Westpark Promenade Site is proposed to be developed with approximately 191 multi-family residential units, 85,000 sf of supermarket uses, 17,354 sf of retail uses, and 16,000 sf of high turnover restaurant uses. It is anticipated that the project will be built by 2017.

2. Existing Land Use

The project site is currently vacant. Adjacent uses include the following:

- North – Residential
- South – Vacant
- East – Residential
- West – I-15 Freeway

3. Proposed Land Use

Proposed Land Use: Residential and Commercial

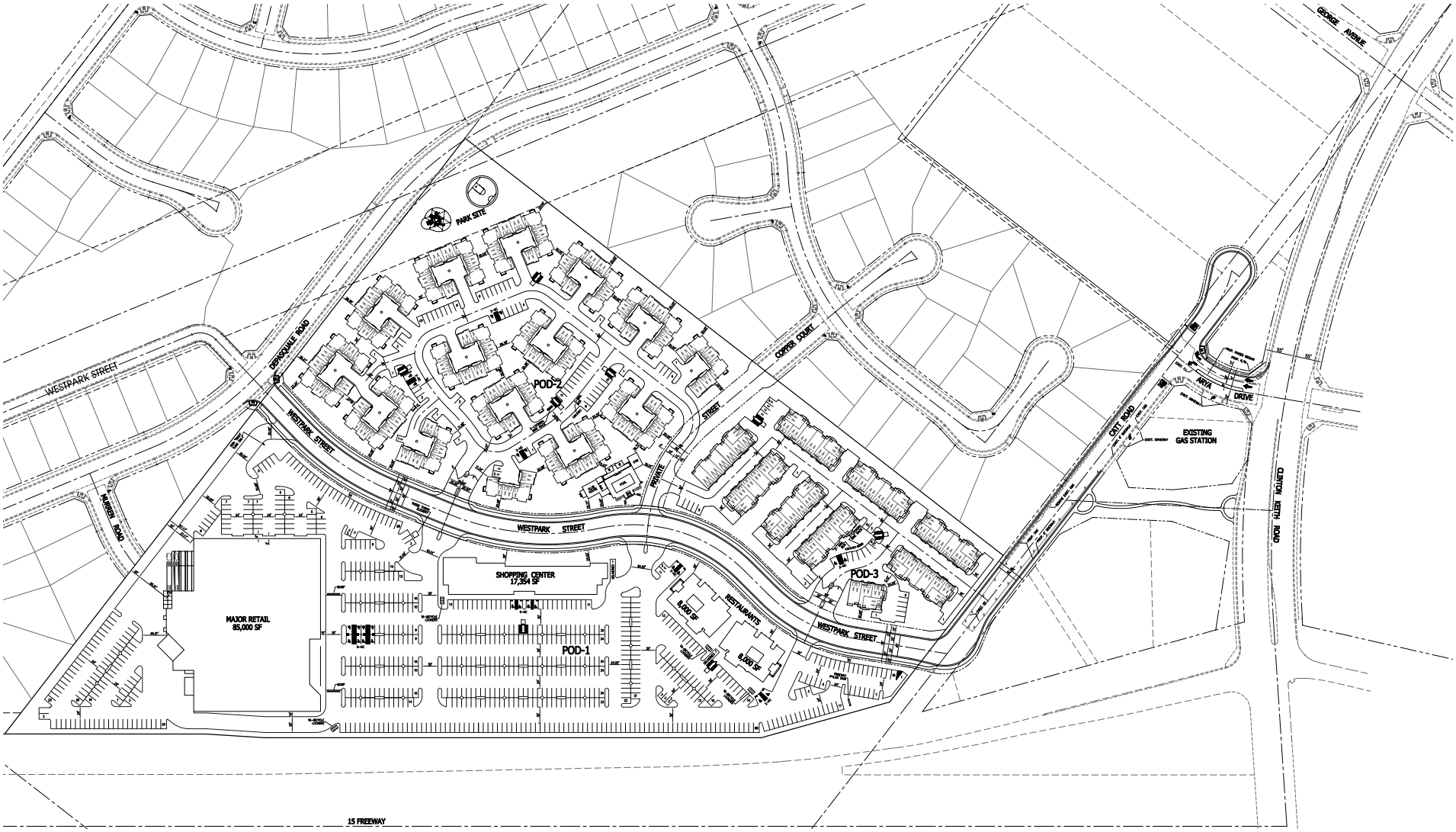
4. Site Plan of Proposed Project

Figure 1-B illustrates the conceptual land use plan. As shown in Figure 1-B, the project is proposed to have four driveways along the Westpark Street future extension. Copper Court is also proposed to be extended and connect to Westpark Street for emergency access purposes.

5. Proposed Project Opening Year

The proposed project is anticipated to be completed in 2017. Future traffic analysis has been based upon three year of background (ambient) growth, at 2% per year, along with traffic generated by other future developments in the surrounding area. The total ambient growth rate is 6% for 2017 conditions.

FIGURE 1-B
SITE PLAN



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

6. Proposed Project Phasing

The project is expected to be completed in a single phase. Therefore, all traffic recommendations included in this report have not been separated into different development phases.

2.0 TRAFFIC ANALYSIS METHODOLOGIES

Traffic operations are quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an infrastructure facility (intersection) representing progressively worsening traffic conditions. This section presents the LOS definition, LOS criteria and methodologies for the Intersection Operations.

A. Level of Service Definition

The definitions of Level of Service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A": Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. Maneuverability within the traffic stream is good. Minor disruptions to flow are easily absorbed without a change in travel speed.

- LOS "B": Free flow conditions, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS "A", but drivers have slightly less freedom to maneuver. Minor disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.

- LOS "C": The influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration in service, and queues will form behind any significant traffic disruption.

- LOS "D": The ability to maneuver is restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.

- LOS "E": Operations at or near capacity, an unstable level. Vehicles are operating with the minimum spacing for maintaining uniform flow.

- LOS "F": Forced or breakdown flow. It occurs either when vehicles arrive at a rate greater than the rate at which they are discharged or when the forecast demand exceeds the computed capacity of a planned facility. Although operations at these points – and on sections immediately downstream – appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

B. City of Wildomar Level of Service Criteria

The City of Wildomar has established Level of Service (LOS) “D” as the maximum allowable threshold for the intersection operations. Therefore, LOS “E” or “F” is considered unacceptable and requires improvements measures.

C. Intersection Operations Analysis Methodology

The City of Wildomar requires the use of the Transportation Research Board - Highway Capacity Manual (HCM), 2000 Update, or most recent release. The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The Levels of Service results in this study are determined using the HCM methodology.

For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service.

The study area intersections which are stop sign controlled with stop control on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at the study area locations; the level of service has been calculated. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle for the worst minor street movement(s).

For all way stop (AWS) controlled intersections, the ability of vehicles to enter the intersection is not controlled by the occurrence of gaps in the flow of the main street. The AWS controlled intersections have been evaluated using the HCM methodology for this type of multi-way stop controlled intersection configuration. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle.

The levels of service are defined for the various analysis methodologies as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	0 to 10.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

Levels of service at the study area intersections have been evaluated using the following HCM intersection analysis program: Synchro 8.0.

Peak hour factors (PHF), where known from existing traffic counts, have been used to assess intersection operations.

D. Traffic Signal Warrant Analysis

Traffic signal warrant analysis included in this report utilizes the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD). The Peak Hour Volume-based Warrant 3 is used for all existing unsignalized intersections within the study area. For future unsignalized intersection, the Caltrans planning level average daily traffic (ADT) based signal warrant analysis is utilized.

E. Freeway Mainline Segment Analysis

The freeway mainline segment analysis based on the HCM methodology. The density and level of service for the freeway segments north and south of Clinton Keith Road has been evaluated based on peak hour directional volumes using the HCS2010 Freeways Version 6.60 software. The measure used to provide an estimate of level of service is density (reported in passenger car/mile/lane). The freeway segment LOS thresholds for each freeway segment density range utilized in this report is presented as follows:

LEVEL OF SERVICE	DENSITY RANGE (pc/mi/ln)[1]
A	0.0 – 11.0
B	11.1 – 18.0
C	18.1 – 26.0
D	26.1 – 35.0
E	>35.1 – 45.0
F	>45.0

[1] pc/mi/ln = passenger cars per mile per lane.

F. Freeway Ramp Analysis

For the purpose of this report, merge/diverge operations analysis methods have been used to evaluate freeway on-ramps and off-ramps. The density and level of service at the I-15/Clinton Keith Road on and off-ramps have been evaluated using the HCS2010 Ramps Version 6.60 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. The merge/diverge area LOS thresholds for each density range utilized in this report is presented as follows:

LEVEL OF SERVICE	DENSITY RANGE (pc/mi/ln)[1]
A	0.0 – 10.0
B	10.1 – 20.0
C	20.1 – 28.0
D	28.1 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] pc/mi/ln = passenger cars per mile per lane.

3.0 AREA CONDITIONS

A. Study Area Intersections and Roadway Segments

In general, the minimum area to be studied shall include 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. The City of Wildomar Engineering Department may require deviation from these requirements based on area conditions. The study area includes the following intersections (shown previously on Figure 1-A):

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road
2.	Hidden Springs Road / Clinton Keith Road
3.	I-15 SB Ramps / Clinton Keith Road
4.	I-15 NB Ramps / Clinton Keith Road
5.	Catt Road-Arya Road / Clinton Keith Road
6.	George Avenue / Clinton Keith Road
7.	Inland Valley Drive / Clinton Keith Road
8.	Smith Ranch Road / Clinton Keith Road
9.	Copper Craft Drive / Clinton Keith Road
10.	Westpark Street Catt Road / Depasquale Road
11.	George Avenue / Depasquale Road
12.	Grand Avenue / Clinton Keith Road
13.	George Avenue / La Estrella Street
14.	Inland Valley Drive / Prielipp Road
15.	Nutmeg Street / Prielipp Road
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road
18.	I-15 NB Ramps / Baxter Road
19.	Driveway 1 / Westpark Street - *(Future)*
20.	Driveway 1 / Westpark Street - *(Future)*
21.	Driveway 1 / Westpark Street - *(Future)*
22.	Driveway 1 / Westpark Street - *(Future)*

B. Area Roadway System

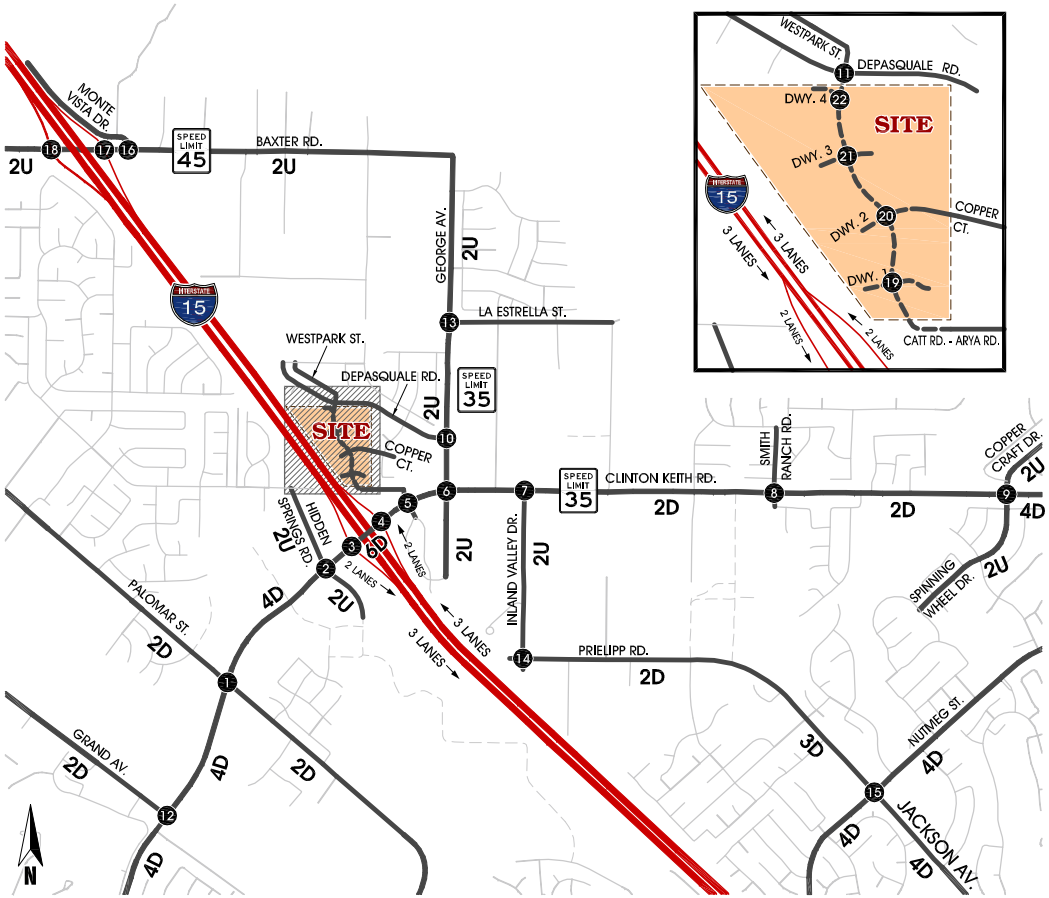
Figure 3-A identifies the existing roadway conditions for study area roadways. The existing intersection traffic controls and geometrics are identified.

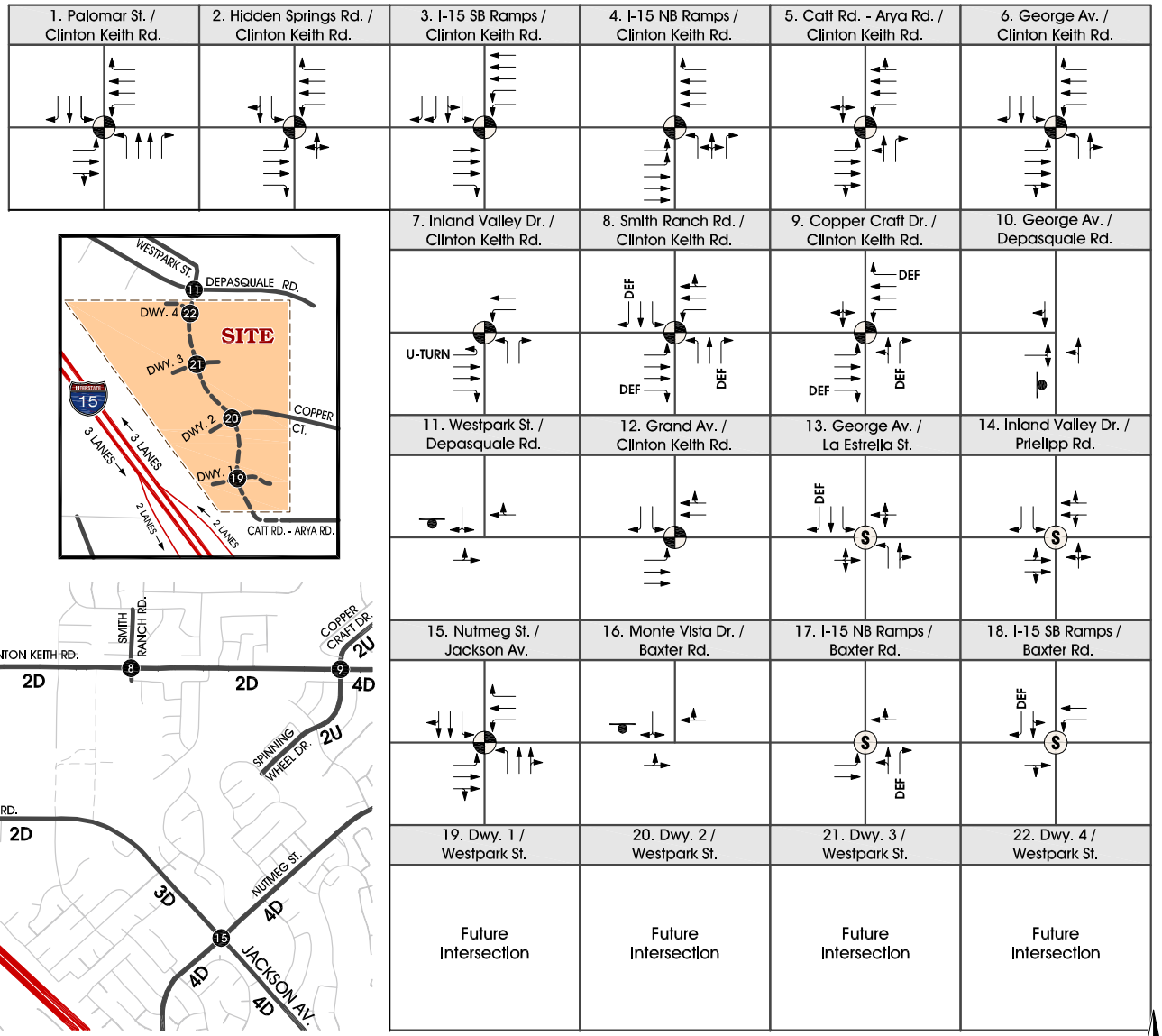
The City of Wildomar Circulation Element is depicted on Figure 3-B. Figure 3-C illustrates the City of Wildomar Roadway Cross-Sections.

FIGURE 3-A
EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS

LEGEND:

- = TRAFFIC SIGNAL
- = ALL WAY STOP
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- DEF = DEFACTO RIGHT TURN LANE
- 22 = INTERSECTION ID
- = DIRT ROAD / FUTURE ROADWAY



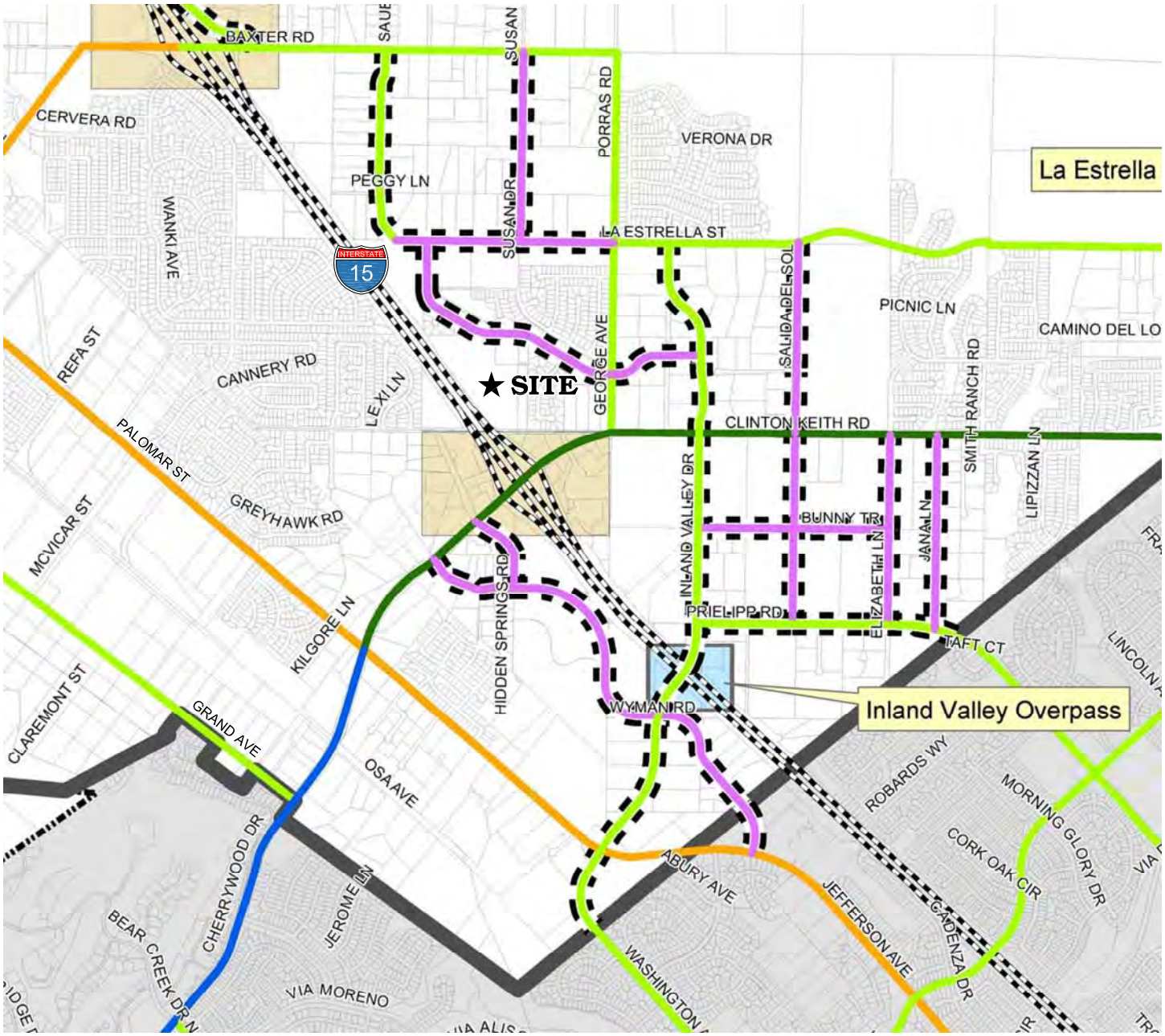


Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

FIGURE 3-B

CITY OF WILDOMAR GENERAL PLAN CIRCULATION ELEMENT



NOTE: THE CITY OF WILDOMAR HAS ADOPTED THE COUNTY'S GENERAL PLAN AND STANDARDS

LEGEND:

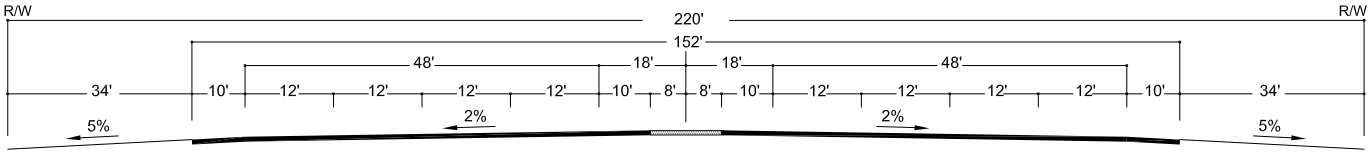
- Proposed Wildomar Circulation Changes
- URBAN ARTERIAL
- ARTERIAL
- MAJOR
- SECONDARY
- COLLECTOR
- Highways
- Parcels
- Proposed Wildomar Incorporation
- Cities
- Existing Interchanges

N

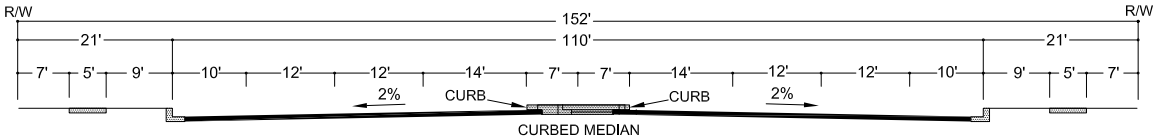
Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:04.dwg)

TRAMES SOLUTIONS INC.

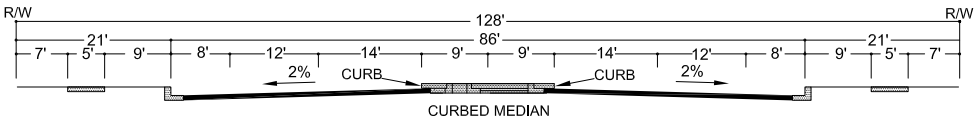
FIGURE 3-C
CITY OF WILDOMAR
GENERAL PLAN ROADWAY CROSS-SECTIONS



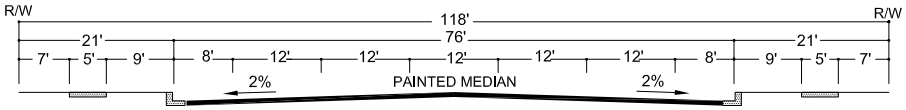
EXPRESSWAY - 8 LANES



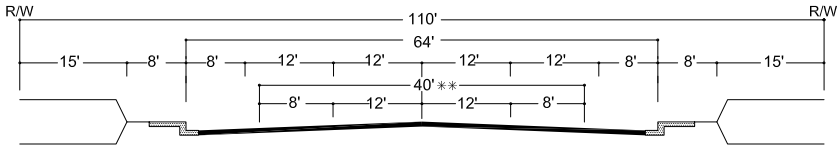
URBAN ARTERIAL HIGHWAY ✳



ARTERIAL HIGHWAY ✳

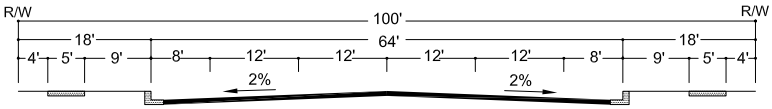


MAJOR HIGHWAY - 4 LANES

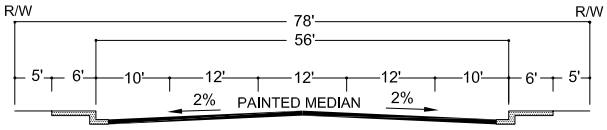


MOUNTAIN ARTERIAL - 2 TO 4 LANES

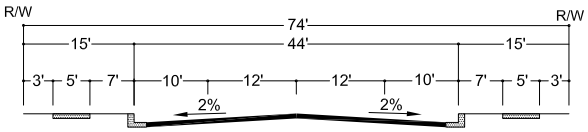
✳✳ 2 LANE SECTION



SECONDARY HIGHWAY



INDUSTRIAL COLLECTOR



COLLECTOR

✳ 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.

