APPENDIX J

Traffic Impact Analysis

LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS

PALOMAR HEIGHTS

Escondido, California
February 25, 2020

LLG Ref. 3-18-2878

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EXECUTIVE SUMMARY

The Palomar Heights Residential Project is located between Valley Parkway and Grand Avenue east of Valley Boulevard and proposes the development of 510 residential dwelling units with 7,000 SF commercial and / or office uses within the 13.8-acre project site. Currently, this site is partially occupied by the Palomar Hospital. This Project is estimated to generate a net of 1,750 additional daily trips with 120 AM peak hour trips and 179 PM peak hour trips. The Project study area includes 15 intersections and 16 segments, based on the City of Escondido ADT thresholds for intersections and segments to be included in the traffic impact analysis. The following scenarios are analyzed in this report.

The VMT analysis indicates that the Project VMT does not result in a significant transportation impact. The intersection and segment analysis indicated that the General Plan Mobility and Infrastructure Element inconsistencies at the following intersections:

I-1. N. Ivy Street / Valley Parkway

I-2. N. Ivy Street / Grand Avenue Intersection

The Project study area intersections and segments are analyzed in the following scenarios:

- Existing
- Existing + Project
- Opening Year (2022) Without Project
- Opening Year (2022) With Project
- Year 2035 Without Project
- Year 2035 With Project

I-1. N. Ivy Street / Valley Parkway

The Project should provide improvements to this intersection to design and construct a new traffic signal at the N. Ivy Street / E. Valley Parkway intersection to the satisfaction of the City of Escondido. As such, the Project would be consistent with the General Plan, Mobility and Infrastructure Element Policy 7.8 and the associated City's Traffic Impact Analysis Requirements Guidelines. Further, CEQA Guidelines Section 15064.3 states "a project's effect on automobile delay shall not constitute a significant environmental effect."

I-2. N. Ivy Street / Grand Avenue Intersection

The Project should contribute 4.6% towards the installation of a traffic signal, roundabout or other necessary improvement, as determined by the City Engineer, at the E. Grand Ave/Ivy St. intersection. Funds shall be deposited into the future public improvements trust deposit account and the applicant shall coordinate with the City to incorporate improvements at the E. Grand Ave/Ivy St. intersection in the City's future Capital Improvement Program (CIP) via the Project's Development Agreement. As such, the Project would be consistent with the

General Plan, Mobility and Infrastructure Element Policy 7.8 and the associated City's Traffic Impact Analysis Requirements Guidelines.

In addition to the above, the Project should ensure the following:

- The ultimate widening of Grand Avenue along the project frontage to Collector standards (32 feet from current 26 feet half street) per the City's adopted Circulation Element of the General Plan.

- The ultimate widening of Fig Street along the project frontage to local Collector (With Parking) standards per the City's adopted Circulation Element of the General Plan.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

APPENDICES

LIST OF FIGURES

LIST OF TABLES

TRANSPORTATION IMPACT ANALYSIS

PALOMAR HEIGHTS

Escondido, California
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1.0 INTRODUCTION

It is proposed to develop the former Palomar Health Downtown Campus in the City of Escondido into a mixed-use residential and commercial project. The Project is located between Valley Parkway and Grand Avenue east of Valley Boulevard. The following sections are included in this report:

- Project Description
- Existing Conditions
- Study Area, Analysis Scenarios and Analysis Approach / Methodology and Significance Criteria
- VMT Analysis
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Opening Year 2022 Volumes
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Access, Parking, Bicycle and Transit Discussion
- Closure of southbound Movement on Valley Boulevard
- Significance of Impacts and Mitigation Measures

With respect to vehicle traffic, this Transportation Impact Analysis (TIA) includes analysis of the Project's impacts utilizing both a Level of Service (LOS) metric and a Vehicle Miles Traveled (VMT) metric. However, as presented in this section, the LOS analysis is provided to consider the Project's consistency with programs addressing the circulation system, including the General Plan, and otherwise is provided for informational purposes only. As provided in CEQA Public Resources Code Section 21099(b)(2), following certification of CEQA Guidelines Section 15064.3, which occurred in December 2018, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to" CEQA. Rather, and as provided in CEQA Guidelines Section 15064.3, VMT is now considered the most appropriate measure of transportation impacts, and the City of Escondido has elected to utilize the provisions of CEQA Guidelines Section 15064.3 for this analysis herein. As such, the analysis presented below utilizes VMT as the measure to determine Project impacts related to transportation facility operations.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The 13.8-acre Project site is located in the central area of the City of Escondido (City), California. The Project site is approximately 1.6 miles east of I-15, and about 0.6 miles west of State Route (SR-) 78. Locally, the site is located on the eastern edge of the downtown area of the City.

Figure 2-1, Vicinity Map, shows the Project location within the County of San Diego and ***Figure 2-2***, shows the Project site within the City of Escondido.

The Project site is the Palomar Health Downtown Campus (Hospital Campus) site (***Table 2-1***) and various adjacent properties/parcels. The site is currently developed with hospital, medical office, and commercial uses, and associated parking facilities. The existing Hospital Campus and surrounding properties are comprised of three areas; the main hospital building to the east of Valley Boulevard, medical offices and commercial uses to the west of Valley Boulevard, and medical offices along E. Grand Avenue and N. Fig Street.

TABLE 2-1
EXISTING PALOMAR HEALTH DOWNTOWN CAMPUS

Address	Existing Use	Square Feet
456 E. Grand Avenue	Medical Offices	12,870
451 Valley Boulevard	Vacant Commercial	4,100
555 E. Valley Parkway	Hospital Use	371,869
624 East Grand Avenue	Medical Offices	2,190
644-660 E. Grand Avenue	Medical Offices	4,668
121-141 N. Fig Street	Medical Offices	2,549
	Total	**398,246**

2.2 Project Description

The Project proposes to demolish all existing structures onsite and construct a mixed-use residential and commercial development. The Project would include 510 dwelling units and up to 10,000 square feet of commercial space. In addition, the Project would include supporting open space and recreational amenities, landscaping, parking, and infrastructure improvements. The infrastructure improvements include utility connections to existing utility lines within the adjacent roadways as well as roadway frontage improvements.

Table 2-2 below provides a summary of the proposed uses. ***Figure 2-3*** is the Conceptual Site Plan.

TABLE 2-2
PROPOSED USES

Land Use	Units	Square-feet
Residential		
Senior Apartments	90	-
Apartments	258	-
Villas	72	-
Rowhomes	90	-
Total	**510**	-
Commercial		
Commercial (Café, workspace, restaurant, leasing space, etc.)	-	10,000
Total	-	**10,000***
Open Space		
Private	-	45,375
Active	-	40,226
Passive	-	99,705
Total	**-**	**185,306**

2.2.1 *Residential*

The residential uses would be comprised of four multi-family residential unit