NOTE: THE CITY OF WILDOMAR HAS ADOPTED THE COUNTY'S GENERAL PLAN AND STANDARDS

NOT TO SCALE

Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:04.dwg)

TRAMES SOLUTIONS INC.

C. Existing (2014) Traffic Volumes

Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts made for Trames Solutions, Inc. in May 2014 and January 2015. Existing (2014) AM and PM peak hour intersection turning movement volumes are shown on Figure 3-D and Figure 3-E, respectively.

Existing average daily traffic (ADT) volumes are shown on Figure 3-F. The following formula is used to estimate the ADT volumes shown on Figure 3-F:

PM Peak Hour Link Volume (Approach + Exit) x 12 = ADT Leg Volume

The traffic count worksheets are included in Appendix "B".

For ramp analysis purposes, the I-15 freeway mainline volume data were obtained from the Caltrans Performance Measurement System (PeMS) website. Freeway mainline peak hour volumes have been obtained between May 27 through 29, 2014 and have been flow conserved with freeway-ramp-to-arterial peak hour count data. The maximum value observed within the three day period is utilized for the AM and PM peak hours. In addition, truck percentage from the Caltrans 2012 Annual Average Daily Truck Traffic on the California State Highway System is utilized which presents 8.7% truck percentage along the I-15 freeway within the study area. The source data and freeway volume summary is also included in Appendix “B”.

D. Existing (2014) Delay and Level of Service

The City of Wildomar has established Level of Service (LOS) “D” as the maximum allowable threshold for the intersection operations. Therefore, LOS “E” or “F” is considered unacceptable and requires improvements measures.

The results of the existing conditions intersection analysis are summarized in Table 3-1. The existing condition operations analysis worksheets are provided in Appendix "C". The following study area intersections are currently operating at an unacceptable level of service (LOS “E” or worse) during the peak hours with the existing geometry and traffic controls:

STUDY AREA INTERSECTIONS
17. I-15 SB Ramps / Baxter Road
18. I-15 NB Ramps / Baxter Road

The Existing (2014) freeway ramp analysis results are summarized in Table 3-2. The ramp analysis calculation worksheets for Existing (2014) conditions are included in

FIGURE 3-D
EXISTING AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

– – – – = DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
↳100 ↓345 ↰148 / ←242 ←106 ↱35	↳68 ↓31 ↰322 / ←201 ←594 ↱55	↳311 ↓0 ↰377 / ←539 ←267	←443 ←578	↳61 ↓3 ↰32 / ←72 ←718 ↱103	↳162 ↓37 ↰83 / ←50 ←695 ↱64
192→ 128→ 20↳ / ↳21 ↑639 ↱50	62→ 1034→ 5↳ / ↳56 ↑12 ↱83	715→ 724↳	326→ 766→ / ↳228 ↑0 ↱196	51→ 686→ 216↳ / ↳242 ↑4 ↱44	119→ 739→ 11↳ / ↳36 ↑20 ↱38

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
←567 ↱109	↳52 ↓0 ↰38 / ←24 ←559 ↱12	↳36 ↓5 ↰19 / ←7 ←529 ↱11	↳6 ←234
0↳ 437→ 372↳ / ↳242 ↱37	19→ 441→ 15↳ / ↳34 ↑0 ↱7	13→ 490→ 18↳ / ↳33 ↑0 ↱34	11→ 48↳ / ↳35 ↑154

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
↳0 ↰6 / ↳6 ←7	↳47 ↰161 / ↳81 ←358	↳43 ↓13 ↰11 / ←18 ←196 ↱39	↳42 ↓0 ↰206 / ←209 ←16 ↱1
0↳ 6→	48→ 606→	47→ 108→ 13↳ / ↳24 ↑19 ↱52	16→ 8→ 0↳ / ↳9 ↑0 ↱0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
↳81 ↓315 ↰174 / ←94 ←116 ↱80	↳327 ↰124 / ↳59 ←172	←154 ←345	↳135 ↓2 ↰87 / ←281 ←239
89→ 182→ 36↳ / ↳48 ↑266 ↱117	112→ 159→	261→ 204→ / ↳175 ↑1 ↱67	378→ 429↳

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

FIGURE 3-E
EXISTING PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
↳160 ↓515 ↲274 / ←169 ←174 ↰86	↳151 ↓13 ↲305 / ←463 ←791 ↰61	↳392 ↓1 ↲431 / ←923 ←251	←417 ←649	↳50 ↓7 ↲31 / ←46 ←744 ↰70	↳75 ↓29 ↲50 / ←70 ←730 ↰76
128→ 96→ 40↳ / ↱37 ↑416 ↰69	156→ 647→ 8↳ / ↱52 ↑11 ↰60	597→ 415↳	271→ 757→ / ↱525 ↑0 ↰360	54→ 796→ 236↳ / ↱272 ↑8 ↰62	96→ 769→ 9↳ / ↱55 ↑33 ↰110

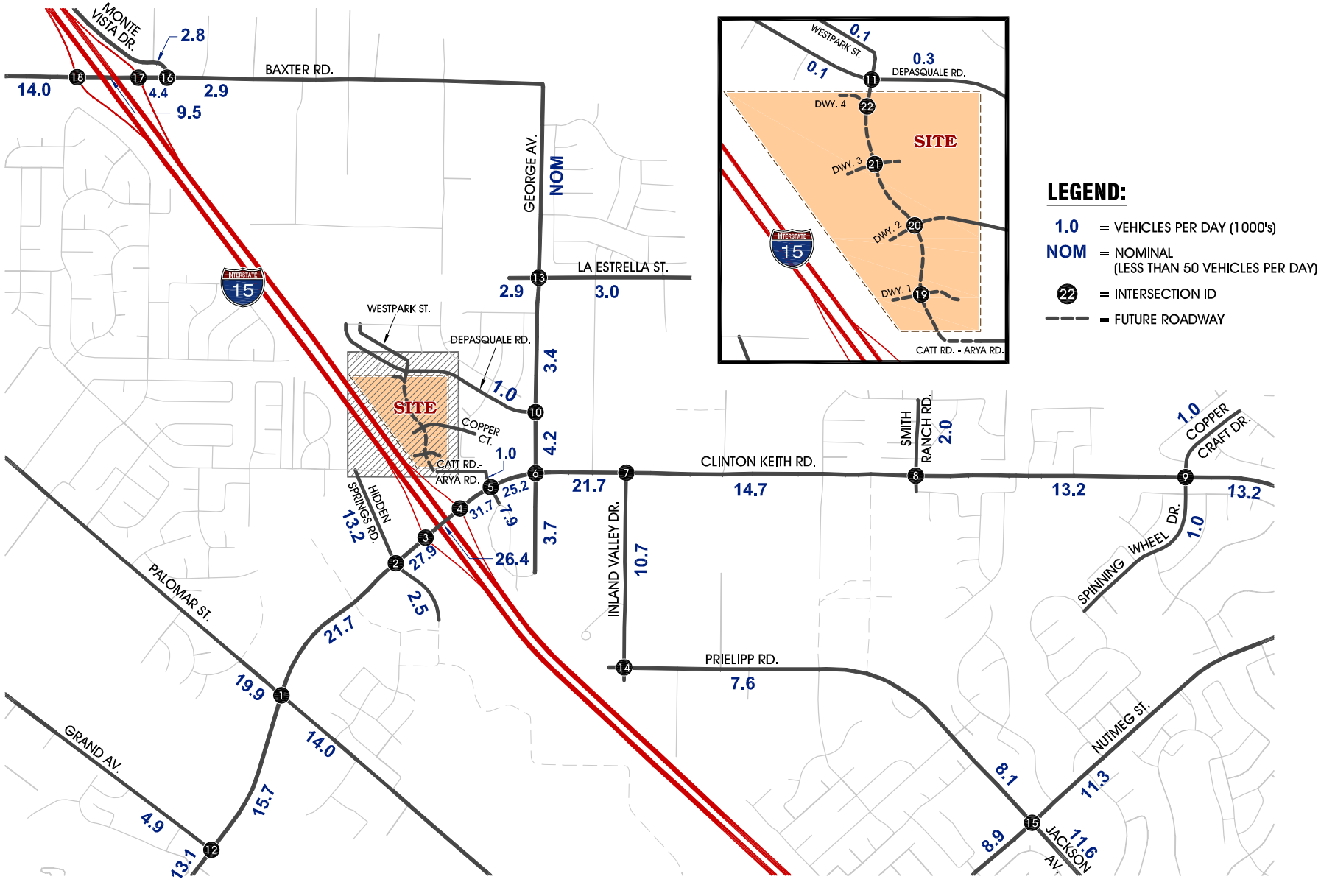
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
←503 ↰59	↳39 ↓3 ↲33 / ←38 ←479 ↰15	↳15 ↓1 ↲17 / ←20 ←491 ↰17	↳4 ←125
0↳ 554→ 341↳ / ↱388 ↰107	57→ 531→ 20↳ / ↱30 ↑0 ↰3	30→ 526→ 21↳ / ↱13 ↑3 ↰29	0↳ 29↳ / ↱48 ↑151

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
↳0 ↲4 / ↳7 ←7	↳48 ↲169 / ↳142 ←521	↳0 ↓0 ↲1 / ↳0 ←97 ↰33	↳7 ↓0 ↲302 / ↳318 ←4 ↰2
0↳ 4→	50→ 475→	0↳ 100→ 27↳ / ↱20 ↑0 ↰22	26→ 11→ 0↳ / ↱0 ↑0 ↰0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
↳56 ↓211 ↲138 / ↳214 ←208 ↰125	↳105 ↓27 ↲ / ↳26 ←69	↳63 ←111	↳171 ↓2 ↲58 / ←446 ↰50
101→ 204→ 51↳ / ↱57 ↑218 ↰76	78→ 117→	148→ 145→ / ↱385 ↑4 ↰50	235→ 314↳

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

FIGURE 3-F
EXISTING (2014) AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

TABLE 3-1

INTERSECTION ANALYSIS FOR EXISTING (2014) CONDITIONS

ID	Intersection	Traffic Control [1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service[3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Palomar St. / Clinton Keith Rd.	TS	1	2	1	1	1	1	1	2	0	1	2	1	23.1	23.5	C	C
2	Hidden Springs Rd. / Clinton Keith Rd.	TS	0	1!	0	1	1	0	1	2	1	1	2	1	20.4	19.0	C	B
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	13.1	11.4	B	B
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	16.6	14.2	B	B
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	10.4	10.8	B	B
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	12.4	11.1	B	B
7	Inland Valley Dr. / Clinton Keith Rd.	TS	1	0	1	0	0	0	1	2	1	1	1	0	9.8	11.4	A	B
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	8.3	6.0	A	A
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	5.7	5.1	A	A
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	11.6	9.2	B	A
11	Westpark St. / Depasquale Rd.	CSS	0	0	0	0	1!	0	0.5	0.5	0	0	1	0	8.6	8.6	A	A
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	9.0	9.2	A	A
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	12.4	7.8	B	A
14	Inland Valley Dr. / Prielipp Rd.	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	9.2	14.2	A	B
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	26.7	25.0	C	C
16	Monte Vista Dr. / Baxter Rd.	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	28.0	10.0	D	A
17	I-15 NB Ramps / Baxter Rd.	AWS	0	1	d	0	0	0	1	1	0	0	1	0	35.8	16.9	E	C
18	I-15 SB Ramps / Baxter Rd.	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	29.2	F	D
19	Dwy. 1 / Westpark St.		Future Intersection												-	-	-	-
20	Dwy. 2 / Westpark St.		Future Intersection												-	-	-	-
21	Dwy. 3 / Westpark St.		Future Intersection												-	-	-	-
22	Dwy. 4 / Westpark St.		Future Intersection												-	-	-	-

1 TS = Traffic Signal; Cross-Street Stop

2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane

3 Delay and level of service calculated using the following analysis software: Synchro 8.0

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\3-1

TABLE 3-2

FREEWAY RAMP ANALYSIS FOR EXISTING (2014) CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road	3	688	824	20.7	20.7	C	C
	SB On Ramp at Clinton Keith Road	3	991	667	25.6	21.3	C	C
I-15 Northbound	NB Off Ramp at Clinton Keith Road	3	424	885	14.9	24.3	B	C
	NB On Ramp at Clinton Keith Road	3	769	688	20.9	26.4	C	C

[1] Existing ramp locations consist of 2 lanes (on/off ramps).

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

Appendix "D". As shown on Table 3-2, the freeway ramps analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours.

Basic freeway segment analysis results are summarized in Table 3-3. The freeway segment calculation worksheets are included in Appendix "E". As shown on Table 3-3, the freeway segments analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours.

E. Traffic Signal Warrant Analysis

Traffic signal warrant analysis included in this report utilizes the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD). The Peak Hour Volume-based Warrant 3 is used for all existing unsignalized intersections within the study area.

Appendix "F" includes the traffic signal warrant worksheets. Based on Appendix "F", the following unsignalized study area intersections are anticipated to meet traffic signal warrants under existing traffic conditions:

STUDY AREA INTERSECTIONS
14. Inland Valley Drive / Prielipp Road
16. Monte Vista Drive / Baxter Road
17. I-15 SB Ramps / Baxter Road
18. I-15 NB Ramps / Baxter Road

F. Transit Service

The Riverside Transit Agency (RTA) Route 7 currently services the study area. Route 7 runs between the Inland Valley Medical Center and the Lake Elsinore Outlet Mall. There are bus stop along Clinton Keith Road in the vicinity of the project between the I-15 Freeway and Inland Valley Road. The headways between buses are about one hour intervals. It is estimated that the distance from the bus stop to the project site is about a quarter of a mile.

TABLE 3-3

BASIC FREEWAY SEGMENT ANALYSIS FOR EXISTING (2014) CONDITIONS

Freeway	Segment	Lanes on Freeway	Volumes		Density[1]		Level of Service[2]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road	3	4,404	4,005	24.7	22.0	C	C
	South of Clinton Keith Road	3	4,707	3,848	27.0	21.0	D	C
I-15 Northbound	South of Clinton Keith Road	3	3,359	5,035	18.2	29.7	C	D
	North of Clinton Keith Road	3	3,704	4,838	20.2	28.0	C	D

[1] Density is measured by passenger cars per lane (pc/mi/ln)

[2] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

4.0 PROJECTED FUTURE TRAFFIC

This section of the report quantifies the number of trips generated by the proposed project and other known developments in the area.

A. Project Traffic

1. Ambient Growth Rate

Some traffic volume increases on roadways can be attributed to vehicles originating outside of the study area. These types of trips either end up within the study area or pass-through onto an outside destination. Therefore, to account for these trips (termed "ambient growth"), a growth rate can be applied to existing traffic volumes.

A 2% ambient growth rate that has been used in this study to account for traffic not attributed to the project or other planned developments within the study area. The City of Wildomar Transportation Department staff has previously reviewed and approved this rate.

2. Project Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The trip generation for the project is based upon the specific land use which has been planned for this development. For the purpose of this analysis, the following land use assumption is evaluated:

- 191 multi-family dwelling units
- 16,000 square feet high turnover restaurant
- 85,000 square feet supermarket
- 17,354 square feet shopping center

Trip generation rates for the proposed development are shown in Table 4-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE). It should be noted that the average trip rates were used for the non-shopping center uses. However, a regression equation was used to determine the trip rates shown in Table 4-1 for the shopping center use. This approach takes into consideration that trips are reduced on a square footage basis as the size of a shopping center increases. This is attributed to a combining of trips by both trucks delivering goods and patrons visiting multiple stores in a single trip.

TABLE 4-1
PROJECT TRIP GENERATION RATES

LAND USE	ITE CODE	QUANTITY[2]	PEAK HOUR TRIP RATES[1]						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Residential Condo/Townhouse	230	191 DU	0.07	0.37	0.44	0.35	0.17	0.52	5.81
High Turnover (Sit-Down) Restaurant	932	16 TSF	5.95	4.86	10.81	5.91	3.94	9.85	127.15
Supermarket	850	85 TSF	2.11	1.29	3.40	4.83	4.65	9.48	102.24
Shopping Center	820	17.354 TSF	1.91	1.17	3.08	5.13	5.55	10.68	125.36

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition, 2012.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

The daily and peak hour trip generations for the proposed project are shown on Table 4-2. The proposed development is projected to generate a total of approximately 13,574 trip-ends per day with 588 vehicles per hour during the AM peak hour and 1,211 vehicles per hour during the PM peak hour.

TABLE 4-2
PROJECT TRIP GENERATION SUMMARY

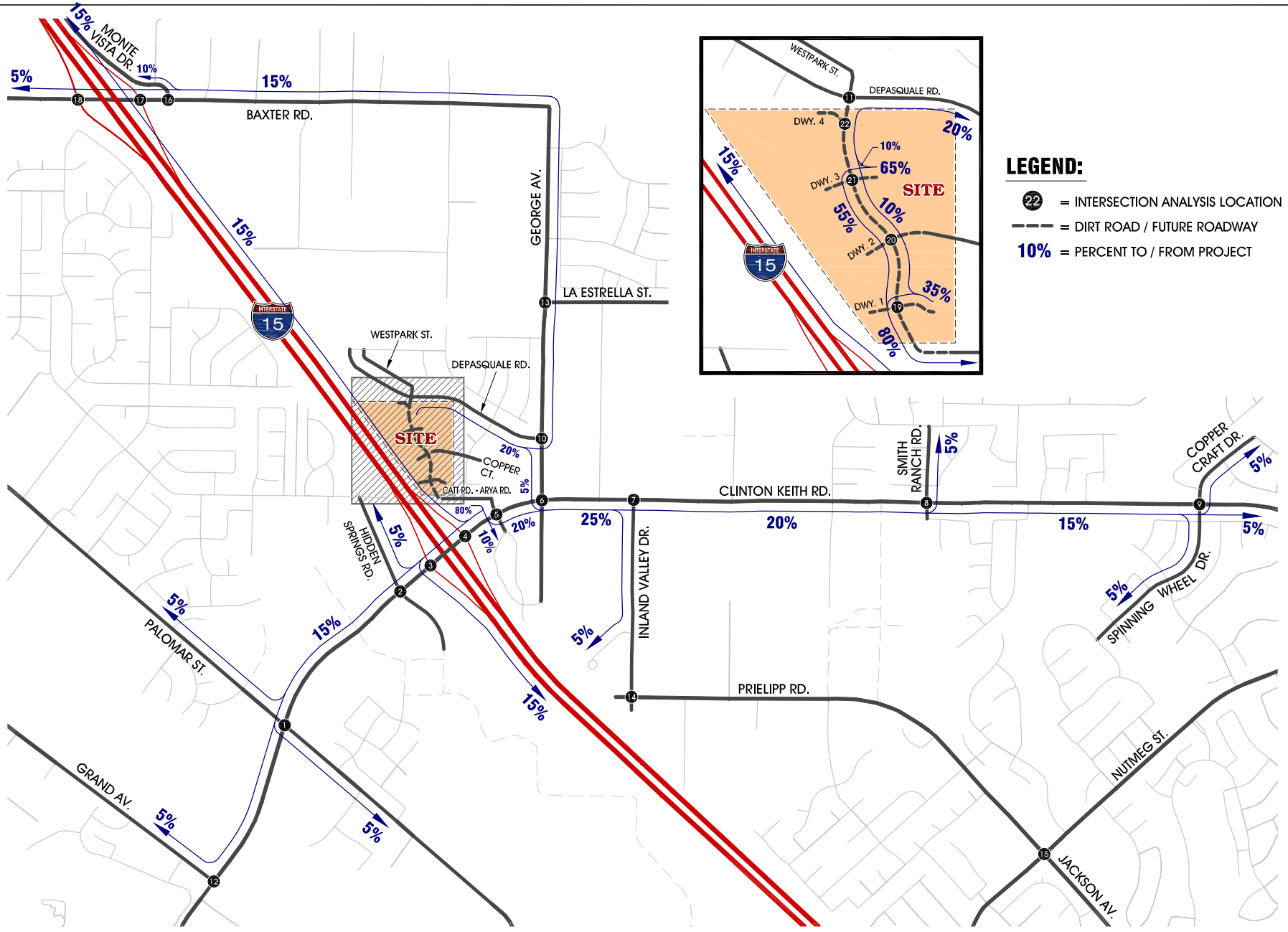
LAND USE	QUANTITY[1]	PEAK HOUR						DAILY
		AM			PM			
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Residential Condo/Townhouse	191 DU	13	71	84	67	32	99	1,110
High Turnover (Sit-Down) Restaurant	16 TSF	95	78	173	95	63	158	2,034
Supermarket	85 TSF	179	110	289	411	395	806	8,690
Shopping Center	17.354 TSF	33	20	53	89	96	185	2,175
Pass by and Internal Capture (20%) Reduction		(7)	(4)	(11)	(18)	(19)	(37)	(435)
Shopping Center Subtotal		26	16	42	71	77	148	1,740
TOTAL PROJECT TRIPS		**313**	**275**	**588**	**644**	**567**	**1,211**	**13,574**

[1] DU = Dwelling Units; TSF = Thousand Square Feet

3. <u>Project Trip Distribution and Assignment</u>

Trip distribution represents the directional orientation of traffic to and from the project site. The project's trip distribution patterns are based on the proximity of the project uses to the proposed driveway locations, the surrounding trip producers/attractors (employment bases, commercial opportunities, schools, recreation centers, etc.), and the regional freeway interchanges. The trip distribution patterns for the project are illustrated on Figure 4-A and Figure 4-B. It should be noted that 10% of the

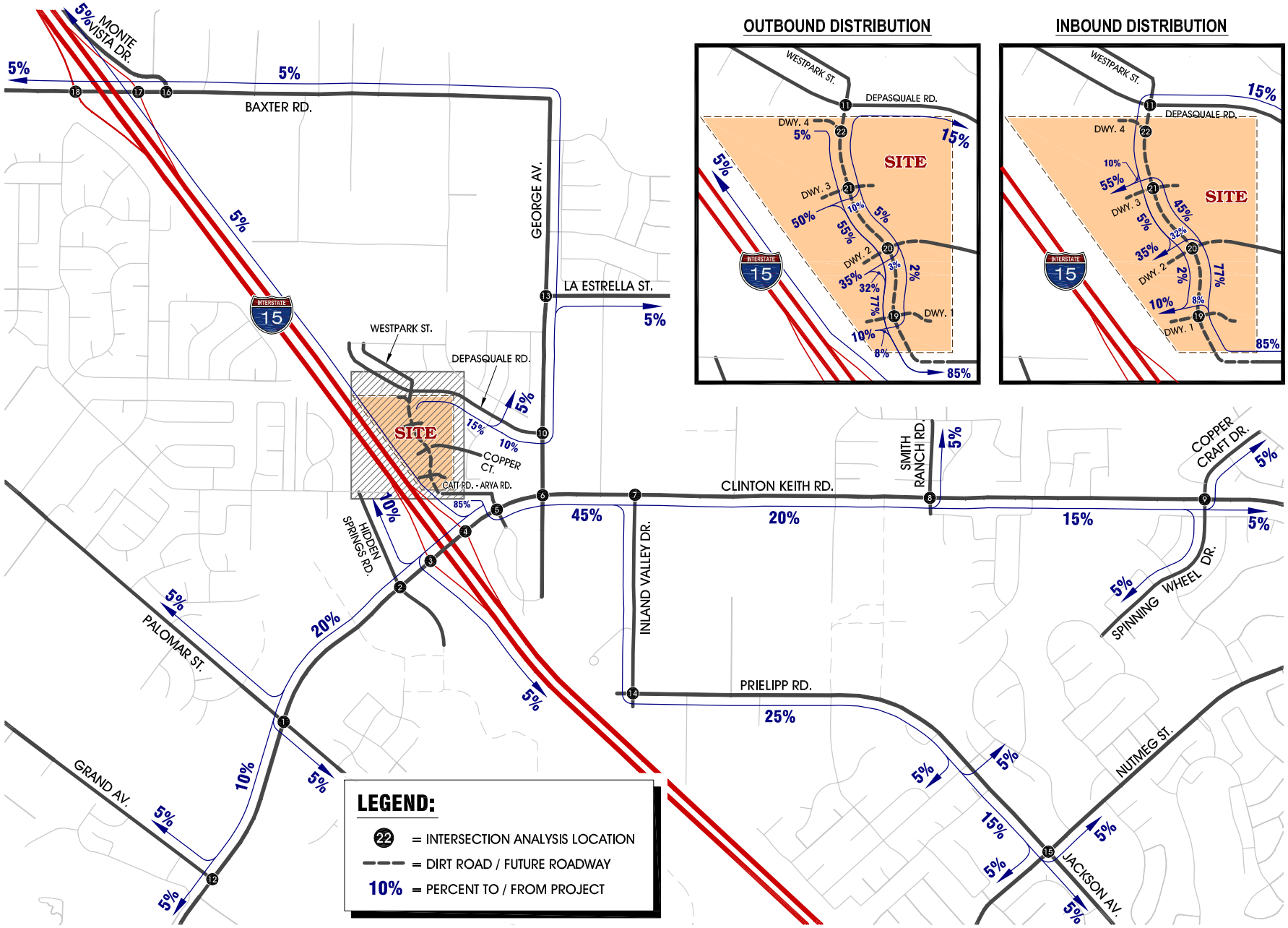
FIGURE 4-A
PROJECT (RESIDENTIAL) TRIP DISTRIBUTION



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-B
PROJECT (SUPERMARKET) TRIP DISTRIBUTION



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

project traffic was directed towards the Oak Creek Mall. This center provides a nearby trip attractor for employment and commercial opportunities.

4. Other Trip Generation Factors

It should be noted that a portion of the project's shopping center trips are anticipated to consist of pass-by and internal captured traffic. Pass-by trips are not new trips but those that are already on the roadway system but are anticipated to "pass-by" the project on their way to a primary destination. Internal captured trips are those that interact with other uses (supermarket and high turnover restaurant) that are on-site.

The ITE Manual indicates that an average of 34% of shopping center trips are comprised of pass-by trips during the PM peak hour. However, for the purposes of this study, a lower reduction (20%) in trips has been utilized to ensure a conservatively high estimate of project traffic.

The project also consists of residential units that do not generate a significant amount of pass-by trips. Furthermore, it is unlikely that trips will be reduced to/from the site by non-motorized modes of travel due to the lack of; 1) convenient transit opportunities, 2) bike lanes, and 3) pedestrian trails. This approach yields a conservative estimate of vehicular traffic impacts within the study area.

5. Project Peak Hour Turning Movement Traffic

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site. Based on the identified project traffic generation and distribution, Project AM and PM peak hour intersection traffic volumes are shown on Figure 4-C and Figure 4-D, respectively. The project average daily traffic (ADT) volumes utilized is shown on Figure 4-E.

Project Pass-By AM and PM peak hour intersection volumes are shown on Figure 4-F and Figure 4-G.

B. Cumulative Traffic (Background)

1. Method of Projection

To assess existing plus ambient plus cumulative plus project traffic conditions, project traffic is combined with existing traffic, area-wide growth and other future

FIGURE 4-C
PROJECT ONLY AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 0, T 0, R 16 L 14, T 24, R 14	L 0, T 0, R 31 L 24, T 51, R 0	L 0, T 0, R 17 T 75, R 21	L 21, T 96	L 117, T 7, R 106 L 138, T 0, R 0	L 0, T 0, R 4 L 1, T 138, R 0
L 0, T 31, R 0 L 0, T 0, R 16	L 0, T 62, R 0 L 0, T 0, R 0	L 93, T 0	L 0, T 110 L 0, T 0, R 17	L 127, T 0, R 0 L 0, T 1, R 0	L 0, T 106, R 0 L 0, T 0, R 0

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 63, R 0	L 16, T 0, R 0 L 0, T 47, R 0	L 16, T 0, R 0 L 0, T 16, R 0	L 32, T 0
L 0, T 55, R 55 L 76, T 0	L 14, T 41, R 0 L 0, T 0, R 0	L 14, T 14, R 14 L 16, T 0, R 0	L 31, T 4 L 1, T 0

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 0, T 0, R 0 L 0, T 0, R 48	L 0, T 16 L 14, T 10	L 0, T 17, R 0 L 0, T 0, R 15	L 0, T 0, R 51 L 75, T 0, R 0
L 0, T 0, R 0 L 0, T 0, R 45	L 0, T 15	L 0, T 0, R 0 L 0, T 21, R 10	L 0, T 0, R 0 L 0, T 0, R 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 15, T 0, R 0 L 0, T 15, R 0	L 0, T 1 L 7, T 14	L 0, T 14	L 0, T 0, R 0 T 14, R 0
L 10, T 10, R 10 L 15, T 0, R 0	L 0, T 16	L 0, T 16 L 0, T 0, R 0	L 16, T 0

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
L 6, T 196, R 1 L 7, T 0, R 18	L 9, T 138, R 0 L 0, T 0, R 0	L 30, T 26, R 1 L 7, T 0, R 39	T 48
L 4, T 0, R 16 L 24, T 238, R 3	L 6, T 0, R 65 L 96, T 153, R 0	L 20, T 0, R 82 L 135, T 17, R 7	L 10 T 45

FIGURE 4-D
PROJECT ONLY PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
↰0 ↑0 ↱32 ↳28 ←55 ↲28	↰0 ↑0 ↱61 ↳55 ←112 ↲0	↰0 ↑0 ↱39 ←167 ↲32	↳32 ←198	↰230 ↓3 ↱247 ↳273 ←0 ↲0	↰0 ↑0 ↱2 ↳3 ←273 ↲0
0→ 61→ 0↳ ↰0 ↑0 ↱32	0→ 125→ 0↳ ↰0 ↑0 ↱0	186→ 0↳	0→ 225→ ↰0 ↑0 ↱39	264→ 0→ 0↳ ↰0 ↑7 ↱0	0→ 247→ 0↳ ↰0 ↑0 ↱0

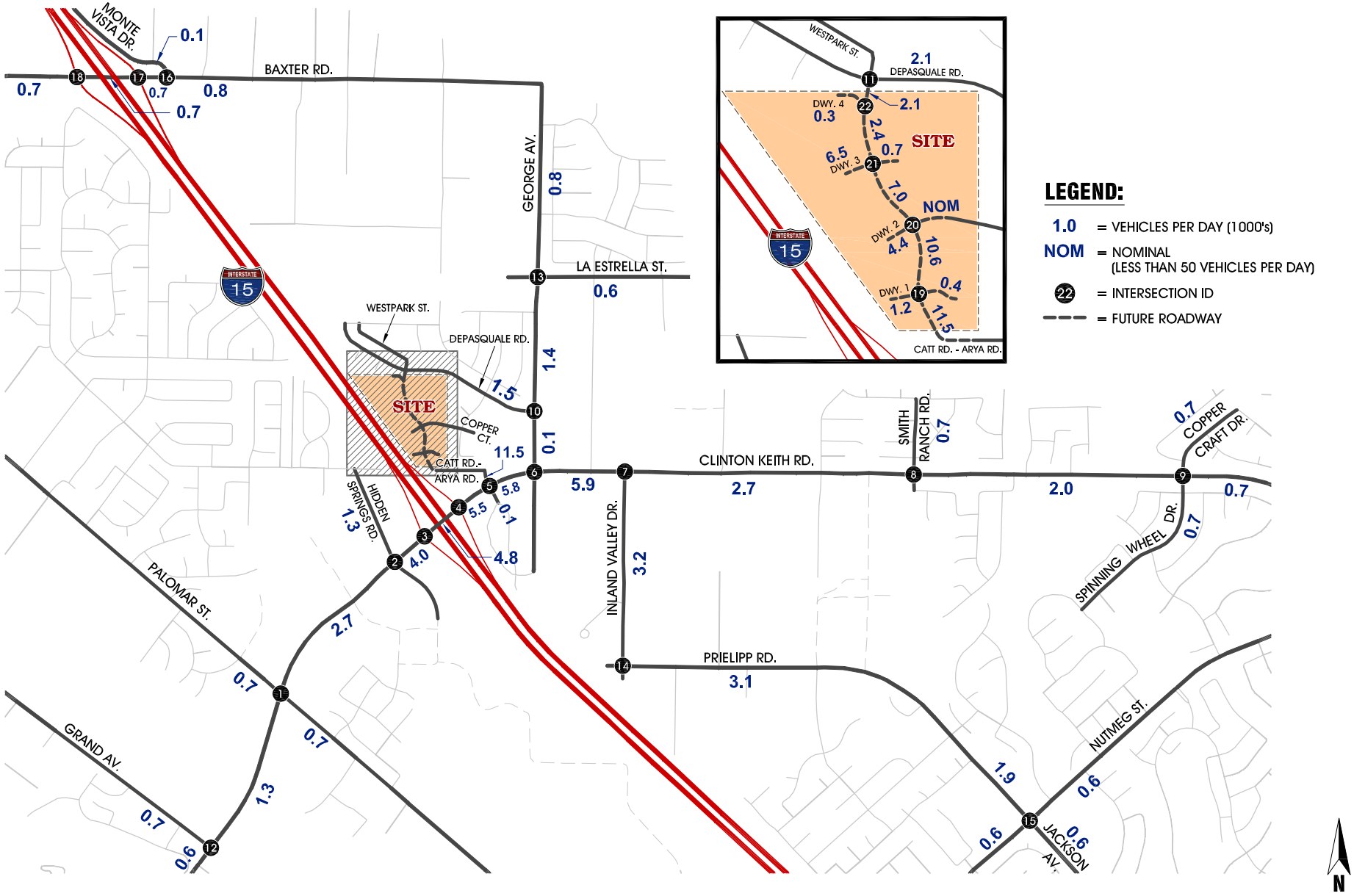
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
←129 ↲0	↰32 ↓0 ↱0 ↳0 ←97 ↲0	↰32 ↓0 ↱0 ↳0 ←32 ↲0	↰68 ↓0
0→ 113→ 135↳ 148→ 0↳	28→ 85→ 0↳ ↰0 ↑0 ↱0	28→ 28→ 28↳ 32→ ↰0 ↑0 ↱0	58→ 2↳ 3→ 0↑

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
↰0 ↑0 ↱0 ↳0 ←0 ↲100	↰0 ↓32 ↳28 ←27	↰0 ↓39 ↱0 ↳0 ←0 ↲29	↰0 ↑0 ↱134 ↳144 ←0 ↲0
0→ 0→ 0↳ ↰0 ↑0 ↱87	0→ 29→	0→ 0→ 0↳ ↰0 ↑32 ↱27	0→ 0→ 0↳ ↰0 ↑0 ↱0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
↰29 ↑0 ↱0 ↳0 ←29 ↲0	↰0 ↓7 ↳3 ←28	↳0 ←28	↰0 ↑0 ↱0 ←28 ↲0
27→ 27→ 27↳ ↰29 ↑0 ↱0	0→ 32→	0→ 32→ ↰0 ↑0 ↱0	32→ 0↳

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
↰12 ↓430 ↱7 ↳3 ←0 ↲8	↰17 ↓277 ↱0 ↳0 ←0 ↲0	↰58 ↓62 ↱7 ↳3 ←0 ↲18	←100
11→ 0→ 43↳ ↰46 ↑481 ↱17	16→ 0→ 171↳ ↰185 ↑310 ↱0	54→ 0→ 214↳ ↰260 ↑30 ↱37	27→ 87↑

FIGURE 4-E
PROJECT ONLY AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-F
PROJECT ONLY PASS-BY AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
Not Applicable	Not Applicable	Not Applicable	Not Applicable	2 0 3 / 2 -2 0 / 3 -3 0 / 0 0 0	Not Applicable
7. Inland Valley Dr. / Clinton Keith Rd.	**8. Smith Ranch Rd. / Clinton Keith Rd.**	**9. Copper Craft Dr. / Clinton Keith Rd.**	**10. George Av. / Depasquale Rd.**		
Not Applicable	Not Applicable	Not Applicable	Not Applicable		
11. Westpark St. / Depasquale Rd.	**12. Grand Av. / Clinton Keith Rd.**	**13. George Av. / La Estrella St.**	**14. Inland Valley Dr. / Prielipp Rd.**		
Not Applicable	Not Applicable	Not Applicable	Not Applicable		
15. Nutmeg St. / Jackson Av.	**16. Monte Vista Dr. / Baxter Rd.**	**17. I-15 NB Ramps / Baxter Rd.**	**18. I-15 SB Ramps / Baxter Rd.**		
Not Applicable	Not Applicable	Not Applicable	Not Applicable		
19. Dwy. 1 / Westpark St.	**20. Dwy. 2 / Westpark St.**	**21. Dwy. 3 / Westpark St.**	**22. Dwy. 4 / Westpark St.**		
0 3 0 / 0 0 0 / 0 0 2 / 2 3 0	0 0 0 / 0 0 0 / 0 0 3 / 3 0 0	0 0 0 / 0 0 0 / 0 0 0 / 0 0 0	0 / 0 / 0		

FIGURE 4-G
PROJECT ONLY PASS-BY PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
Not Applicable	Not Applicable	Not Applicable	Not Applicable	6 0 8 / 6 -6 0 / 8 -8 0 / 0 0 0	Not Applicable

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
Not Applicable	Not Applicable	Not Applicable	Not Applicable

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
Not Applicable	Not Applicable	Not Applicable	Not Applicable

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
Not Applicable	Not Applicable	Not Applicable	Not Applicable

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
0 10 0 / 0 0 0 / 0 0 4 / 4 10 0	0 0 0 / 0 0 0 / 0 0 10 / 10 0 0	0 0 0 / 0 0 0 / 0 0 0 / 0 0 0	0 / 0 / 0

developments which are approved or being processed concurrently in the study area. Developments which are being processed concurrently in the study area have been provided by the City of Wildomar staff.

2. Other Approved or Proposed Development Projects

The cumulative developments have been included along with the land use associated with each project. The location of the cumulative projects provided by the City are shown on Figure 4-H.

3. Other Approved Projects Trip Generation

Table 4-3 presents the cumulative trip generation rates. Table 4-4 presents the cumulative development land uses and trip generation summary. As presented in Table 4-4 Cumulative developments are projected to generate a total of approximately 65,852 trip-ends per day with 3,671 vehicles per hour during the AM peak hour and 6,115 vehicles per hour during the PM peak hour.

4. Other Approved Development Trip Distribution and Assignments

Appendix "G" contains the directional distribution and assignment of the cumulative development traffic.

5. Total Background Peak Hour Turning Movement Volumes

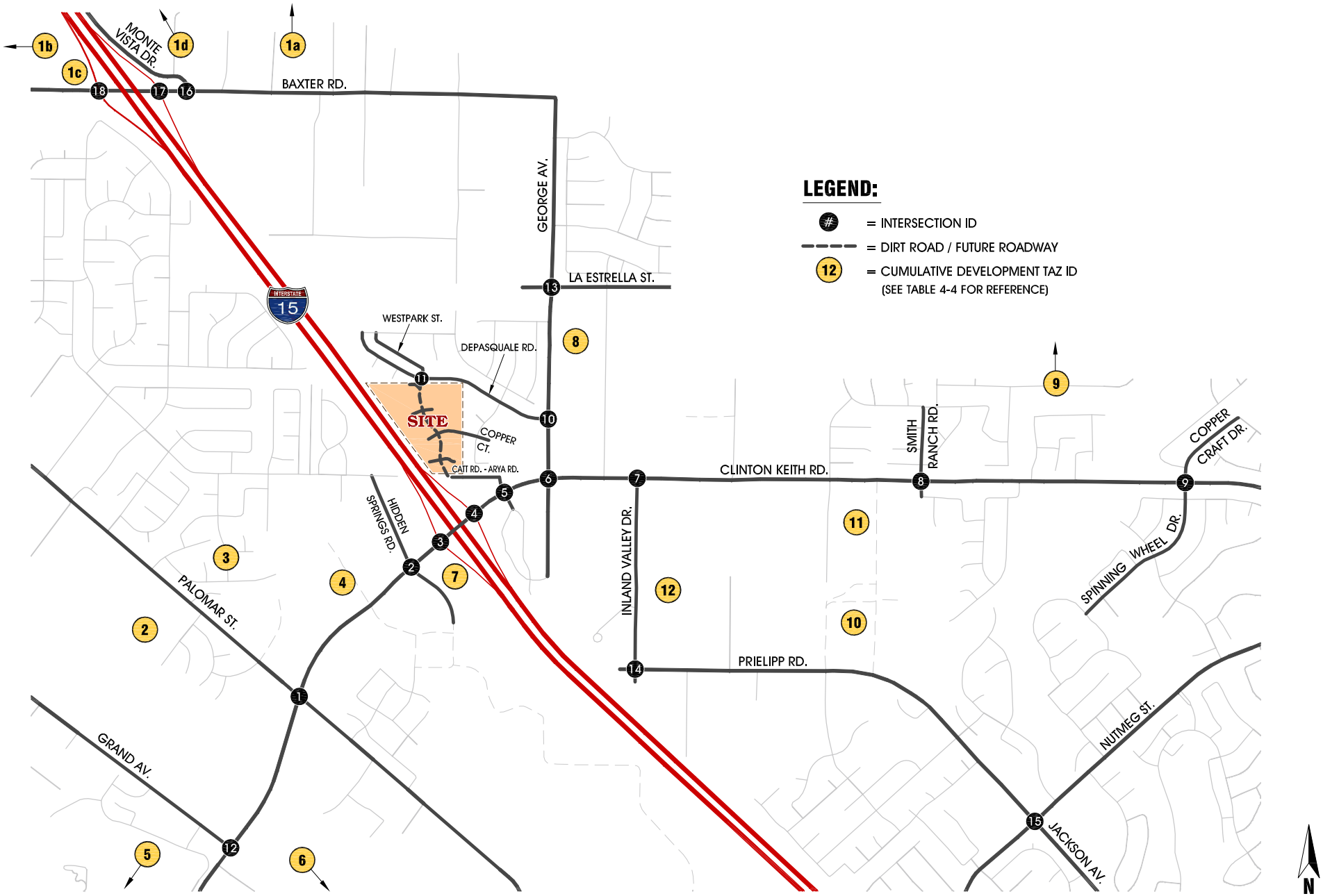
Based on the identified trip distribution for the cumulative development on arterial highways throughout the study area, cumulative development AM and PM peak hour intersection turning movement volumes are shown on Figure 4-I and 4-J, respectively. Average daily traffic volumes are shown on Figure 4-K.

Existing plus Project (E+P) AM and PM peak hour intersection turning movement volumes are shown on Figure 4-L and 4-M, respectively, E+P average daily traffic volumes are shown on Figure 4-N.

Existing plus Ambient plus Project (EAP) AM and PM peak hour intersection turning movement volumes are shown on Figure 4-O and 4-P, respectively. E+A+P average daily traffic volumes are shown on Figure 4-Q.

Existing plus Ambient plus Project plus Cumulative (EAPC) AM and PM peak hour intersection turning movement volumes are shown on Figure 4-R and 4-S, respectively. EAPC average daily traffic volumes are shown on Figure 4-T.

FIGURE 4-H
CUMULATIVE DEVELOPMENTS LOCATION MAP



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:05.dwg)

TRAMES SOLUTIONS INC.

(C:\TRAMES\0201-0002\ACAD\05.dwg)

TABLE 4-3

TRIP GENERATION RATES[1]

LAND USE	ITE CODE	QUANTITY[2]		PEAK HOUR TRIP RATES						DAILY
				AM			PM			
				IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Fam. Detached	210	varies	DU	0.19	0.56	0.75	0.75	0.63	1.38	0.37
Apartment	220	varies	DU	0.10	0.41	0.51	0.51	0.40	0.91	0.22
Residential Condo/Townhouse	230	varies	DU	0.07	0.37	0.44	0.44	0.35	0.79	0.17
Day Care Center	565	170	STU	0.42	0.38	0.80	0.80	0.39	1.19	0.43
Nursing Home	620	25.000	TSF	0.39	0.16	0.55	0.55	0.38	0.93	0.36
Medical-Dental Office	720	varies	TSF	1.82	0.48	2.30	2.30	0.93	3.23	2.53
Free-Standing Discount Superstore	813	varies	TSF	0.94	0.90	1.84	1.84	1.90	3.74	1.97
Specialty Retail Center	814	10.500	TSF	3.28	3.56	6.84	6.84	2.81	9.65	2.21
Shopping Center	820	7.800	TSF	2.61	1.60	4.21	6.67	7.23	13.90	165.85
Shopping Center	820	75.000	TSF	1.08	0.66	1.74	3.16	3.43	6.59	75.10
Shopping Center	820	79.497	TSF	1.06	0.65	1.71	3.10	3.36	6.46	73.59
Shopping Center	820	36.990	TSF	1.42	0.87	2.29	3.99	4.33	8.32	96.18
Shopping Center	820	20.894	TSF	1.78	1.09	2.87	4.82	5.22	10.04	117.47
Shopping Center	820	30.000	TSF	1.55	0.95	2.50	4.28	4.64	8.92	103.50
Shopping Center	820	46.600	TSF	1.30	0.80	2.10	3.70	4.01	7.71	88.72
Shopping Center	820	40.000	TSF	1.38	0.85	2.23	3.89	4.22	8.11	93.59
Shopping Center	820	19.250	TSF	1.84	1.13	2.97	4.95	5.37	10.32	120.89
Fast Food w/o Drive Thru	933	3	TSF	26.32	17.55	43.87	43.87	13.34	57.21	12.81
Fast Food w/ Drive Thru	934	1.5	TSF	23.16	22.26	45.42	45.42	16.98	62.40	15.67
Gasoline/Service Station	944	6	VFP	6.04	6.04	12.08	12.08	6.93	19.01	6.93

[1] Source: ITE (Institute of Transportation Engineers) Trip Generation Manual, 9th Edition, 2012.

[2] DU = Dwelling Units; TSF = Thousand Square Feet; VFP = Vehicle Fueling Position

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\4-3

TABLE 4-4

CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

TAZ ID	PROJECT NAME[3]	LAND USE	QUANTITY[1]	AM Peak Hour IN	AM Peak Hour OUT	AM Peak Hour TOTAL	PM Peak Hour IN	PM Peak Hour OUT	PM Peak Hour TOTAL	DAILY
1a	Wal-Mart Retail	Free-Standing Discount Superstore	185.992 TSF	175	167	342	353	366	719	9,153
		Shopping Center	7.800 TSF	20	12	32	52	56	108	1,294
		Pass-By Reduction (25%)		-	-	-	(41)	(42)	(83)	(1,045)
		Wal-Mart Subtotal		195	179	374	364	380	744	9,402
	Orange Bundy (TPM 30522)	Shopping Center	79.497 TSF	84	52	136	246	267	513	5,850
		Fast Food w/ Drive Thru	1.500 TSF	38	36	74	26	24	50	744
		Gasoline/Service Station	6 VFP	36	36	72	42	42	84	1,011
		Retail Pass-By Reduction (25%)		*(17)*	*(17)*	*(34)*	*(64)*	*(64)*	*(128)*	*(2,340)*
		Orange Bundy Subtotal		141	107	248	250	269	519	5,265
	Oak Creek (TTM 36388)	Single Fam. Detached	275 DU	52	154	206	176	102	278	2,632
		Pharmacy/Drugstore w/Drive-Thru win	14 TSF	22	17	39	75	75	150	1,276
		Pass-By Reduction		-	-	-	(37)	(37)	(74)	(625)
		Gas/Service Station w/Food Mart and Car Wash	8 VFP	49	47	96	57	55	112	1,223
		Pass-By Reduction		(30)	(29)	(59)	(32)	(31)	(63)	(685)
		Specialty Retail	2.55 TSF	2	1	3	3	4	7	113
		Oak Creek Subtotal		95	190	285	242	168	410	3,934
	Rancon Monte Vista (TTM 31409)	Single Fam. Detached	126 DU	24	71	95	79	47	126	1,200
	Bundy Cyn. Plaza (TPM 32257)	Shopping Center	36.990 TSF	53	32	85	148	160	308	3,558
	Subway Commercial Proj. (10-0222)	Specialty Retail Center	10.500 TSF	34	37	71	30	23	53	465
	Sehremelis PAR (TTM 29426)	Single Fam. Detached	80 DU	15	45	60	50	30	80	762
	Rancon GPA Initiation PAR	Apartment	200 DU	20	82	102	80	44	124	1,330
	TAZ 1a Subtotal			577	743	1,320	1,243	1,121	2,364	25,916
1b	Lesle Tract Map (TTM 36519)	Single Fam. Detached	10 DU	2	6	8	6	4	10	95
	TAZ 1b Subtotal			2	6	8	6	4	10	95
1c	Baxter Village	Shopping Center	75 TSF	81	50	131	237	257	494	5,633
		Apartment	204 DU	20	84	104	82	45	127	1,357
		Single Fam. Detached	67 DU	13	38	51	42	25	67	638
		Internal Trip Reduction (10%)		(11)	(17)	(28)	(36)	(33)	(69)	(763)
		Pass-By Reduction (25%)		-	-	-	(56)	(55)	(111)	(1,268)
	TAZ 1c (Baxter Village) Subtotal			103	155	258	269	239	508	5,597
1d	Cornerstone Church Preschool & Admin Bldg.	Day Care Center	170 STU	71	65	136	66	73	139	762
	TAZ 1d Subtotal			71	65	136	66	73	139	762
2	Elm St. Subdivision (TTM 33840)	Single Fam. Detached	15 DU	3	8	11	9	6	15	143
	McVicar Residential (TTM 32035)	Single Fam. Detached	49 DU	9	27	36	31	18	49	466
	C.V. Communities DA (TTM 25122 & TM 32078)	Single Fam. Detached	55 DU	10	31	41	35	20	55	524
	Lennar Homes Andalusia III (TTM 30839 & TM 30939)	Single Fam. Detached	55 DU	10	31	41	35	20	55	524
	Meritage Homes (TTM 31499)	Single Fam. Detached	74 DU	14	41	55	47	27	74	704
	TAZ 2 Subtotal			46	138	184	157	91	248	2,361

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\4-4

TABLE 4-4

CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

TAZ ID	PROJECT NAME[3]	LAND USE	QUANTITY[1]	AM Peak Hour IN	AM Peak Hour OUT	AM Peak Hour TOTAL	PM Peak Hour IN	PM Peak Hour OUT	PM Peak Hour TOTAL	DAILY
3	Lennar Homes Andalusia II (TTM 31499)	Single Fam. Detached	44 DU	8	25	33	28	16	44	419
	TAZ 3 Subtotal			8	25	33	28	16	44	419
4	C.V. Communities (TTM 32535)	Single Fam. Detached	84 DU	16	47	63	53	31	84	800
	Stable Lanes Retail Ctr. (08-0166)	Shopping Center	20.894 TSF	37	23	60	101	109	210	2,454
		Day Care Center	9.305 TSF	60	54	114	55	61	116	738
		Retail Pass-by Reduction (25%)		-	-	-	(27)	(26)	(53)	(614)
		Stable Lanes Retail Center Subtotal		97	77	174	129	144	273	2,578
	Autozone Retail	Shopping Center	30.000 TSF	47	29	76	128	139	267	3,105
		Pass-by Reduction (25%)		-	-	-	(34)	(33)	(67)	(776)
		Autozone Retail Subtotal		47	29	76	94	106	200	2,329
	Subtotal TAZ 4			160	153	313	276	281	557	5,707
5	Park at Bear Creek (GPA-011-3031)	Single Fam. Detached	52 DU	10	29	39	33	19	52	495
	TAZ 5 Subtotal			10	29	39	33	19	52	495
6	Hoover Ranch (TTM 31895)	Single Fam. Detached	51 DU	10	29	39	32	19	51	486
	TAZ 6 Subtotal			10	29	39	32	19	51	486
7	Wildomar Square Retail Ctr. (PM 36080)	Shopping Center	46.600 TSF	61	37	98	172	187	359	4,134
	TAZ 7 Subtotal			61	37	98	172	187	359	4,134
8	Rancon 51 Development (TM 31479)	Single Fam. Detached	51 DU	10	29	39	32	19	51	486
	TAZ 8 Subtotal			10	29	39	32	19	51	486
9	Spring Meadow Ranch	Single Fam. Detached	596 DU	113	334	447	375	221	596	5,674
	TAZ 9 Subtotal			113	334	447	375	221	596	5,674
10	Villa Sienna Apartment	Apartment	180 DU	18	74	92	72	40	112	1,197
	Strata/Clinton Keith (13-0041)	Apartment	192 DU	19	79	98	77	42	119	1,277
		Shopping Center	40.000 TSF	55	34	89	156	169	325	3,744
		Internal Trip Reduction (10%)		(7)	(11)	(18)	(23)	(21)	(44)	(502)
		Pass-By Reduction (25%)		-	-	-	(40)	(39)	(79)	(906)
		Strata/Clinton Keith Subtotal		67	102	169	170	151	321	3,613
	Strata/Prielipp (13-0039)	Residential Condo/Townhouse	150 DU	11	56	67	53	26	79	872
		Nursing Home	25.000 TSF	10	4	14	10	9	19	190
		Strata/Prielipp Subtotal		21	60	81	63	35	98	1,062
	Lennar Residential (TM 36497)	Single Fam. Detached	67 DU	13	38	51	42	25	67	638
	TAZ 10 Subtotal			119	274	393	347	251	598	6,510
11	Rancon Medical & Retail Ctr.	Medical-Dental Office	36.700 TSF	67	18	85	34	93	127	1,326
		Shopping Center	19.250 TSF	35	22	57	95	103	198	2,327
		Fast Food w/o Drive Thru	3.000 TSF	79	53	132	40	38	78	2,148
	TAZ 11 Subtotal			181	93	274	169	234	403	5,801
12	Inland Valley Medical (08-0062)	Medical-Dental Office	39.000 TSF	71	19	90	36	99	135	1,409
	TAZ 12 Subtotal			71	19	90	36	99	135	1,409
GRAND TOTAL				1,542	2,129	3,671	3,241	2,874	6,115	65,852

[1] TSF = Thousand Square Feet; RM = Room; DU = Dwelling Units; VFP = Vehicle Fueling Positions; STU = Students

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\4-4

FIGURE 4-I
CUMULATIVE DEVELOPMENTS ONLY AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 13, T 16, R 161 L 105, T 28, R 43	L 0, T 0, R 38 L 41, T 135, R 34	L 44, T 0, R 44 T 165, R 127	L 55, T 248	L 0, T 0, R 0 L 0, T 303, R 11	L 16, T 0, R 7 L 3, T 298, R 3
L 16, T 56, R 6 L 2, T 5, R 47	L 0, T 204, R 27 L 17, T 0, R 20	L 201, T 62	L 62, T 183 L 44, T 0, R 68	L 0, T 252, R 0 L 0, T 0, R 5	L 6, T 251, R 0 L 0, T 0, R 1

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 286, R 21	L 4, T 0, R 0 L 0, T 209, R 0	L 1, T 0, R 0 L 0, T 208, R 0	L 0, T 23
L 0, T 218, R 41 L 17, R 6	L 3, T 185, R 0 L 0, T 0, R 0	L 1, T 182, R 1 L 1, T 0, R 0	L 0, T 0 L 0, T 8

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 0, T 0 L 0, T 0	L 2, T 14 L 18, T 25	L 0, T 1, R 0 L 0, T 0, R 0	L 0, T 0, R 0 L 0, T 0, R 0
L 0, T 0	L 6, T 64	L 0, T 0, R 1 L 1, T 4, R 0	L 0, T 0, R 0 L 0, T 0, R 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 31, T 0, R 0 L 0, T 65, R 0	L 40, T 4 L 5, T 3	L 11, T 31	L 21, T 0, R 11 T 43, R 10
L 25, T 63, R 39 L 37, T 0, R 0	L 48, T 1	L 32, T 38 L 21, T 0, R 11	L 59, T 32

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-J
CUMULATIVE DEVELOPMENTS ONLY PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 20, T 11, R 202 L 243, T 83, R 96	L 0, T 0, R 68 L 67, T 282, R 95	L 105, T 0, R 76 T 339, R 120	L 73, T 354	L 0, T 0, R 0 L 0, T 427, R 9	L 10, T 0, R 5 L 8, T 426, R 2
L 18, T 62, R 4 L 6, T 19, R 91	L 0, T 228, R 77 L 84, T 0, R 103	L 306, T 92	L 92, T 290 L 105, T 0, R 156	L 0, T 446, R 0 L 0, T 0, R 14	L 18, T 442, R 0 L 0, T 0, R 4

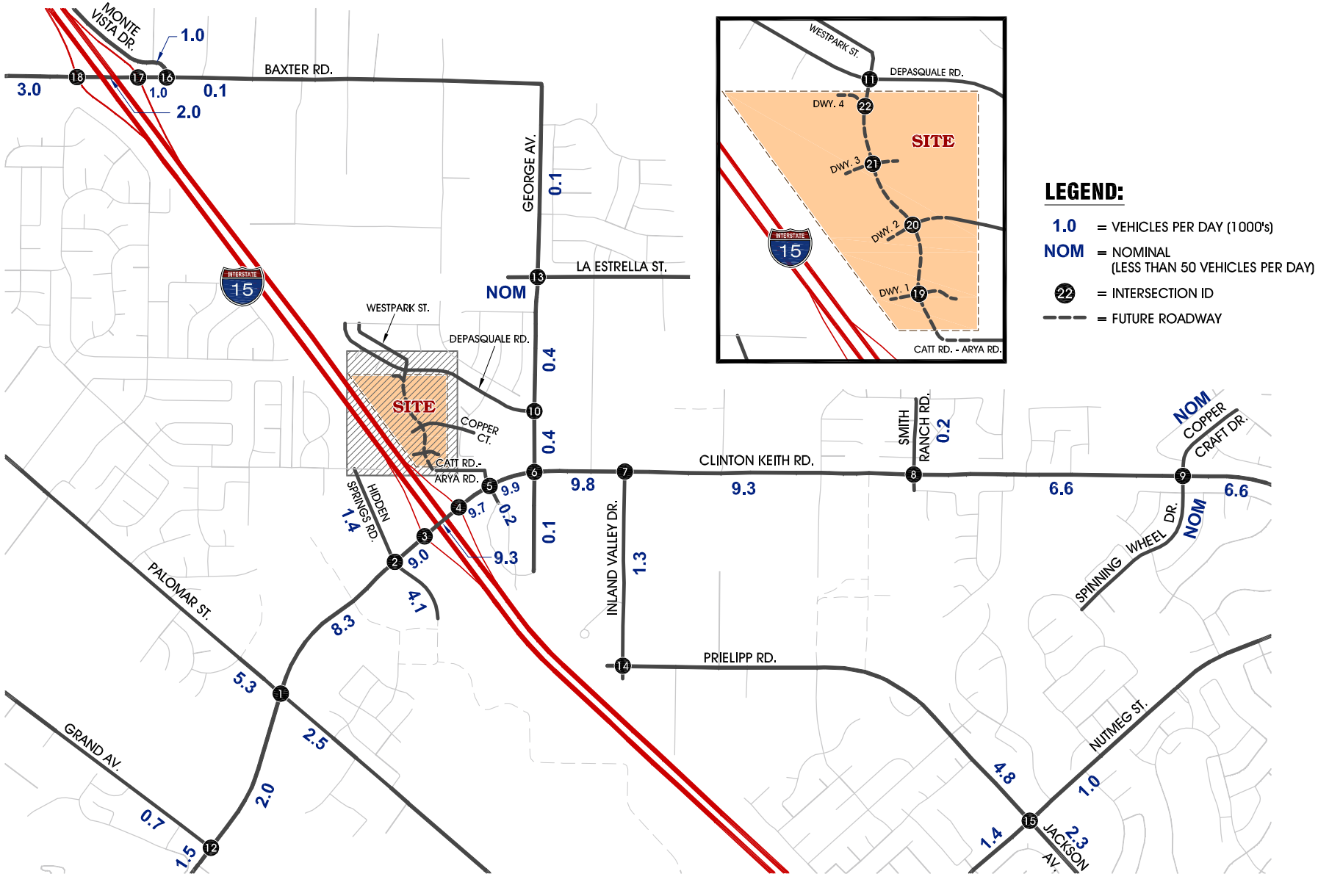
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 379, R 12	L 10, T 0, R 0 L 0, T 292, R 0	L 2, T 0, R 0 L 0, T 289, R 0	L 0, T 15
L 0, T 419, R 32 L 58, T 27	L 10, T 318, R 0 L 0, T 0, R 0	L 1, T 316, R 1 L 2, T 0, R 0	L 0, T 0 L 0, T 26

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 0, T 0 L 0, T 0	L 7, T 32 L 29, T 80	L 0, T 5, R 0 L 0, T 0, R 0	L 0, T 0, R 0 L 0, T 0, R 0
L 0, T 0	L 4, T 52	L 0, T 0, R 2 L 1, T 3, R 0	L 0, T 0, R 0 L 0, T 0, R 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 38, T 0, R 0 L 0, T 91, R 0	L 60, T 5 L 4, T 2	L 12, T 50	L 55, T 0, R 11 T 94, R 11
L 46, T 99, R 58 L 55, T 0, R 0	L 54, T 3	L 49, T 47 L 55, T 0, R 10	L 84, T 49

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

FIGURE 4-K
CUMULATIVE DEVELOPMENTS ONLY AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-L
EXISTING PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 100, T 345, R 164 / L 256, T 130, R 49	L 68, T 31, R 353 / L 225, T 645, R 55	L 311, T 0, R 394 / T 614, R 288	T 464, R 674	L 180, T 10, R 141 / L 212, T 716, R 103	L 162, T 37, R 87 / L 51, T 833, R 64
L 192, T 159, R 20 / L 21, T 639, R 66	L 62, T 1096, R 5 / L 56, T 12, R 83	L 808, T 724	L 326, T 876 / L 228, T 0, R 213	L 181, T 683, R 216 / L 242, T 5, R 44	L 119, T 845, R 11 / L 36, T 20, R 38

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 630, R 109	L 68, T 0, R 38 / L 24, T 606, R 12	L 52, T 5, R 19 / L 7, T 545, R 11	L 38, T 234
L 0, T 492, R 427 / L 318, T 37	L 33, T 482, R 15 / L 34, T 0, R 7	L 27, T 504, R 32 / L 49, T 0, R 34	L 42, T 52 / L 36, T 154

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 0, T 0, R 6 / L 6, T 7, R 48	L 47, T 177 / L 95, T 368	L 43, T 30, R 11 / L 18, T 196, R 54	L 42, T 0, R 257 / L 284, T 16, R 1
L 0, T 6, R 0 / L 0, T 0, R 45	L 48, T 621	L 47, T 108, R 13 / L 24, T 40, R 62	L 16, T 8, R 0 / L 9, T 0, R 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 96, T 315, R 174 / L 94, T 131, R 80	L 327, T 125 / L 66, T 186	L 154, T 359	L 135, T 2, R 87 / T 295, R 239
L 99, T 192, R 46 / L 63, T 266, R 117	L 112, T 175	L 261, T 220 / L 175, T 1, R 67	L 394, T 429

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
L 6, T 199, R 1 / L 7, T 10, R 18	L 9, T 138, R 0 / L 0, T 10, R 0	L 30, T 26, R 1 / L 7, T 10, R 39	T 48
L 4, T 10, R 18 / L 26, T 241, R 3	L 6, T 10, R 68 / L 99, T 153, R 0	L 20, T 10, R 82 / L 135, T 17, R 7	L 10 / T 45

FIGURE 4-M
EXISTING PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
↳160 ↓515 ↰306 ↳197 ←229 ↰114	↳151 ↓13 ↰366 ↳518 ←903 ↰61	↳392 ↓1 ↰470 ←1090 ↰283	↳449 ←847	↳286 ↓10 ↰286 ↳325 ←738 ↰70	↳75 ↓29 ↰52 ↳73 ←1003 ↰76
128→ 157→ 40↳ ↳37 ↑416 ↱101	156→ 772→ 8↳ ↳52 ↑11 ↱60	783→ 415↳	271→ 982→ ↳525 ↑0 ↱399	326→ 788→ 236↳ ↳272 ↑15 ↱62	96→ 1016→ 9↳ ↳55 ↑33 ↱110

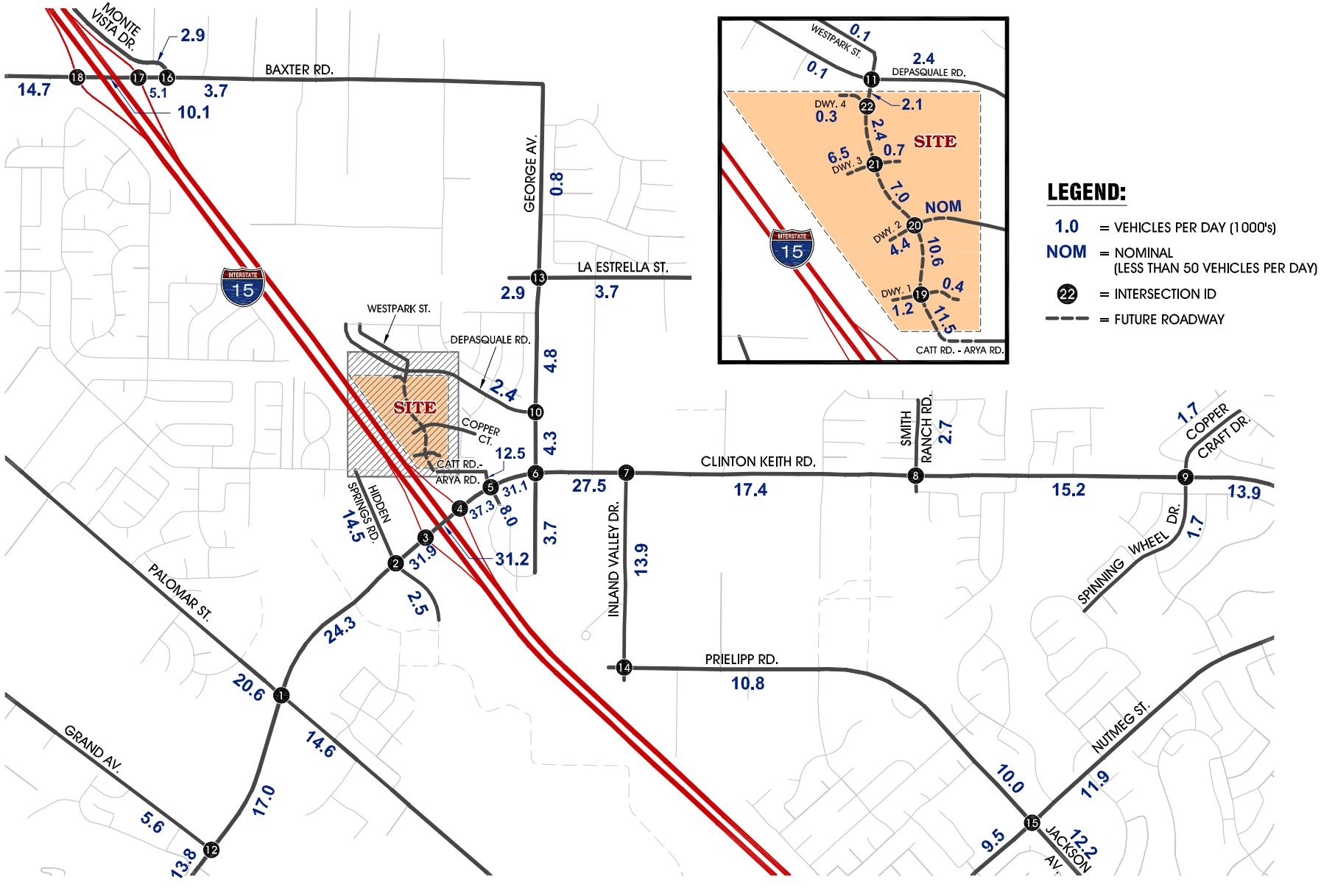
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
←632 ↰59	↳71 ↓3 ↰33 ↳38 ←576 ↰15	↳47 ↓1 ↰17 ↳20 ←523 ↰17	↳72 ↓125
0↳ 667→ 476↳ ↳536 ↱107	85→ 616→ 20↳ ↳30 ↑0 ↱3	58→ 554→ 49↳ ↳45 ↑3 ↱29	58→ 31↳ ↳51 ↑151

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
↳0 ↓0 ↰4 ↳7 ←7 ↰100	↳48 ↓201 ↳170 ←548	↳0 ↓39 ↰1 ↳0 ←97 ↰62	↳7 ↓0 ↰436 ↳462 ←4 ↰2
0→ 4→ 0↳ ↳0 ↑0 ↱87	50→ 504→	0→ 100→ 27↳ ↳20 ↑32 ↱49	26→ 11→ 0↳ ↳0 ↑0 ↱0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
↳85 ↓211 ↰138 ↳214 ←237 ↰125	↳105 ↓34 ↳29 ←97	↳63 ←139	↳171 ↓2 ↰58 ←474 ↰50
128→ 231→ 78↳ ↳86 ↑218 ↱76	78→ 149→	148→ 177→ ↳385 ↑4 ↱50	267→ 314↳

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
↳12 ↓440 ↰7 ↳3 ←10 ↰8	↳17 ↓277 ↰0 ↳0 ←10 ↰0	↳58 ↓62 ↰7 ↳3 ←10 ↰18	←100
11→ 10→ 47↳ ↳50 ↑491 ↱17	16→ 10→ 181↳ ↳195 ↑310 ↱0	54→ 10→ 214↳ ↳260 ↑30 ↱37	27↳ 87↑

FIGURE 4-N
EXISTING PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-O
EXISTING PLUS AMBIENT PLUS PROJECT AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 106, T 366, R 173 / L 271, T 136, R 51	L 72, T 33, R 372 / L 237, T 681, R 58	L 330, T 0, R 417 / T 646, R 304	L 491, T 709	L 184, T 10, R 143 / L 216, T 759, R 109	L 172, T 39, R 92 / L 54, T 875, R 68
L 204, T 167, R 21 / L 22, T 677, R 69	L 66, T 1158, R 5 / L 59, T 13, R 88	L 851, T 767	L 346, T 922 / L 242, T 0, R 225	L 184, T 724, R 229 / L 257, T 5, R 47	L 126, T 889, R 12 / L 38, T 21, R 40
7. Inland Valley Dr. / Clinton Keith Rd.	**8. Smith Ranch Rd. / Clinton Keith Rd.**	**9. Copper Craft Dr. / Clinton Keith Rd.**	**10. George Av. / Depasquale Rd.**		
T 664, R 116	L 71, T 0, R 40 / L 25, T 640, R 13	L 54, T 5, R 20 / L 7, T 577, R 12	L 38, T 248		
L 0, T 518, R 449 / T 333, R 39	L 34, T 508, R 16 / T 36, T 0, R 7	L 28, T 533, R 33 / L 51, T 0, R 36	L 43, T 55 / T 38, T 163		
11. Westpark St. / Depasquale Rd.	**12. Grand Av. / Clinton Keith Rd.**	**13. George Av. / La Estrella St.**	**14. Inland Valley Dr. / Prielipp Rd.**		
L 0, T 0, R 6 / L 6, T 7, R 48	L 50, T 187 / L 100, T 389	L 46, T 31, R 12 / L 19, T 208, R 56	L 45, T 0, R 269 / L 297, T 17, R 1		
L 0, T 6, R 0 / T 0, T 0, R 45	L 51, T 657	L 50, T 114, R 14 / L 25, T 41, R 65	L 17, T 8, R 0 / T 10, T 0, R 0		
15. Nutmeg St. / Jackson Av.	**16. Monte Vista Dr. / Baxter Rd.**	**17. I-15 NB Ramps / Baxter Rd.**	**18. I-15 SB Ramps / Baxter Rd.**		
L 101, T 334, R 184 / L 100, T 138, R 85	L 347, T 132 / L 70, T 196	L 163, T 380	L 143, T 2, R 92 / T 312, R 253		
L 104, T 203, R 48 / T 66, T 282, R 124	L 119, T 185	L 277, T 232 / L 186, T 1, R 71	L 417, T 455		
19. Dwy. 1 / Westpark St.	**20. Dwy. 2 / Westpark St.**	**21. Dwy. 3 / Westpark St.**	**22. Dwy. 4 / Westpark St.**		
L 6, T 199, R 1 / L 7, T 10, R 18	L 9, T 138, R 0 / L 0, T 10, R 0	L 30, T 26, R 1 / L 7, T 10, R 39	L 48		
L 4, T 10, R 18 / T 26, T 241, R 3	L 6, T 10, R 68 / T 99, T 153, R 0	L 20, T 10, R 82 / L 135, T 17, R 7	L 10 / T 45		

FIGURE 4-P
EXISTING PLUS AMBIENT PLUS PROJECT PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 170, T 546, R 322 / L 207, T 239, R 119	L 160, T 14, R 384 / L 546, T 950, R 65	L 416, T 1, R 496 / T 1145, R 298	L 474, T 886	L 289, T 10, R 288 / L 328, T 783, R 74	L 80, T 31, R 55 / L 77, T 1047, R 81
L 136, T 163, R 42 / L 39, T 441, R 105	L 165, T 811, R 8 / L 55, T 12, R 64	L 819, T 440	L 287, T 1027 / L 557, T 0, R 421	L 329, T 836, R 250 / L 288, T 15, R 66	L 102, T 1062, R 10 / L 58, T 35, R 117

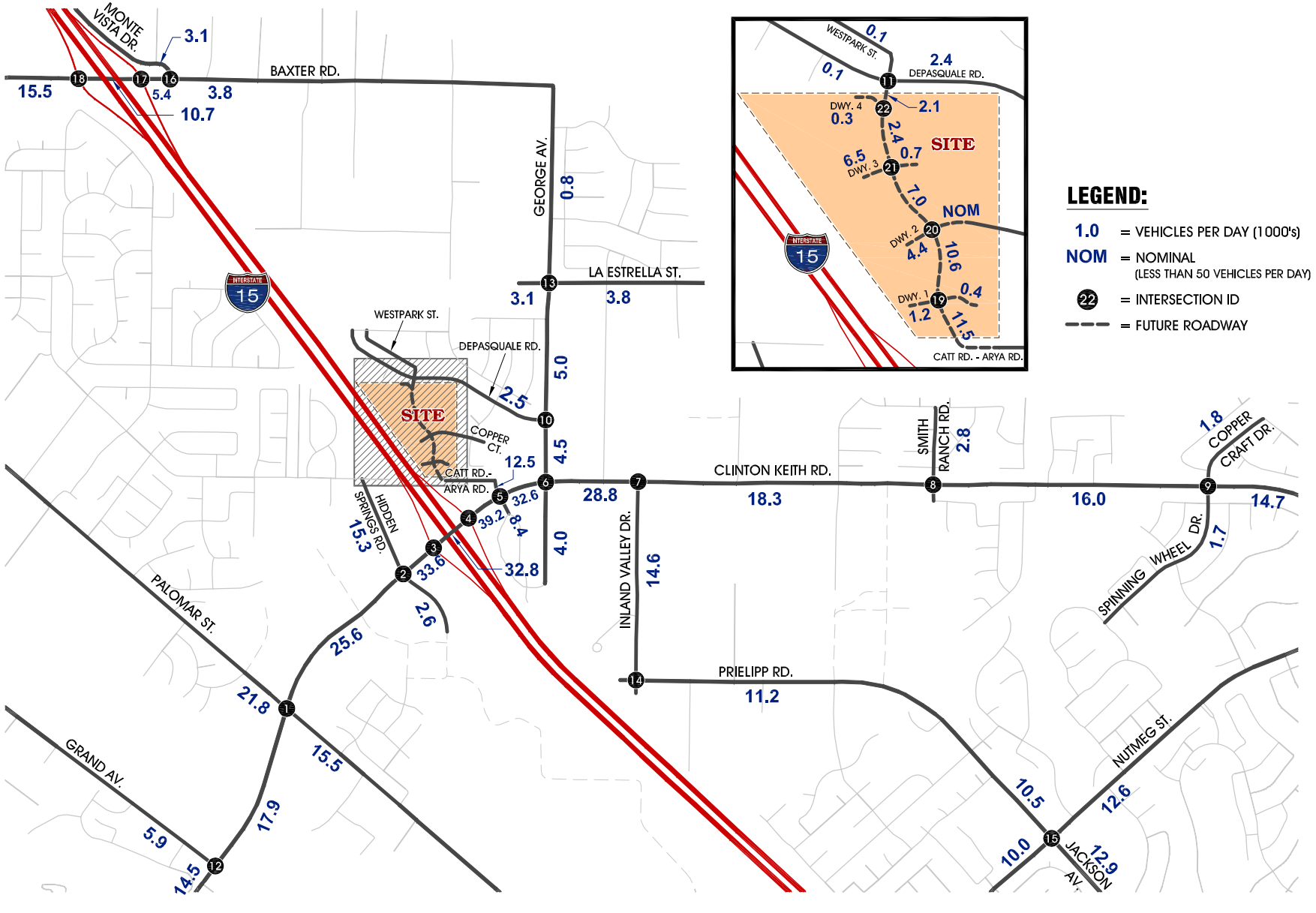
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 662, R 63	L 73, T 3, R 35 / L 40, T 605, R 16	L 48, T 1, R 18 / L 21, T 552, R 18	L 72, T 133
L 0, T 700, R 496 / L 559, R 113	L 88, T 648, R 21 / L 32, T 0, R 3	L 60, T 586, R 50 / L 46, T 3, R 31	L 58, T 33 / L 54, T 160

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 0, T 0, R 4 / L 7, T 7, R 100	L 51, T 211 / L 179, T 579	L 0, T 39, R 1 / L 0, T 103, R 64	L 7, T 0, R 454 / L 481, T 4, R 2
L 0, T 4, R 0 / L 0, T 0, R 87	L 53, T 533	L 0, T 106, R 29 / L 21, T 32, R 50	L 28, T 12, R 0 / L 0, T 0, R 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 88, T 224, R 146 / L 227, T 249, R 133	L 111, T 36 / L 31, T 101	L 67, T 146	L 181, T 2, R 61 / T 501, R 53
L 134, T 243, R 81 / L 89, T 231, R 81	L 83, T 156	L 157, T 186 / L 408, T 4, R 53	L 281, T 333

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
L 12, T 440, R 7 / L 3, T 10, R 8	L 17, T 277, R 0 / L 0, T 10, R 0	L 58, T 62, R 7 / L 3, T 10, R 18	T 100
L 11, T 10, R 47 / L 50, T 491, R 17	L 16, T 10, R 181 / L 195, T 310, R 0	L 54, T 10, R 214 / L 260, T 30, R 37	R 27 / T 87

FIGURE 4-Q
EXISTING PLUS AMBIENT PLUS PROJECT AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-R
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
↰119 ↑382 ↱334 ←376 →164 ↱94	↰72 ↑33 ↱410 ←278 →816 ↱92	↰374 ↑0 ↱461 ←811 ↱431	←546 →957	↰184 ↑10 ↱143 ←216 →1062 ↱120	↰188 ↑39 ↱99 ←57 →1173 ↱71
220↰ 223→ 27↳ 24↰ 682↑ 116↱	66↰ 1362→ 32↳ 76↰ 13↑ 108↱	1052→ 829↳	408↰ 1105→ 286↰ 0↑ 293↱	184↰ 976→ 229↳ 257↰ 5↑ 52↱	132↰ 1140→ 12↳ 38↰ 21↑ 41↱

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
←950 ↱137	↰75 ↑0 ↱40 ←25 →849 ↱13	↰55 ↑5 ↱20 ←7 →785 ↱12	↰38 →271
0↰ 736→ 490↳ 350↰ 45↱	37↰ 693→ 16↳ 36↰ 0↑ 7↱	29↰ 715→ 34↳ 52↰ 0↑ 36↱	43↰ 55↳ 38↰ 171↑

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
↰0 ↑0 ↱6 ←6 →7 ↱48	↰52 ↑201 ←118 ←414	↰46 ↑32 ↱12 ←19 →208 ↱56	↰45 ↑0 ↱269 ←297 →17 ↱1
0↰ 6→ 0↳ 0↰ 0↑ 45↱	57↰ 721→	50↰ 114→ 15↳ 26↰ 45↑ 65↱	17↰ 8→ 0↳ 10↰ 0↑ 0↱

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
↰132 ↑334 ↱184 ←100 →203 ↱85	↰387 ↑136 ←75 ←199	←174 ←411	↰164 ↑2 ↱103 ←355 ←263
129↰ 266→ 87↳ 103↰ 282↑ 124↱	167↰ 186→	309↰ 270→ 207↰ 1↑ 82↱	476→ 487↳

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
↰6 ↑199 ↱1 ←7 →10 ↱18	↰9 ↑138 ↱0 ←0 →10 ↱0	↰30 ↑26 ↱1 ←7 →10 ↱39	←48
4↰ 10→ 18↳ 26↰ 241↑ 3↱	6↰ 10→ 68↳ 99↰ 153↑ 0↱	20↰ 10→ 82↳ 135↰ 17↑ 7↱	10↰ 45↑

FIGURE 4-S
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
190 ↓ 557 ↓ 524 450 ← 322 ← 215	160 ↓ 14 ↓ 452 613 ← 1232 ← 160	521 ↓ 1 ↓ 572 1484 ← 418	547 ← 1240	289 ↓ 10 ↓ 288 328 ← 1210 ← 83	90 ↓ 31 ↓ 60 85 ← 1473 ← 83
154 → 225 → 46 45 ↑ 460 ↑ 196	165 → 1039 → 85 139 ↑ 12 ↑ 167	1125 → 532	379 → 1317 → 662 ↑ 0 ↑ 577	329 → 1282 → 250 288 ↑ 15 ↑ 80	120 → 1504 → 10 58 ↑ 35 ↑ 121

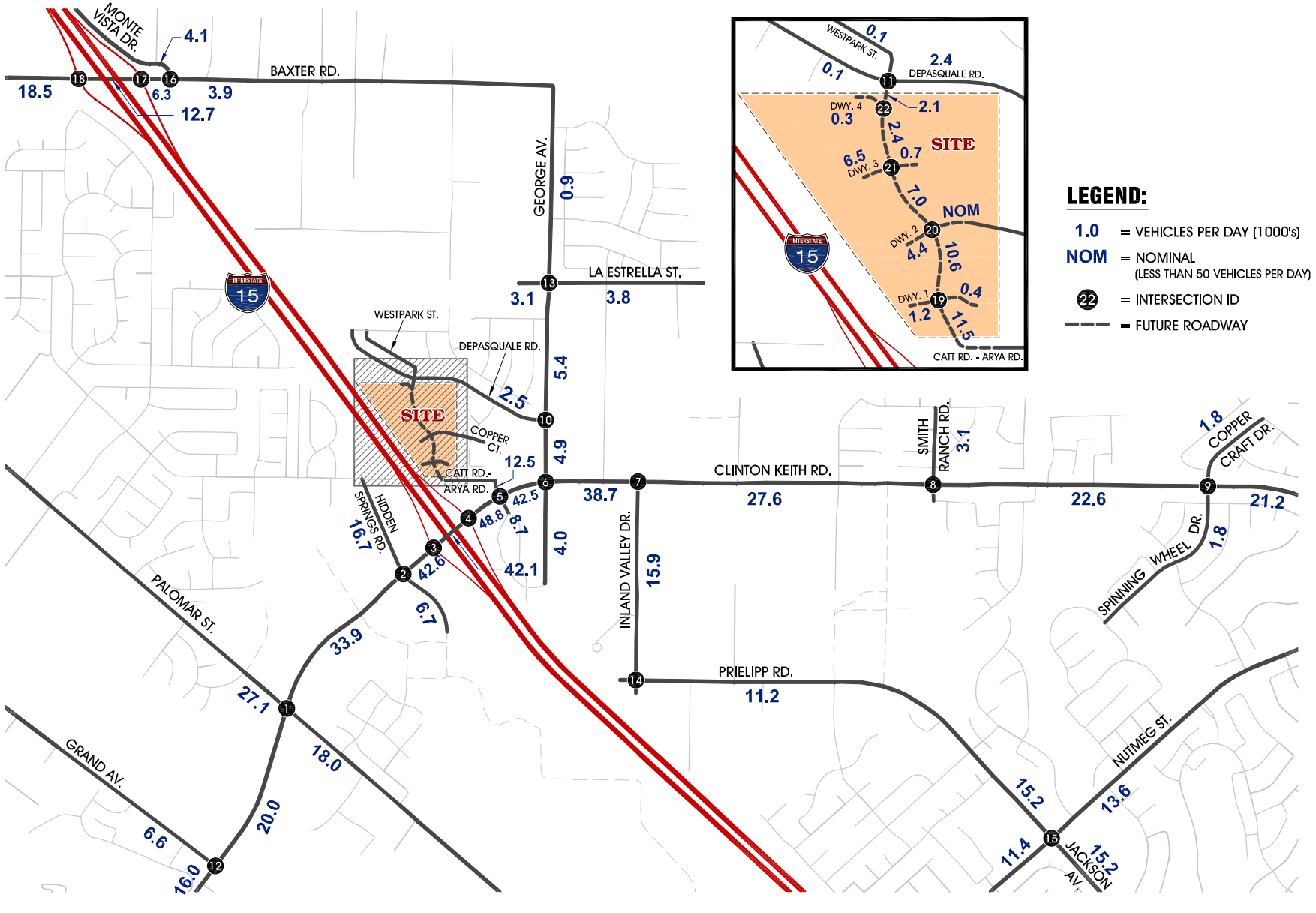
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
1041 ← 75	83 ↓ 3 ↓ 35 40 ← 897 ← 16	50 ↓ 1 ↓ 18 21 ← 841 ← 18	72 ↓ 148
0 → 1119 → 528 617 ↑ 140	98 → 966 → 21 32 ↑ 0 ↑ 3	61 → 902 → 51 48 ↑ 3 ↑ 31	58 → 33 54 ↑ 186

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
0 ↓ 0 ↓ 4 7 ← 7 ← 100	58 ↓ 243 208 ← 659	0 ↓ 44 ↓ 1 0 ← 103 ← 64	7 ↓ 0 ↓ 454 481 ← 4 ← 2
0 → 4 → 0 0 ↑ 0 ↑ 87	57 → 585 →	0 → 106 → 31 22 ↑ 35 ↑ 50	28 → 12 → 0 0 ↑ 0 ↑ 0

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
126 ↓ 224 ↓ 146 227 ← 340 ← 133	171 ↓ 41 35 ← 103	79 ← 196	236 ↓ 2 ↓ 72 595 ← 64
180 → 342 → 139 144 ↑ 231 ↑ 81	137 → 159 →	206 → 233 → 463 ↑ 4 ↑ 63	365 → 382 →

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
12 ↓ 440 ↓ 7 3 ← 10 ← 8	17 ↓ 277 ↓ 0 0 ← 10 ← 0	58 ↓ 62 ↓ 7 3 ← 10 ← 18	100 ←
11 → 10 → 47 50 ↑ 491 ↑ 17	16 → 10 → 181 195 ↑ 310 ↑ 0	54 → 10 → 214 260 ↑ 30 ↑ 37	27 → 87 ↑

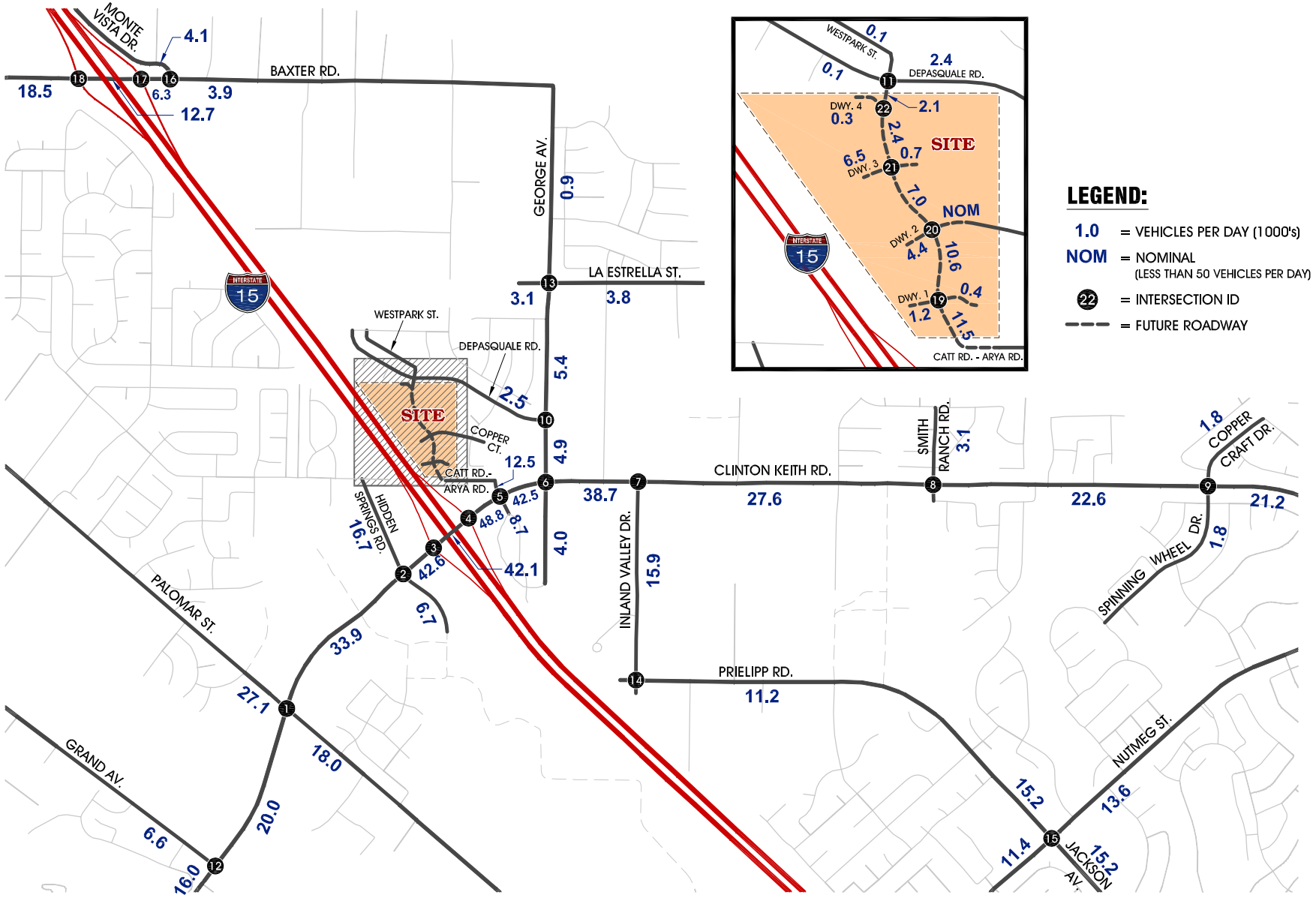
FIGURE 4-T
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-T
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

C. Horizon Year (2035) Conditions

Horizon Year (2035) with Project traffic volumes have been derived from the Riverside County Transportation and Analysis Model (RivTAM). The traffic forecasts reflect the area-wide growth anticipated between existing + ambient + cumulative (2017) with project conditions and Horizon Year (2035) conditions. In addition, Horizon Year (2035) peak hour forecasts were reviewed and adjusted to ensure a minimum growth of ten (10) percent and applied flow conservation between closely spaced intersections.

The finalized Horizon Year (2035) without Project AM and PM peak hour intersection turning movement volumes are shown on Figures 4-U and Figures 4-V, respectively. Horizon Year (2035) without Project average daily traffic volumes are shown on Figure 4-W.

The Horizon Year (2035) with Project AM and PM peak hour intersection turning movement volumes are shown on Figures 4-X and Figures 4-Y, respectively. Horizon Year (2035) with Project average daily traffic volumes are shown on Figure 4-Z.

FIGURE 4-U
HORIZON YEAR (2035) WITHOUT PROJECT AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 131, T 420, R 352 / L 494, T 694, R 324	L 80, T 37, R 420 / L 282, T 1394, R 102	L 622, T 1, R 789 / T 1156, R 454	L 682, T 1094	L 84, T 4, R 49 / L 98, T 1409, R 138	L 213, T 43, R 105 / L 62, T 1390, R 79
L 242, T 654, R 76 / L 46, T 750, R 182	L 73, T 1482, R 36 / L 84, T 15, R 119	L 1109, T 912	L 792, T 1106 / L 516, T 9, R 311	L 73, T 1077, R 252 / L 283, T 5, R 58	L 146, T 1153, R 14 / L 42, T 24, R 46

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 1409, R 151	L 67, T 5, R 44 / L 28, T 887, R 15	L 68, T 6, R 64 / L 20, T 1144, R 56	L 10, R 298
L 0, T 1049, R 484 / L 309, R 50	L 27, T 721, R 18 / L 40, T 5, R 8	L 35, T 927, R 24 / L 42, T 23, R 81	L 17, T 57 / L 41, T 188

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 5, T 7 / L 7, T 8	L 58, T 205 / L 116, T 445	L 51, T 224, R 65 / L 120, T 229, R 73	L 50, T 0, R 245 / L 252, T 19, R 2
L 5, T 7	L 63, T 778	L 55, T 126, R 42 / L 58, T 125, R 62	L 19, T 9, R 1 / L 11, T 1, R 1

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 131, T 368, R 203 / L 110, T 209, R 94	L 426, T 149 / L 76, T 209	L 196, T 439	L 181, T 1, R 114 / T 556, R 290
L 132, T 283, R 86 / L 99, T 310, R 137	L 184, T 189	L 343, T 281 / L 407, T 2, R 92	L 510, T 536

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

FIGURE 4-V
HORIZON YEAR (2035) WITHOUT PROJECT PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 209, T 613, R 545 L 539, T 944, R 424	L 176, T 16, R 436 L 619, T 1245, R 176	L 574, T 2, R 932 T 1466, R 428	L 694, T 1166	L 82, T 8, R 62 L 82, T 1461, R 128	L 138, T 51, R 94 L 91, T 1469, R 112
L 170, T 582, R 77 L 64, T 506, R 313	L 182, T 1232, R 94 L 153, T 14, R 184	L 1266, T 586	L 781, T 1417 L 729, T 7, R 596	L 90, T 1418, R 275 L 317, T 10, R 88	L 132, T 1572, R 11 L 64, T 41, R 134

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 1365, R 117	L 60, T 4, R 39 L 44, T 890, R 18	L 23, T 2, R 46 L 72, T 1173, R 41	L 12, T 163
L 0, T 1554, R 446 L 531, R 185	L 80, T 978, R 24 L 36, T 5, R 4	L 63, T 1373, R 29 L 21, T 11, R 88	L 6, T 35 R 57, T 205

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 5, T 5 L 8, T 8	L 64, T 236 L 201, T 698	L 1, T 176, R 131 L 67, T 0, R 42	L 8, T 0, R 365 L 385, T 5, R 3
L 5, T 5	L 63, T 615	L 10, T 117, R 35 L 25, T 139, R 49	L 31, T 14, R 1 L 1, T 1, R 1

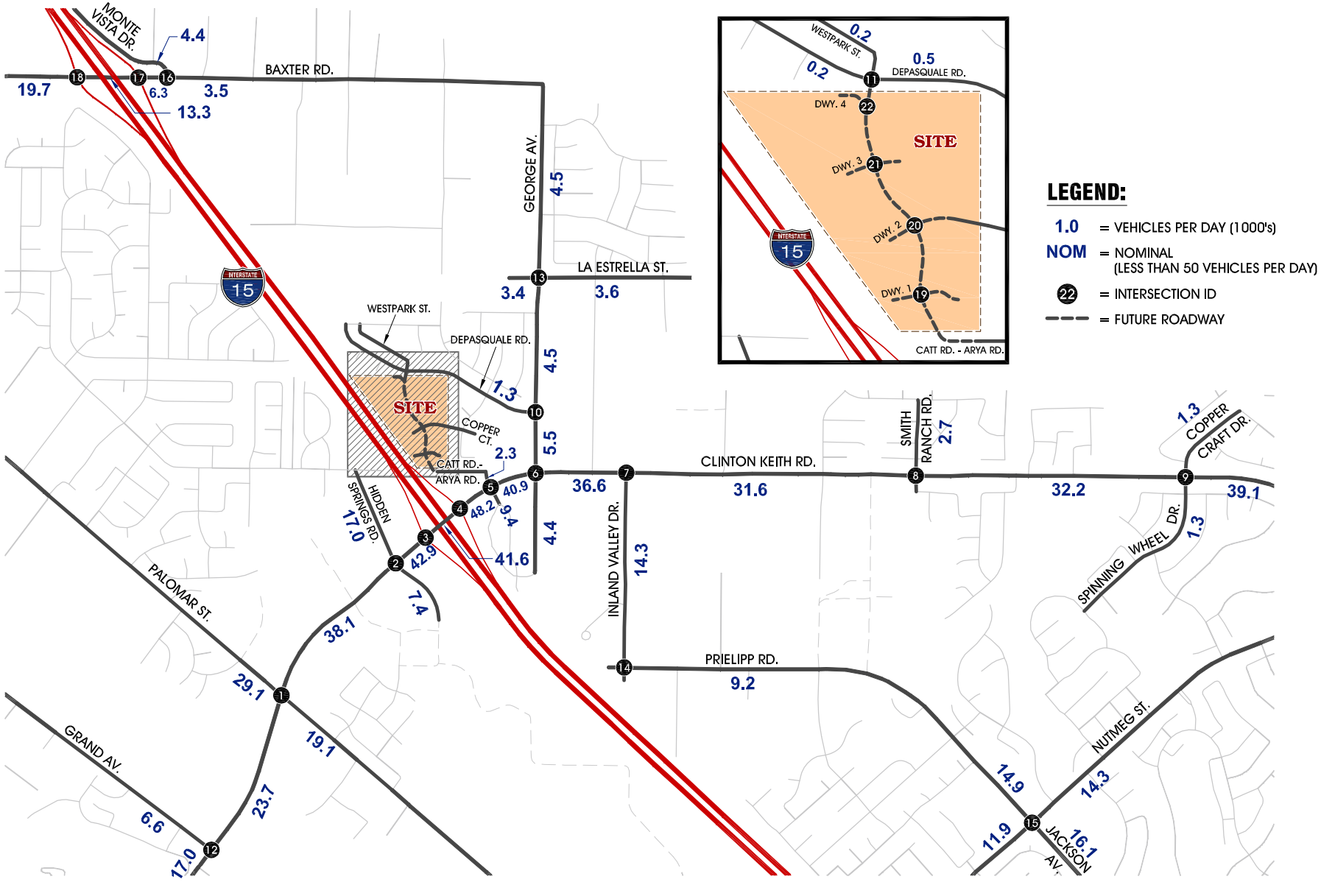
15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 110, T 247, R 161 L 250, T 345, R 147	L 188, T 39 L 36, T 87	L 87, T 188	L 351, T 3, R 108 T 652, R 71
L 171, T 349, R 126 L 130, T 254, R 90	L 151, T 177	L 256, T 225 L 535, T 5, R 103	L 373, T 448

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
Future Intersection	Future Intersection	Future Intersection	Future Intersection

Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-W
HORIZON YEAR (2035) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

FIGURE 4-X
HORIZON YEAR (2035) WITH PROJECT AM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 131, T 420, R 368 / L 508, T 718, R 338	L 80, T 37, R 451 / L 306, T 1445, R 102	L 622, T 1, R 806 / T 1231, R 475	L 703, T 1190	L 203, T 11, R 158 / L 238, T 1407, R 138	L 213, T 43, R 109 / L 63, T 1528, R 79
L 242, T 685, R 76 / L 46, T 750, R 198	L 73, T 1544, R 36 / L 84, T 15, R 119	L 1202, T 912	L 792, T 1216 / L 516, T 9, R 328	L 203, T 1074, R 252 / L 283, T 6, R 58	L 146, T 1259, R 14 / L 42, T 24, R 46

7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 1472, R 151	L 83, T 5, R 44 / L 28, T 934, R 15	L 84, T 6, R 64 / L 20, T 1160, R 56	L 42, R 298
L 0, T 1104, R 539 / L 385, R 50	L 41, T 762, R 18 / L 40, T 5, R 8	L 49, T 941, R 38 / L 58, T 23, R 81	L 48, T 61 / L 42, T 188

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 5, T 10, R 7 / L 7, T 8, R 48	L 58, T 221 / L 130, T 455	L 51, T 241, R 65 / L 120, T 229, R 88	L 50, T 0, R 296 / L 327, T 19, R 2
L 5, T 7, R 5 / L 5, T 10, R 45	L 63, T 793	L 55, T 126, R 42 / L 58, T 146, R 72	L 19, T 9, R 1 / L 11, T 1, R 1

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 146, T 368, R 203 / L 110, T 224, R 94	L 426, T 150 / L 83, T 223	L 196, T 453	L 181, T 1, R 114 / T 570, R 290
L 142, T 293, R 96 / L 114, T 310, R 137	L 184, T 205	L 343, T 297 / L 407, T 2, R 92	L 526, T 536

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
L 6, T 214, R 1 / L 7, T 10, R 18	L 9, T 153, R 0 / L 0, T 10, R 0	L 30, T 41, R 1 / L 7, T 10, R 39	T 63
L 4, T 10, R 18 / L 26, T 256, R 3	L 6, T 10, R 68 / L 99, T 168, R 0	L 20, T 10, R 82 / L 135, T 32, R 7	L 10 / T 60

FIGURE 4-Y
HORIZON YEAR (2035) WITH PROJECT PM PEAK HOUR INTERSECTION VOLUMES

LEGEND:

22 = INTERSECTION ANALYSIS LOCATION

= DIRT ROAD / FUTURE ROADWAY

1. Palomar St. / Clinton Keith Rd.	2. Hidden Springs Rd. / Clinton Keith Rd.	3. I-15 SB Ramps / Clinton Keith Rd.	4. I-15 NB Ramps / Clinton Keith Rd.	5. Catt Rd. - Arya Rd. / Clinton Keith Rd.	6. George Av. / Clinton Keith Rd.
L 209, T 613, R 577 / L 567, T 999, R 452	L 176, T 16, R 497 / L 674, T 1357, R 176	L 574, T 2, R 971 / T 1633, R 460	L 726, T 1364	L 318, T 11, R 317 / L 361, T 1455, R 128	L 138, T 51, R 96 / L 94, T 1742, R 112
L 170, T 643, R 77 / L 64, T 506, R 345	L 182, T 1357, R 94 / L 153, T 14, R 184	L 1452, T 586	L 781, T 1642 / L 729, T 7, R 635	L 362, T 1410, R 275 / L 317, T 17, R 88	L 132, T 1819, R 11 / L 64, T 41, R 134

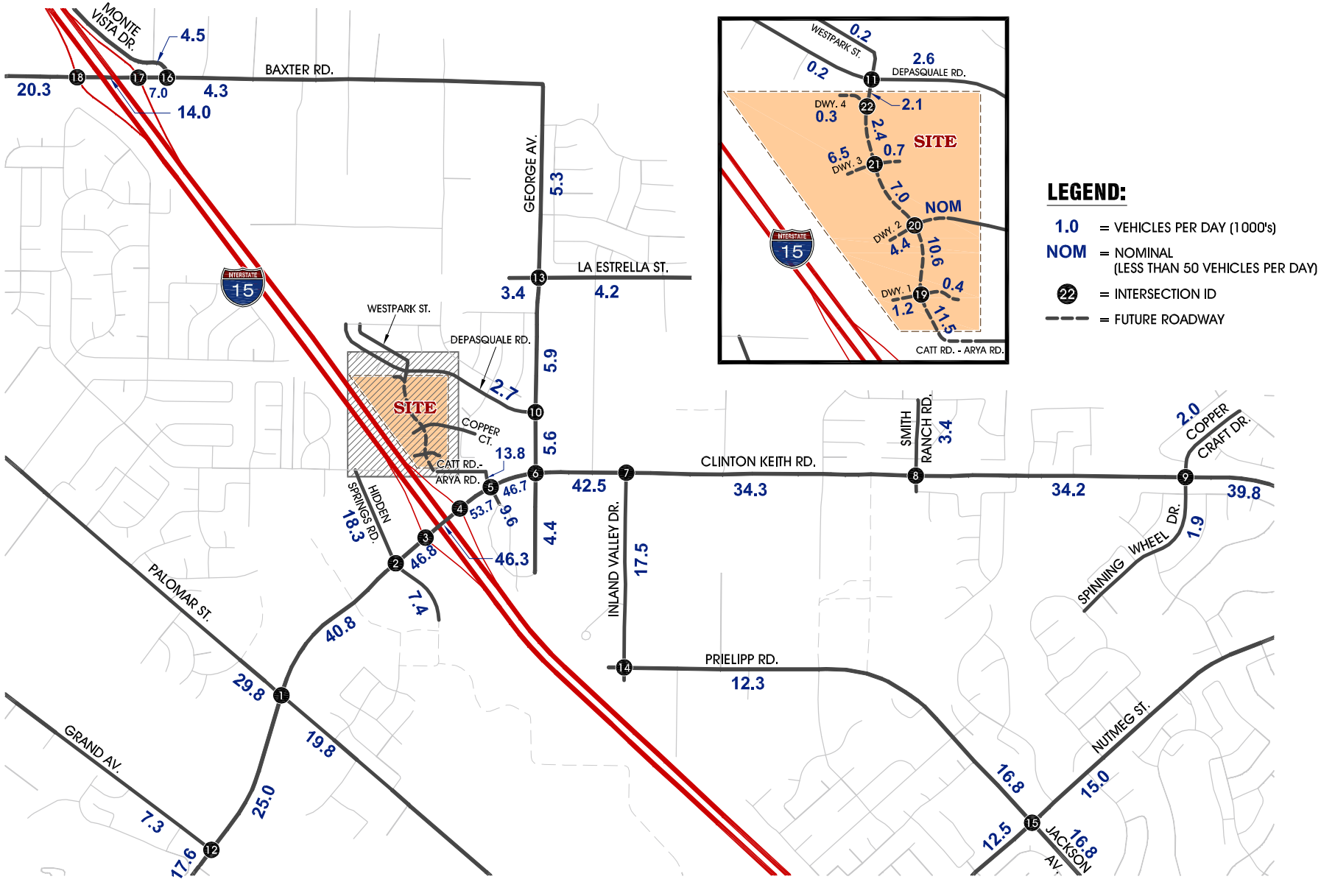
7. Inland Valley Dr. / Clinton Keith Rd.	8. Smith Ranch Rd. / Clinton Keith Rd.	9. Copper Craft Dr. / Clinton Keith Rd.	10. George Av. / Depasquale Rd.
T 1494, R 117	L 92, T 4, R 39 / L 44, T 987, R 18	L 55, T 2, R 46 / L 72, T 1205, R 41	L 80, R 163
L 0, T 1667, R 581 / L 679, R 185	L 108, T 1063, R 24 / L 36, T 5, R 4	L 91, T 1401, R 57 / L 53, T 11, R 88	L 64, T 37 / T 60, R 205

11. Westpark St. / Depasquale Rd.	12. Grand Av. / Clinton Keith Rd.	13. George Av. / La Estrella St.	14. Inland Valley Dr. / Prielipp Rd.
L 5, T 10, R 5 / L 8, T 8, R 100	L 64, R 268 / L 229, T 725	L 1, T 215, R 131 / L 67, T 0, R 71	L 8, T 0, R 499 / L 529, T 5, R 3
L 5, T 5, R 5 / L 5, T 10, R 87	L 63, T 644	L 10, T 117, R 35 / L 25, T 171, R 76	L 31, T 14, R 1 / L 1, T 1, R 1

15. Nutmeg St. / Jackson Av.	16. Monte Vista Dr. / Baxter Rd.	17. I-15 NB Ramps / Baxter Rd.	18. I-15 SB Ramps / Baxter Rd.
L 139, T 247, R 161 / L 250, T 374, R 147	L 188, R 46 / L 39, T 115	L 87, T 216	L 351, T 3, R 108 / T 680, R 71
L 198, T 376, R 153 / L 159, T 254, R 90	L 151, T 209	L 256, T 257 / L 535, T 5, R 103	L 405, T 448

19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
L 12, T 455, R 7 / L 3, T 10, R 8	L 17, T 292, R 0 / L 0, T 10, R 0	L 58, T 77, R 7 / L 3, T 10, R 18	T 115
L 11, T 10, R 47 / L 50, T 506, R 17	L 16, T 10, R 181 / L 195, T 325, R 0	L 54, T 10, R 214 / L 260, T 45, R 37	R 27 / T 102

FIGURE 4-Z
HORIZON YEAR (2035) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:02.dwg)

TRAMES SOLUTIONS INC.

THIS PAGE INTENTIONALLY LEFT BLANK

5.0 TRAFFIC ANALYSIS

Peak hour intersection analysis has been performed at the study area intersections for each of the project scenarios and for projected future conditions. Improvements are recommended to satisfy the level of service requirements of the City of Wildomar and if the following impacts are identified:

1) When existing traffic conditions (Analysis Scenario 1) exceed the General Plan target LOS.

2) When project traffic, when added to existing traffic (Analysis Scenario 2), will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval.

3) When cumulative traffic (Analysis Scenario 3) exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms.

A. Existing plus Project (E+P) Conditions

The results of the E+P conditions intersection analysis are summarized in Table 5-1. The E+P condition operations analysis worksheets are provided in Appendix "H". The following study area intersections are projected to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with the existing geometry and traffic controls:

STUDY AREA INTERSECTIONS	
5.	Catt Road-Arya Road / Clinton Keith Road
14.	Inland Valley Drive / Prielipp Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

The following improvements are recommended to mitigate the deficient intersections to operate at an acceptable level of service:

Catt Road / Clinton Keith Road [#5]

- Modify northbound striping to provide a dedicated left turn lane and a shared through/right turn lane.
- Construct a separate southbound left turn lane.

Inland Valley Drive / Prielipp Road [#14]

- Install a traffic signal.
- Modify westbound striping to provide one through lane and one right turn lane.

TABLE 5-1
INTERSECTION ANALYSIS FOR
EXISTING PLUS PROJECT CONDITIONS

ID	Intersection	Traffic Control[1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service[3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Palomar St. / Clinton Keith Rd.	TS	1	2	1	1	1	1	1	2	0	1	2	1	23.3	30.5	C	C
2	Hidden Springs Rd. / Clinton Keith Rd.	TS	0	1!	0	1	1	0	1	2	1	1	2	1	25.2	25.7	C	C
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	19.3	16.8	B	B
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	15.3	17.5	B	B
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	18.2	--[4]	B	F
	- With Improvements	TS	1	1	0	1	1	0	1	3	0	1	3	0	20.0	27.5	B	C
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	13.2	14.0	B	B
7	Inland Valley Dr. / Clinton Keith Rd.	TS	1	0	1	0	0	0	1	2	1	1	1	0	14.0	18.1	B	B
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	8.4	9.2	A	A
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	7.4	11.5	A	B
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	14.1	12.3	B	B
11	Westpark St. - Catt Rd. / Depasquale Rd.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.2	13.4	B	B
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	10.6	13.3	B	B
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	14.0	8.3	B	A
14	Inland Valley Dr. / Prielipp Rd.																	
	- Without Improvements	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	11.0	43.1	B	E
	- With Improvements	TS	0	1!	0	1	0	1	0	2	0	0	1	1	27.8	38.4	C	D
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	27.2	26.1	C	C
16	Monte Vista Dr. / Baxter Rd.	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	31.6	10.6	D	B
17	I-15 NB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	1	d	0	0	0	1	1	0	0	1	0	39.4	17.9	E	C
	- With Improvements	TS	0	1	d	0	0	0	1	1	0	0	1	0	24.8	17.7	C	B
18	I-15 SB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	37.6	F	E
	- With Improvements	TS	0	0	0	0	1	d	0	1	1	1	1	0	18.8	10.6	B	B
19	Dwy. 1 / Westpark St.	CSS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	13.4	27.6	B	D
20	Dwy. 2 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	13.9	26.2	B	D
21	Dwy. 3 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0.5	0.5	d	13.7	28.4	B	D
22	Dwy. 4 / Westpark St.	CSS	0	1	0	0	1	0	0	0	1	0	0	0	8.6	8.9	A	A

1 TS = Traffic Signal; Cross-Street Stop

2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;
> = Right Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Lane Improvement

3 Delay and level of service calculated using the following analysis software: Synchro 8.0

4 Volume to capacity ratio > 1.0. Intersection unstable. LOS = "F"

I-15 SB Ramps / Baxter Road [#17]

- Install a traffic signal.

I-15 NB Ramps / Baxter Road [#18]

- Install a traffic signal.
- Provide a separate eastbound right turn lane

The freeway ramp analysis results for E+P conditions are summarized in Table 5-2. The ramp analysis calculation worksheets for E+P conditions are included in Appendix "I". As shown on Table 5-2, the freeway ramps analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours.

The freeway segment analysis results for E+P conditions are summarized in Table 5-3. The freeway segment analysis calculation worksheets for E+P conditions are included in Appendix "J". As shown on Table 5-3, the freeway segments analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours

B. Existing plus Ambient plus Project (EAP) Conditions

The results of the EAP conditions intersection analysis are summarized in Table 5-4. The EAP condition operations analysis worksheets are provided in Appendix "K". The study area intersections are projected to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with the existing geometry and traffic controls:

STUDY AREA INTERSECTIONS	
5.	Catt Road-Arya Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
14.	Inland Valley Drive / Prielipp Road– *(also operates at LOS "E" or worse under E+P)*
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operating at LOS "E" or worse under Existing 2014)*

The recommended improvements identified previously under E+P conditions are also anticipated to mitigate the deficient intersections to operate at an acceptable level of service under EAP conditions.

The freeway ramp analysis results for EAP conditions are summarized in Table 5-5. The ramp analysis calculation worksheets for EAP conditions are included in Appendix "L". As shown on Table 5-5, the freeway ramps analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours.

TABLE 5-2

FREEWAY RAMP ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Ramp Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road	3	705	863	20.8	18.7	C	B
	SB On Ramp at Clinton Keith Road	3	1,012	699	26.8	21.6	C	C
I-15 Northbound	NB Off Ramp at Clinton Keith Road	3	441	924	15.0	24.5	B	C
	NB On Ramp at Clinton Keith Road	3	790	720	21.1	26.6	C	C

[1] Existing ramp locations consist of 2 lanes (on/off ramps).

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

TABLE 5-3

BASIC FREEWAY SEGMENT ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

Freeway	Segment	Lanes on Freeway	Volumes		Density[1]		Level of Service[2]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road	3	4,421	4,044	24.8	24.7	C	C
	South of Clinton Keith Road	3	4,728	3,880	27.1	21.2	D	C
I-15 Northbound	South of Clinton Keith Road	3	3,376	5,074	18.3	30.0	C	D
	North of Clinton Keith Road	3	3,725	4,870	20.3	28.3	C	D

[1] Density is measured by passenger cars per lane (pc/mi/ln)

[2] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

TABLE 5-4
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT (2017) CONDITIONS

ID	Intersection	Traffic Control[1]	Intersection Approach Lanes[2] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Delay[3] (secs.) AM	Delay[3] (secs.) PM	Level of Service[3] AM	Level of Service[3] PM
1	Palomar St. / Clinton Keith Rd.	TS	1	2	1	1	1	1	1	2	0	1	2	1	23.9	31.4	C	C
2	Hidden Springs Rd. / Clinton Keith Rd.	TS	0	1!	0	1	1	0	1	2	1	1	2	1	28.5	26.6	C	C
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	17.3	17.0	B	B
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	13.8	17.6	B	B
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	19.1	--[4]	B	F
	- With Improvements	TS	1	1	0	1	1	0	1	3	0	1	3	0	20.4	27.6	C	C
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	14.3	15.1	B	B
7	Inland Valley Dr. / Clinton Keith Rd.	TS	1	0	1	0	0	0	1	2	1	1	1	0	15.2	19.9	B	B
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	9.2	9.3	A	A
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	7.4	11.3	A	B
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	14.7	12.6	B	B
11	Westpark St. - Catt Rd. / Depasquale Rd.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.2	13.4	B	B
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	10.8	13.5	B	B
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	15.3	8.4	C	A
14	Inland Valley Dr. / Prielipp Rd.																	
	- Without Improvements	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	11.5	51.4	B	F
	- With Improvements	TS	0	1!	0	1	0	1	0	2	0	0	1	1	27.8	33.9	C	C
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	27.8	26.7	C	C
16	Monte Vista Dr. / Baxter Rd.																	
	- Without Improvements	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	42.5	10.8	E	B
	- With Improvements	TS	0	0	0	0	1!	0	0	1	0	0	1	0	17.2	8.2	B	A
17	I-15 NB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	1	d	0	0	0	1	1	0	0	1	0	50.8	20.6	F	C
	- With Improvements	TS	0	1	d	0	0	0	1	1	0	0	1	0	25.2	17.8	C	B
18	I-15 SB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	48.3	F	E
	- With Improvements	TS	0	0	0	0	1	d	0	1	1	1	1	0	19.5	10.8	B	B
19	Dwy. 1 / Westpark St.	CSS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	13.4	27.6	B	D
20	Dwy. 2 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	13.9	26.2	B	D
21	Dwy. 3 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0.5	0.5	d	13.7	28.4	B	D
22	Dwy. 4 / Westpark St.	CSS	0	1	0	0	1	0	0	0	1	0	0	0	8.6	8.9	A	A

1 TS = Traffic Signal; Cross-Street Stop
2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;
> = Right Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Lane Improvement
3 Delay and level of service calculated using the following analysis software: Synchro 8.0
4 Volume to capacity ratio > 1.0. Intersection unstable. LOS = "F"

TABLE 5-5

FREEWAY RAMP ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT (2017) CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Ramp Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road	3	747	913	22.3	20.1	C	C
	SB On Ramp at Clinton Keith Road	3	1,071	739	28.4	22.9	D	C
I-15 Northbound	NB Off Ramp at Clinton Keith Road	3	467	978	16.1	26.2	B	C
	NB On Ramp at Clinton Keith Road	3	837	761	22.3	28.2	C	D

[1] Existing ramp locations consist of 2 lanes (on/off ramps).

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

The freeway segment analysis results for EAP conditions are summarized in Table 5-6. The freeway segment analysis calculation worksheets are included in Appendix “M”. As shown on Table 5-6, the freeway segments analyzed for this study were found to operate at an acceptable LOS (LOS “D” or better) during the peak hours.

C. Existing plus Ambient plus Project plus Cumulative (EAPC) Conditions

The results of the EAPC conditions intersection analysis are summarized in Table 5-7. The EAPC condition operations analysis worksheets are provided in Appendix "N". The study area intersections are projected to operate at an unacceptable level of service (LOS “E” or worse) during the peak hours with the existing geometry and traffic controls:

STUDY AREA INTERSECTIONS	
2.	Hidden Springs Road / Clinton Keith Road
5.	Catt Road-Arya Road / Clinton Keith Road – *(also operates at LOS “E” or worse under E+P)*
7.	Inland Valley Drive / Clinton Keith Road
14.	Inland Valley Drive / Prielipp Road – *(also operates at LOS “E” or worse under E+P)*
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS “E” or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS “E” or worse under Existing 2014)*

The following improvements are recommended to mitigate the deficient intersections to operate at an acceptable level of service, in addition to the improvements identified previously under E+P and EAP conditions:

Hidden Springs Road / Clinton Keith Road [#2]

- Construct a 2nd southbound left turn lane.

Inland Valley Drive / Clinton Keith Road [#7]

- Provide a 2nd westbound through lane.

Monte Vista Drive / Baxter Road [#16]

- Install a traffic signal.

The freeway ramp analysis results for EAPC conditions are summarized in Table 5-8. The ramp analysis calculation worksheets for EAPC conditions are included in Appendix “O”. As shown on Table 5-8, the freeway ramps analyzed for this study were found to operate at an acceptable LOS (LOS “D” or better) during the peak hours.

The freeway segment analysis results for EAPC conditions are summarized in Table 5-9. The freeway segment analysis calculation worksheets are included in Appendix “P”. As

TABLE 5-6

BASIC FREEWAY SEGMENT ANALYSIS FOR EXISTING PLUS AMBIENT PLUS PROJECT (2017) CONDITIONS

Freeway	Segment	Lanes on Freeway	Volumes		Density[1]		Level of Service[2]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road	3	4,685	4,284	26.8	23.9	D	C
	South of Clinton Keith Road	3	5,010	4,111	29.5	22.7	D	C
I-15 Northbound	South of Clinton Keith Road	3	3,578	5,376	19.4	32.9	C	D
	North of Clinton Keith Road	3	3,948	5,160	21.7	30.8	C	D

[1] Density is measured by passenger cars per lane (pc/mi/ln)

[2] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\5-6

TABLE 5-7
INTERSECTION ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2017) CONDITIONS

ID	Intersection	Traffic Control[1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service[3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Palomar St. / Clinton Keith Rd.	TS	1	2	1	1	1	1	1	2	0	1	2	1	35.4	50.0	D	D
2	Hidden Springs Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0	1!	0	1	1	0	1	2	1	1	2	1	--[4]	--[4]	F	F
	- With Improvements	TS	0	1!	0	2	1	0	1	2	1	1	2	1	31.7	31.6	C	C
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	15.3	17.3	B	B
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	12.6	16.6	B	B
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	21.8	>80	C	F
	- With Improvements	TS	1	1	0	1	1	0	1	3	0	1	3	0	24.2	32.4	C	C
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	13.9	13.5	B	B
7	Inland Valley Dr. / Clinton Keith Rd.																	
	- Without Improvements	TS	1	0	1	0	0	0	1	2	1	1	1	0	16.9	--[4]	B	F
	- With Improvements	TS	1	0	1	0	0	0	1	2	1	1	2	0	15.8	19.2	B	B
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	8.2	9.1	A	A
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	6.8	9.5	A	A
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	15.4	13.1	C	B
11	Westpark St. - Catt Rd. / Depasquale Rd.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.2	13.4	B	B
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	10.9	13.9	B	B
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	15.6	8.5	C	A
14	Inland Valley Dr. / Prielipp Rd.																	
	- Without Improvements	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	11.5	51.4	B	F
	- With Improvements	TS	0	1!	0	1	0	1	0	2	0	0	1	1	37.8	31.8	D	C
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	33.8	29.3	C	C
16	Monte Vista Dr. / Baxter Rd.																	
	- Without Improvements	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	>80	11.9	F	B
	- With Improvements	TS	0	0	0	0	1!	0	0	1	0	0	1	0	19.3	8.8	B	A
17	I-15 NB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	1	d	0	0	0	1	1	0	0	1	0	72.0	35.3	F	E
	- With Improvements	TS	0	1	d	0	0	0	1	1	0	0	1	0	28.7	20.0	C	B
18	I-15 SB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	>80	F	F
	- With Improvements	TS	0	0	0	0	1	d	0	1	1	1	1	0	20.5	11.0	C	B
19	Dwy. 1 / Westpark St.	CSS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	13.4	27.6	B	D
20	Dwy. 2 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	13.9	26.2	B	D
21	Dwy. 3 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0.5	0.5	d	12.8	28.4	B	D
22	Dwy. 4 / Westpark St.	CSS	0	1	0	0	1	0	0	0	1	0	0	0	8.6	8.9	A	A

1 TS = Traffic Signal; Cross-Street Stop

2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;
> = Right Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Lane Improvement

3 Delay and level of service calculated using the following analysis software: Synchro 8.0

4 Volume to capacity ratio > 1.0. Intersection unstable. LOS = "F"

TABLE 5-8

FREEWAY RAMP ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2017) CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Ramp Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road	3	835	1,094	23.6	22.4	C	C
	SB On Ramp at Clinton Keith Road	3	1,260	951	30.7	25.7	D	C
I-15 Northbound	NB Off Ramp at Clinton Keith Road	3	579	1,239	17.4	30.3	B	D
	NB On Ramp at Clinton Keith Road	3	954	926	23.8	30.8	C	D

[1] Existing ramp locations consist of 2 lanes (on/off ramps).

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

TABLE 5-9

BASIC FREEWAY SEGMENT ANALYSIS FOR
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2017) CONDITIONS

Freeway	Segment	Lanes on Freeway[1]	Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road	3	4,919	4,682	28.7	26.8	D	D
	South of Clinton Keith Road	3	5,345	4,540	32.6	25.7	D	C
I-15 Northbound	South of Clinton Keith Road							
	- Without Improvements	3	3,803	5,874	20.8	38.5	C	E
	- With Improvements	4			15.4	24.7	B	C
	North of Clinton Keith Road	3	4,178	5,562	23.2	34.8	C	D

[1] 1 = Existing; 1 = Improvement

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

shown on Table 5-9, the following freeway segment is found to operate at LOS "E" during the PM peak hours.

- I-15 Northbound, south of Clinton Keith Road

However, providing the following improvements on the I-15 freeway mainline is anticipated to mitigate the deficient freeway segment location to operate at an acceptable level of service (LOS "D" or better) as presented on Table 5-9:

I-15 Northbound, south of Clinton Keith Road

- Construct a 4th northbound lane.

D. Horizon Year (2035) Without Project (2035NP) Conditions

Table 5-10 summarizes the Intersection levels of service for the Horizon Year (2035) Without Project conditions. HCM calculations shown in Table 5-10 are based on the geometrics at the study area intersections. The operation analysis worksheets for Horizon Year (2035) Without Project conditions are provided in Appendix "Q".

For Horizon Year (2035) Without Project conditions, the following study area intersections are projected to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road
2.	Hidden Springs Road / Clinton Keith Road
7.	Inland Valley Drive / Clinton Keith Road
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

The following improvements are recommended to mitigate the deficient intersections to operate at an acceptable level of service:

Palomar Street / Clinton Keith Road [#1]

- Construct a 2nd southbound left turn lane.
- Provide a separate eastbound right turn lane.
- Provide a westbound right turn overlap phase

Hidden Springs Road / Clinton Keith Road [#2]

- Construct a 2nd southbound left turn lane.
- Provide a westbound right turn overlap phase

TABLE 5-10
INTERSECTION ANALYSIS FOR
HORIZON YEAR (2035) WITHOUT PROJECT CONDITIONS

ID	Intersection	Traffic Control[1]	Intersection Approach Lanes[2] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Delay[3] (secs.) AM	Delay[3] (secs.) PM	Level of Service[3] AM	Level of Service[3] PM
1	Palomar St. / Clinton Keith Rd.																	
	- Without Improvements	TS	1	2	1	1	1	1	1	2	0	1	2	1	48.8	--[4]	D	F
	- With Improvements	TS	1	2	1	2	1	1	1	2	1	1	2	1>	40.6	44.7	D	D
2	Hidden Springs Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0	1!	0	1	1	0	1	2	1	1	2	1	--[4]	--[4]	F	F
	- With Improvements	TS	0	1!	0	2	1	0	1	2	1	1	2	1>	32.4	41.1	C	D
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	26.7	18.7	C	B
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	26.4	38.5	C	D
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	21.5	23.1	C	C
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	17.0	17.8	B	B
7	Inland Valley Dr. / Clinton Keith Rd.																	
	- Without Improvements	TS	1	0	1	0	0	0	1	2	1	1	1	0	--[4]	--[4]	F	F
	- With Improvements	TS	1.5	0	0.5	0	0	0	1	2	1	1	2	0	10.0	15.3	A	B
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	8.3	9.2	A	A
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	12.2	9.1	B	A
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	13.5	10.1	B	B
11	Westpark St. - Catt Rd. / Depasquale Rd.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	8.6	8.6	A	A
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	12.1	12.4	B	B
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	19.2	10.1	C	B
14	Inland Valley Dr. / Prielipp Rd.	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	10.2	17.3	B	C
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	30.3	28.8	C	C
16	Monte Vista Dr. / Baxter Rd.																	
	- Without Improvements	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	>80	11.9	F	B
	- With Improvements	TS	0	0	0	0	1!	0	0	1	0	0	1	0	21.3	10.0	C	A
17	I-15 NB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	1	d	0	0	0	1	1	0	0	1	0	>80	57.8	F	F
	- With Improvements	TS	0	1	d	0	0	0	1	1	0	0	1	0	50.5	24.9	D	C
18	I-15 SB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	>80	F	F
	- With Improvements	TS	0	0	0	0	1	d	0	1	1	1	1	0	18.4	12.0	B	B
19	Dwy. 1 / Westpark St.		Future Intersection												-	-	-	-
20	Dwy. 2 / Westpark St.		Future Intersection												-	-	-	-
21	Dwy. 3 / Westpark St.		Future Intersection												-	-	-	-
22	Dwy. 4 / Westpark St.		Future Intersection												-	-	-	-

1 TS = Traffic Signal; Cross-Street Stop

2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;
> = Right Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Lane Improvement

3 Delay and level of service calculated using the following analysis software: Synchro 8.0

4 Volume to capacity ratio > 1.0. Intersection unstable. LOS = "F"

Inland Valley Drive / Clinton Keith Road [#7]

- Modify northbound striping to provide one left turn lane and one shared left/right turn lane.
- Provide a 2nd westbound through lane.

Monte Vista Drive / Baxter Road [#16]

- Install a traffic signal.

I-15 SB Ramps / Baxter Road [#17]

- Install a traffic signal.

I-15 NB Ramps / Baxter Road [#18]

- Install a traffic signal.
- Provide a separate eastbound right turn lane

The freeway ramp analysis results for Horizon Year (2035) Without Project conditions are summarized in Table 5-11. The ramp analysis calculation worksheets for Horizon Year (2035) Without Project conditions are included in Appendix "R". As shown on Table 5-11, the freeway ramps analyzed for this study were found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours.

However, providing the following improvements on the I-15 freeway mainline are anticipated to mitigate the deficient merge/diverge ramp locations to operate at an acceptable level of service as presented on Table 5-11:

I-15/Clinton Keith Road Interchange

- Construct a 4th and 5th southbound freeway mainline lane
- Construct a 4th and 5th northbound freeway mainline lane.

The freeway segment analysis results for Horizon Year (2035) Without Project conditions are summarized in Table 5-12. The freeway segment analysis calculation worksheets are included in Appendix "S". As shown on Table 5-12, the freeway segment locations analyzed for this study were found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours. Widening the I-15 freeway mainline to provide 5 lanes for the northbound and southbound direction within the study area are anticipated to mitigate the deficient freeway segment locations to operate at an acceptable level of service as presented on Table 5-12.

TABLE 5-11

FREEWAY RAMP ANALYSIS FOR
HORIZON YEAR (2035) WITHOUT PROJECT CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Ramp Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road							
	- Without Improvements	3	1,412	1,508	27.2	>45	C	F
	- With Improvements	5			17.7	23.9	B	C
	SB On Ramp at Clinton Keith Road							A
	- Without Improvements	3	1,367	1,016	31.0	>45	D	F
	- With Improvements	4			25.0	32.7	C	D
I-15 Northbound	NB Off Ramp at Clinton Keith Road							
	- Without Improvements	3	836	1,332	>45	35.7	F	F
	- With Improvements	4			25.9	21.8	C	C
	NB On Ramp at Clinton Keith Road							
	- Without Improvements	3	1,483	1,482	>45	37.5	F	F
	- With Improvements	5			28.9	25.5	D	C

[1] Existing ramp locations consist of 2 lanes (on/off ramps). 1 = Improvement

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\5-11

TABLE 5-12

BASIC FREEWAY SEGMENT ANALYSIS FOR HORIZON YEAR (2035) WITHOUT PROJECT CONDITIONS

Freeway	Segment	Lanes on Freeway[1]	Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road							
	- Without Improvements	3	5,394	8,487	33.1	>45	D	F
	- With Improvements	5			17.5	30.2	B	D
	South of Clinton Keith Road							
	- Without Improvements	3	5,349	7,995	32.6	>45	D	F
	- With Improvements	5			17.4	27.7	B	D
I-15 Northbound	South of Clinton Keith Road							
	- Without Improvements	3	7,607	6,422	>45	>45	F	F
	- With Improvements	5			25.9	21.1	C	C
	North of Clinton Keith Road							
	- Without Improvements	3	8,254	6,572	>45	>45	F	F
	- With Improvements	5			29.0	21.6	D	C

[1] 1 = Existing; 5 = Improvement

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

E. Horizon Year (2035) With Project (2035WP) Conditions

Table 5-13 summarizes the Intersection levels of service for the Horizon Year (2035) With Project conditions. HCM calculations shown in Table 5-13 are based on the geometrics at the study area intersections. The operation analysis worksheets for Horizon Year (2035) With Project conditions are provided in Appendix "T".

For Horizon Year (2035) With Project conditions, the study area intersections are projected to operate at an acceptable level of service during the peak hours with existing geometry, except at the following location, in addition to previously identified intersections under Horizon Year (2035) Without Project conditions:

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road – *(also operates at LOS "E" or worse under 2035NP)*
2.	Hidden Springs Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
5.	Catt Road-Arya Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
7.	Inland Valley Drive / Clinton Keith Road – *(also operates at LOS "E" or worse under 2035NP)*
14.	Inland Valley Drive / Prielipp Road – *(also operates at LOS "E" or worse under E+P)*
16.	Monte Vista Drive / Baxter Road – *(also operates at LOS "E" or worse under 2035NP)*
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

The following improvement is recommended to mitigate the deficient intersections to operate at an acceptable level of service, in addition to the improvements identified under Horizon Year (2035) Without Project conditions:

Catt Road / Clinton Keith Road [#5]

- Modify northbound striping to provide a dedicated left turn lane and a shared through/right turn lane.
- Construct a separate southbound left turn lane.

Inland Valley Drive / Prielipp Road [#14]

- Install a traffic signal.
- Modify westbound striping to provide one through lane and one right turn lane.

The freeway ramp analysis results for Horizon Year (2035) With Project conditions are summarized in Table 5-14. The ramp analysis calculation worksheets for Horizon Year (2035) Without Project conditions are included in Appendix "U". As shown on Table 5-10, the freeway ramps analyzed for this study were found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours.

TABLE 5-13
INTERSECTION ANALYSIS FOR
HORIZON YEAR (2035) WITH PROJECT CONDITIONS

ID	Intersection	Traffic Control[1]	Intersection Approach Lanes[2] Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R	Delay[3] (secs.) AM	Delay[3] (secs.) PM	Level of Service[3] AM	Level of Service[3] PM
1	Palomar St. / Clinton Keith Rd.																	
	- Without Improvements	TS	1	2	1	1	1	1	1	2	0	1	2	1	50.1	--[4]	D	F
	- With Improvements	TS	1	2	1	2	1	1	1	2	1	1	2	1>	38.0	49.6	D	D
2	Hidden Springs Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0	1!	0	1	1	0	1	2	1	1	2	1	--[4]	--[4]	F	F
	- With Improvements	TS	0	1!	0	2	1	0	1	2	1	1	2	1>	32.7	47.4	C	D
3	I-15 SB Ramps / Clinton Keith Rd.	TS	0	0	0	1.5	0.5	2	0	3	1	2	3	0	27.1	22.2	C	C
4	I-15 NB Ramps / Clinton Keith Rd.	TS	1	1!	1	0	0	0	2	3	0	0	3	1	20.7	27.4	C	C
5	Catt Rd. - Arya Rd. / Clinton Keith Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0	1!	0	1	3	0	1	3	0	35.3	--[4]	D	F
	- With Improvements	TS	1	1	0	1	1	0	1	3	0	1	3	1	24.8	39.5	C	D
6	George Av. / Clinton Keith Rd.	TS	1	1	0	1	1	1	1	3	0	1	2	1	16.8	18.1	B	B
7	Inland Valley Dr. / Clinton Keith Rd.																	
	- Without Improvements	TS	1	0	1	0	0	0	1	2	1	1	1	0	--[4]	--[4]	F	F
	- With Improvements	TS	1.5	0	0.5	0	0	0	1	2	1	1	2	0	17.7	20.7	B	C
8	Smith Ranch Rd. / Clinton Keith Rd.	TS	1	1	d	1	1	d	1	2	d	1	2	0	8.7	10.3	A	B
9	Copper Craft Dr. / Clinton Keith Rd.	TS	0.5	0.5	d	0	1!	0	1	2	d	1	2	d	13.0	11.5	B	B
10	George Av. / Depasquale Rd.	CSS	0.5	0.5	0	0	0.5	0.5	0	1!	0	0	0	0	17.3	14.1	C	B
11	Westpark St. - Catt Rd. / Depasquale Rd.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.1	11.8	B	B
12	Grand Av. / Clinton Keith Rd.	TS	0	0	0	1	0	1	1	2	0	0	2	0	12.0	12.9	B	B
13	George Av. / La Estrella St.	AWS	1	1	0	1	1	d	0	1!	0	0	1!	0	22.6	11.1	C	B
14	Inland Valley Dr. / Prielipp Rd.																	
	- Without Improvements	AWS	0	1!	0	1	0	1	0	2	0	0	2	0	12.7	56.2	B	F
	- With Improvements	TS	0	1!	0	1	0	1	0	2	0	0	1	1	37.8	38.8	D	D
15	Nutmeg St. / Jackson Av.	TS	1	2	0	1	2	0	1	2	0	1	1	1	37.1	32.6	D	C
16	Monte Vista Dr. / Baxter Rd.																	
	- Without Improvements	CSS	0	0	0	0	1!	0	0	1	0	0	1	0	>80	13.0	F	B
	- With Improvements	TS	0	0	0	0	1!	0	0	1	0	0	1	0	21.9	9.6	C	A
17	I-15 NB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	1	d	0	0	0	1	1	0	0	1	0	>80	60.8	F	F
	- With Improvements	TS	0	1	d	0	0	0	1	1	0	0	1	0	51.0	24.7	D	C
18	I-15 SB Ramps / Baxter Rd.																	
	- Without Improvements	AWS	0	0	0	0	1	d	0	1	0	1	1	0	>80	>80	F	F
	- With Improvements	TS	0	0	0	0	1	d	0	1	1	1	1	0	20.2	13.3	C	B
19	Dwy. 1 / Westpark St.	CSS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	13.8	28.9	B	D
20	Dwy. 2 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	14.3	27.3	B	D
21	Dwy. 3 / Westpark St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0.5	0.5	d	14.2	30.0	B	D
22	Dwy. 4 / Westpark St.	CSS	0	1	0	0	1	0	0	0	1	0	0	0	8.7	9.0	A	A

1 TS = Traffic Signal; Cross-Street Stop

2 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; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; d = Defacto right turn lane;
> = Right Turn Overlap Phasing; >> = Free-Right Turn Lane; 1 = Lane Improvement

3 Delay and level of service calculated using the following analysis software: Synchro 8.0

4 Volume to capacity ratio > 1.0. Intersection unstable. LOS = "F"

C:\TRAMES\0201-0002\Excel\0201-0002_04 Report\5-13

TABLE 5-14

FREEWAY RAMP ANALYSIS FOR HORIZON YEAR (2035) WITH PROJECT CONDITIONS

Freeway	Ramp Location	Lanes on Freeway[1]	Ramp Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	SB Off Ramp at Clinton Keith Road							
	- Without Improvements	3	1,429	1,547	27.4	56.2	C	F
	- With Improvements	5			17.8	24.3	B	C
	SB On Ramp at Clinton Keith Road							A
	- Without Improvements	3	1,388	1,048	31.2	49.1	D	F
	- With Improvements	4			25.1	33.0	C	D
I-15 Northbound	NB Off Ramp at Clinton Keith Road							
	- Without Improvements	3	853	1,371	47.4	36.0	F	F
	- With Improvements	4			25.9	22.1	C	C
	NB On Ramp at Clinton Keith Road							
	- Without Improvements	3	1,504	1,514	50.9	36.7	F	F
	- With Improvements	5			29.1	25.7	D	C

[1] Existing ramp locations consist of 2 lanes (on/off ramps). 1 = Improvement

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

Freeway mainline improvements identified under Horizon Year (2035) Without Project conditions are anticipated to mitigate the merge/diverge ramp locations as shown on Table 5-14.

The freeway segment analysis results for Horizon Year (2035) With Project conditions are summarized in Table 5-15. The freeway segment analysis calculation worksheets are included in Appendix "V". As shown on Table 5-15, the freeway ramps analyzed for this study were found to operate at an acceptable LOS (LOS "D" or better) during the peak hours.

Freeway mainline improvements identified under Horizon Year (2035) Without Project conditions are anticipated to mitigate the freeway segment locations as shown on Table 5-15.

TABLE 5-15

BASIC FREEWAY SEGMENT ANALYSIS FOR HORIZON YEAR (2035) WITH PROJECT CONDITIONS

Freeway	Segment	Lanes on Freeway[1]	Volumes		Density[2]		Level of Service[3]	
			AM	PM	AM	PM	AM	PM
I-15 Southbound	North of Clinton Keith Road							
	- Without Improvements	3	5,411	8,526	33.2	>45	D	F
	- With Improvements	5			17.6	30.4	B	D
	South of Clinton Keith Road							
	- Without Improvements	3	5,370	8,027	32.8	>45	D	F
	- With Improvements	5			17.4	27.9	B	D
I-15 Northbound	South of Clinton Keith Road							
	- Without Improvements	3	7,624	6,461	>45	>45	F	F
	- With Improvements	5			26.0	21.2	C	C
	North of Clinton Keith Road							
	- Without Improvements	3	8,275	6,604	>45	>45	F	F
	- With Improvements	5			29.1	21.8	D	C

[1] 1 = Existing; 5 = Improvement

[2] Density is measured by passenger cars per lane (pc/mi/ln)

[3] Density and and level of service calculated using the following analysis software: HCS2010, Version 6.6

6.0 FINDINGS AND RECOMMENDATIONS

A. Traffic Impacts, Level of Service Analysis, and Traffic Signal Warrants

For Existing (2014) traffic conditions, the following study area intersections are currently operating at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
17.	I-15 SB Ramps / Baxter Road
18.	I-15 NB Ramps / Baxter Road

For E+P and EAP traffic conditions, the following study area intersections are anticipated to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
5.	Catt Road-Arya Road / Clinton Keith Road
14.	Inland Valley Drive / Prielipp Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

For EAPC traffic conditions, the following study area intersections are anticipated to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
2.	Hidden Springs Road / Clinton Keith Road
5.	Catt Road-Arya Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
7.	Inland Valley Drive / Clinton Keith Road
14.	Inland Valley Drive / Prielipp Road – *(also operates at LOS "E" or worse under E+P)*
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

For Horizon Year (2035) Without Project (2035NP) Conditions, the following study area intersections are anticipated to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road
2.	Hidden Springs Road / Clinton Keith Road
7.	Inland Valley Drive / Clinton Keith Road
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

For Horizon Year (2035) With Project (2035WP) conditions, the following study area intersections are anticipated to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with existing geometry:

STUDY AREA INTERSECTIONS	
1.	Palomar Street / Clinton Keith Road – *(also operates at LOS "E" or worse under 2035NP)*
2.	Hidden Springs Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
5.	Catt Road-Arya Road / Clinton Keith Road – *(also operates at LOS "E" or worse under E+P)*
7.	Inland Valley Drive / Clinton Keith Road – *(also operates at LOS "E" or worse under 2035NP)*
14.	Inland Valley Drive / Prielipp Road – *(also operates at LOS "E" or worse under E+P)*
16.	Monte Vista Drive / Baxter Road – *(also operates at LOS "E" or worse under 2035NP)*
17.	I-15 SB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*
18.	I-15 NB Ramps / Baxter Road – *(also operates at LOS "E" or worse under Existing 2014)*

Traffic signal warrant analysis results indicated that the following unsignalized study area intersections are anticipated to meet traffic signal warrants under existing traffic conditions:

STUDY AREA INTERSECTIONS	
14.	Inland Valley Drive / Prielipp Road
16.	Monte Vista Drive / Baxter Road
17.	I-15 SB Ramps / Baxter Road
18.	I-15 NB Ramps / Baxter Road

B. <u>Recommended Off-Site Improvements</u>

The following intersection improvements are recommended for Existing plus Project and EAP conditions (see Figure 6-A and Figure 6-B):

Catt Road / Clinton Keith Road [#5]

- Modify northbound striping to provide a dedicated left turn lane and a shared through/right turn lane.
- Construct a separate southbound left turn lane.

FIGURE 6-A
EXISTING PLUS PROJECT (E+P) RECOMMENDED IMPROVEMENTS

LEGEND:

- N = NEW TRAFFIC SIGNAL IMPROVEMENT
- = EXISTING TRAFFIC SIGNAL
- S = EXISTING ALL WAY STOP
- = STOP SIGN
- = EXISTING LANE
- = LANE IMPROVEMENT
- DEF = DEFACTO RIGHT TURN LANE
- 22 = INTERSECTION ID
- = DIRT ROAD / FUTURE ROADWAY

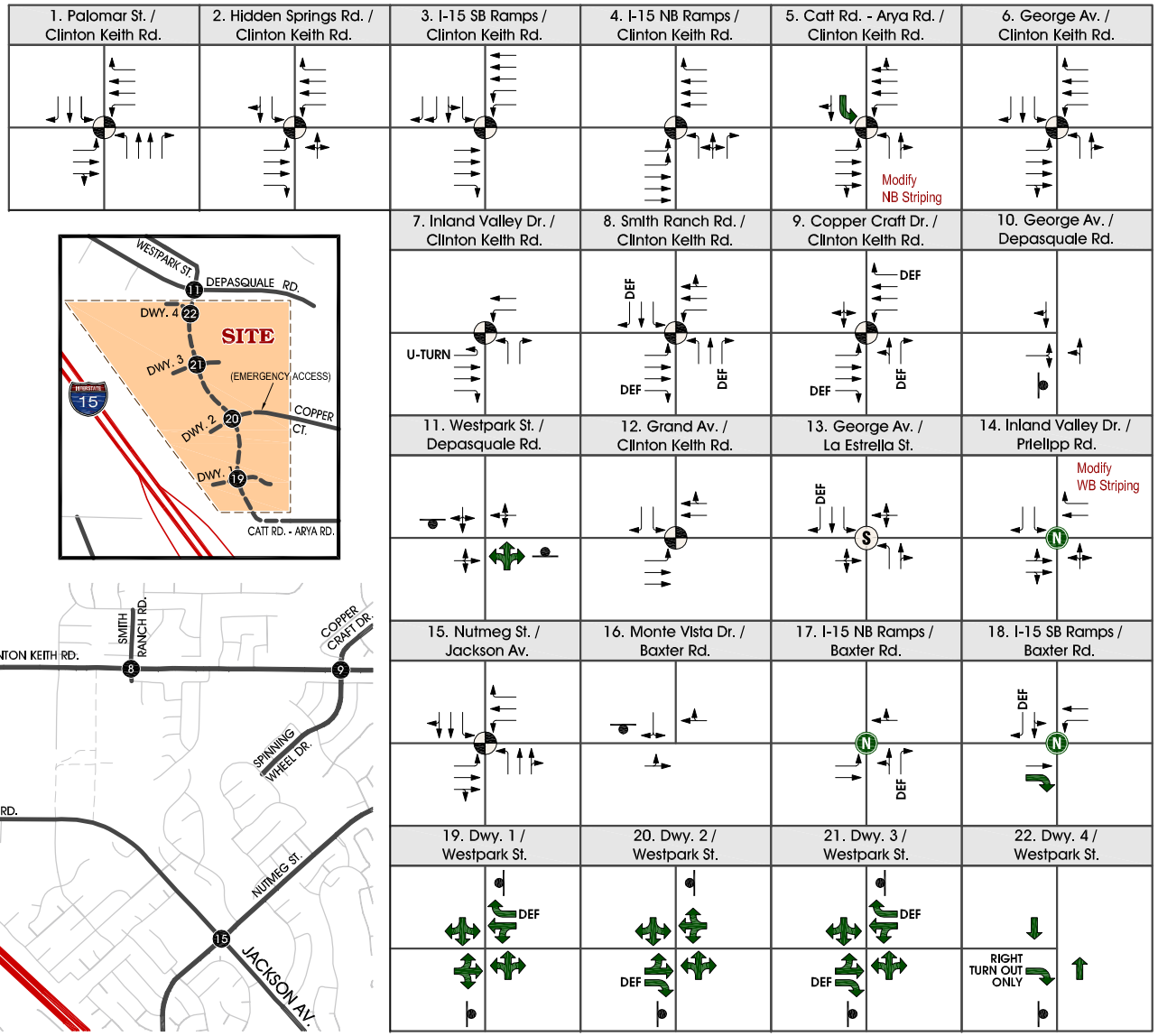
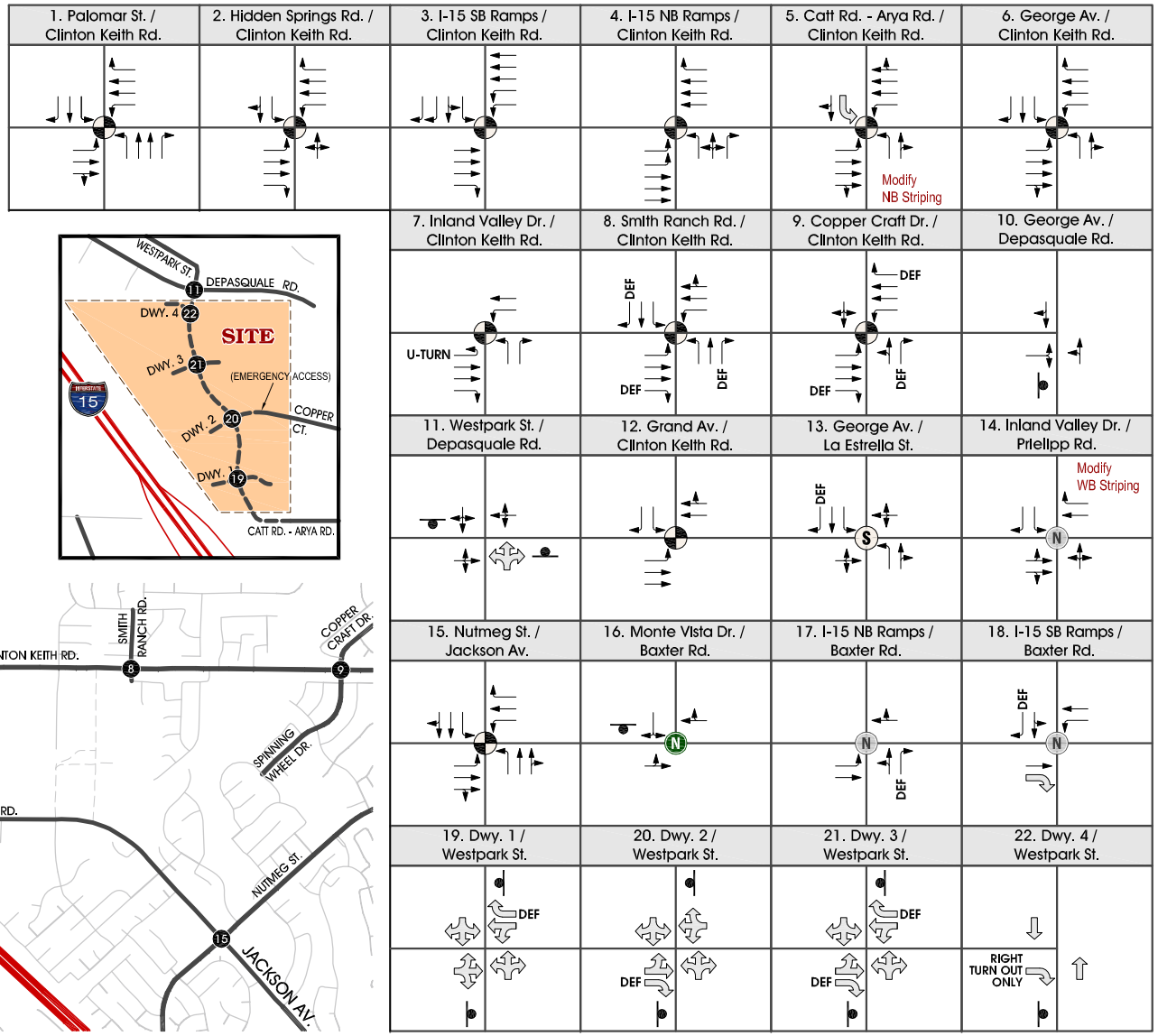


FIGURE 6-B
EXISTING PLUS AMBIENT PLUS PROJECT (EAP) RECOMMENDED IMPROVEMENTS

LEGEND:

- = NEW TRAFFIC SIGNAL IMPROVEMENT (EAP)
- = PREVIOUS TRAFFIC SIGNAL IMPROVEMENT (E+P)
- = EXISTING TRAFFIC SIGNAL
- = EXISTING ALL WAY STOP
- DEF = DEFACTO RIGHT TURN LANE
- = STOP SIGN
- = INTERSECTION ID
- = EXISTING LANE
- = DIRT ROAD / FUTURE ROADWAY
- = PREVIOUS LANE IMPROVEMENT (E+P)



Inland Valley Drive / Prielipp Road [#14]

- Install a traffic signal.
- Modify westbound striping to provide one through lane and one right turn lane.

I-15 SB Ramps / Baxter Road [#17]

- Install a traffic signal.

I-15 NB Ramps / Baxter Road [#18]

- Install a traffic signal.
- Provide a separate eastbound right turn lane

The following intersection improvements are recommended for EAPC conditions, in addition to the improvements identified previously under E+P and EAP conditions (see Figure 6-C):

Hidden Springs Road / Clinton Keith Road [#2]

- Construct a 2nd southbound left turn lane.

Inland Valley Drive / Clinton Keith Road [#7]

- Provide a 2nd westbound through lane.

Monte Vista Drive / Baxter Road [#16]

- Install a traffic signal.

The following intersection improvements are recommended for Horizon Year (2035) Without Project conditions (see Figure 6-D):

Palomar Street / Clinton Keith Road [#1]

- Construct a 2nd southbound left turn lane.
- Provide a separate eastbound right turn lane.
- Provide a westbound right turn overlap phase

Hidden Springs Road / Clinton Keith Road [#2]

- Construct a 2nd southbound left turn lane.
- Provide a westbound right turn overlap phase

Inland Valley Drive / Clinton Keith Road [#7]

- Modify northbound striping to provide one left turn lane and one shared left/right turn lane.
- Provide a 2nd westbound through lane.

FIGURE 6-C
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC) RECOMMENDED IMPROVEMENTS

LEGEND:

- (N) = NEW TRAFFIC SIGNAL IMPROVEMENT (EAPC)
- (N) = PREVIOUS TRAFFIC SIGNAL IMPROVEMENT (E+P AND EAP)
- = EXISTING TRAFFIC SIGNAL
- (S) = EXISTING ALL WAY STOP
- DEF = DEFACTO RIGHT TURN LANE
- = STOP SIGN
- (22) = INTERSECTION ID
- = EXISTING LANE
- = DIRT ROAD / FUTURE ROADWAY
- = CURRENT LANE IMPROVEMENT (EAPC)
- = PREVIOUS LANE IMPROVEMENT (E+P)

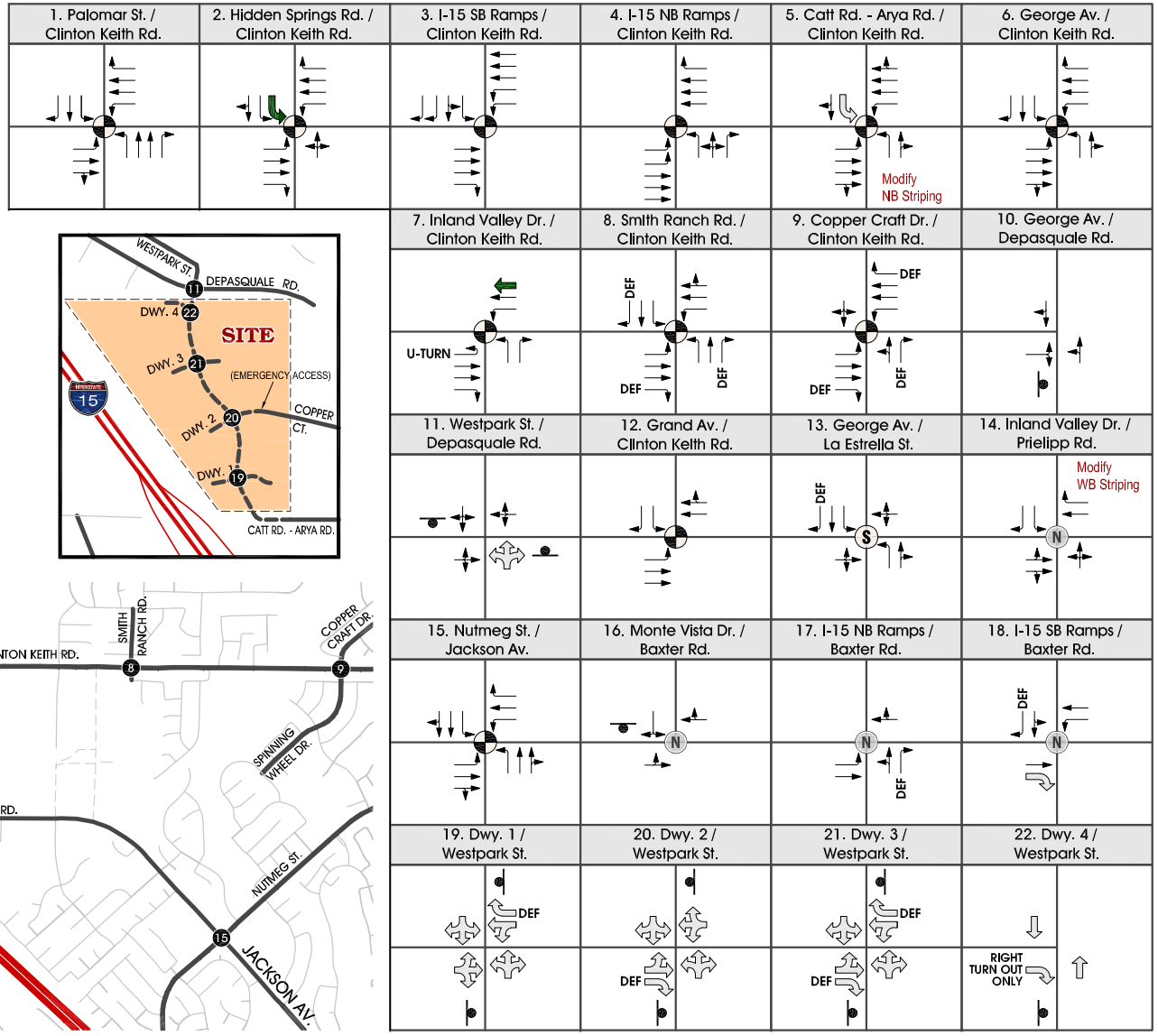
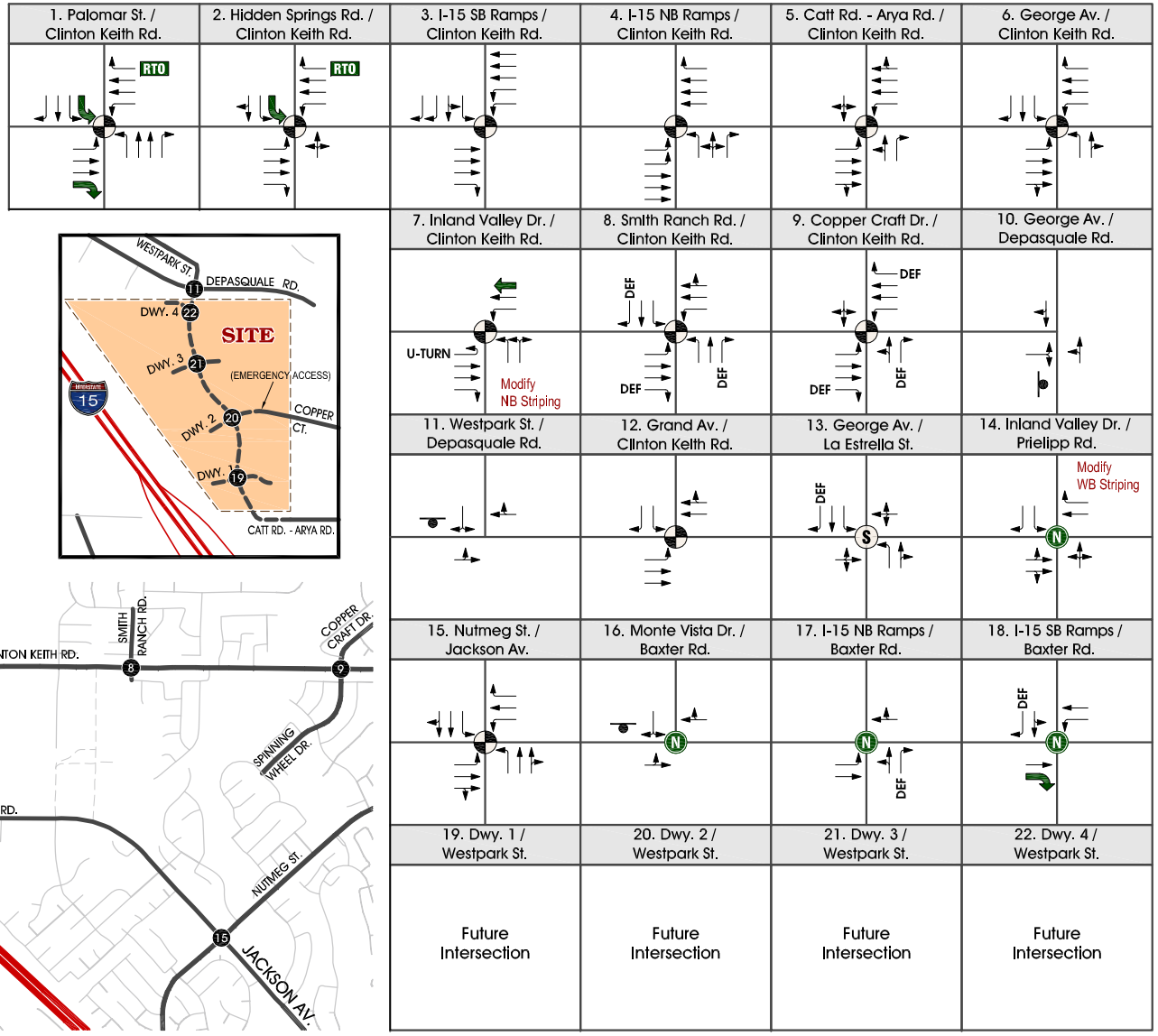


FIGURE 6-D

HORIZON YEAR (2035) WITHOUT PROJECT (2035NP) RECOMMENDED IMPROVEMENTS

LEGEND:

- N = NEW TRAFFIC SIGNAL IMPROVEMENT (2035NP)
- = EXISTING TRAFFIC SIGNAL
- S = EXISTING ALL WAY STOP
- DEF = DEFACTO RIGHT TURN LANE
- = STOP SIGN
- 22 = INTERSECTION ID
- = EXISTING LANE
- = DIRT ROAD / FUTURE ROADWAY
- = CURRENT LANE IMPROVEMENT (2035NP)
- RTO = CURRENT RIGHT TURN OVERLAP PHASE IMPROVEMENT (2035NP)



Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

Monte Vista Drive / Baxter Road [#16]

- Install a traffic signal.

I-15 SB Ramps / Baxter Road [#17]

- Install a traffic signal.

I-15 NB Ramps / Baxter Road [#18]

- Install a traffic signal.
- Provide a separate eastbound right turn lane

The following intersection improvements are recommended for Horizon Year (2035) With Project conditions, in addition to the improvements identified previously under Horizon Year (2035) Without Project conditions (see Figure 6-E):

Catt Road / Clinton Keith Road [#5]

- Modify northbound striping to provide a dedicated left turn lane and a shared through/right turn lane.
- Construct a separate southbound left turn lane.

Inland Valley Drive / Prielipp Road [#14]

- Install a traffic signal.
- Modify westbound striping to provide one through lane and one right turn lane.

The project will add a considerable amount of traffic to Catt Road – Arya Road near Clinton Keith Road. Therefore, it is recommended that a median be installed to prohibit left turns into the USA gas station off of Arya. Additionally, a left turn pocket into the driveway off of Catt Road should be provided to allow vehicles to turn into the gas station.

The following freeway mainline improvements are provided to address the ramp deficiencies EAPC conditions:

I-15 Northbound, south of Clinton Keith Road

- Construct a 4th northbound lane.

The following freeway mainline improvements are provided to address the ramp and freeway segment deficiencies for Horizon Year (2035) conditions:

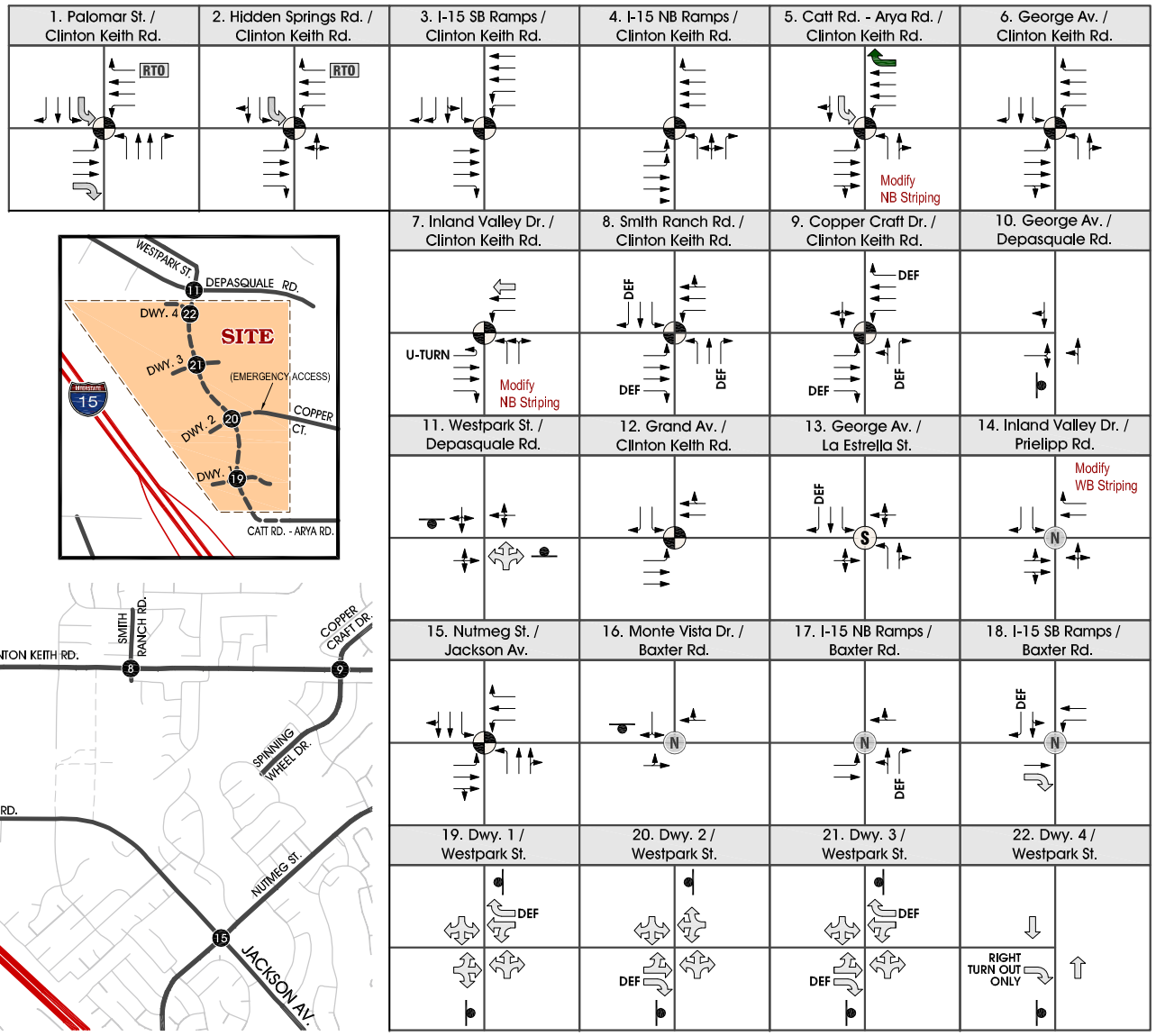
I-15/Clinton Keith Road Interchange

- Construct a 4th and 5th southbound freeway mainline lane
- Construct a 4th and 5th northbound freeway mainline lane.

FIGURE 6-E
HORIZON YEAR (2035) WITH PROJECT (2035WP) RECOMMENDED IMPROVEMENTS

LEGEND:

- = NEW TRAFFIC SIGNAL IMPROVEMENT (2035WP)
- = PREVIOUS TRAFFIC SIGNAL IMPROVEMENT (2035NP)
- = EXISTING TRAFFIC SIGNAL
- = EXISTING ALL WAY STOP
- DEF = DEFACTO RIGHT TURN LANE
- = STOP SIGN
- 22 = INTERSECTION ID
- = EXISTING LANE
- = DIRT ROAD / FUTURE ROADWAY
- = CURRENT LANE IMPROVEMENT (2035WP)
- = PREVIOUS LANE IMPROVEMENT (2035NP)
- RTO = PREVIOUS RIGHT TURN OVERLAP PHASE IMPROVEMENT (2035NP)



C. Circulation Recommendations

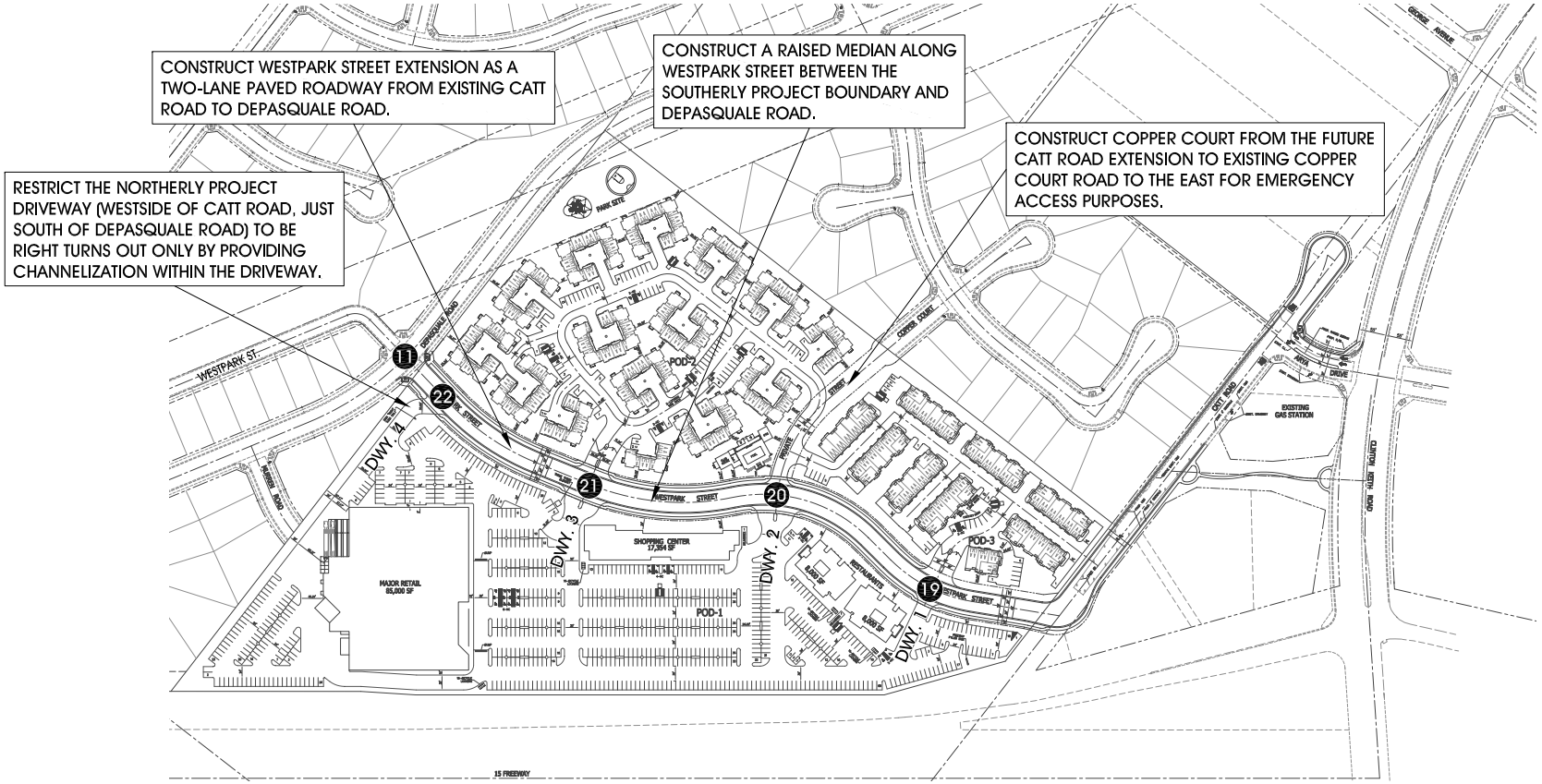
1. On-Site

Figure 6-F illustrates the on-site recommended roadway and intersection lane improvements. Construction of on-site improvements shall occur in conjunction with adjacent project development activity or as needed for project access purposes.

The recommended on-site roadway improvements are described below.

- Construct Westpark Street extension as a two-lane paved roadway from existing Catt Road to Depasquale Road.
- Construct a raised median along Westpark Street between the southerly project boundary and Depasquale Road.
- Restrict the northerly project driveway (westside of Catt Road, just south of Depasquale Road) to be right turns out only by providing channelization within the driveway. The intent of this recommendation is to reduce the potential for vehicular conflicts between traffic heading south from Depasquale Road and vehicles turning into the shopping center.
- Construct Copper Court from the future Catt Road extension to existing Copper Court Road to the east for emergency access purposes.
- Provide stop sign control at the project driveways.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.
- Verify that minimum sight distance is provided at the project driveways.

FIGURE 6-F
CIRCULATION RECOMMENDATIONS



ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT.

VERIFY THAT MINIMUM SIGHT DISTANCE IS PROVIDED AT THE PROJECT ACCESS POINTS.

PROVIDE STOP SIGN CONTROL AT THE PROJECT DRIVEWAYS.

11. Westpark St. / Depasquale Rd.	19. Dwy. 1 / Westpark St.	20. Dwy. 2 / Westpark St.	21. Dwy. 3 / Westpark St.	22. Dwy. 4 / Westpark St.
	DEF		DEF	
		DEF	DEF	RIGHT TURN OUT ONLY

LEGEND:

= STOP SIGN CONTROL

= EXISTING LANE

= LANE IMPROVEMENT

DEF = DEFACTO RIGHT TURN LANE

22 = INTERSECTION ID

Westpark Promenade Traffic Impact Analysis
City of Wildomar, CA (0201-0002:01.dwg)

TRAMES SOLUTIONS INC.

THIS PAGE INTENTIONALLY LEFT BLANK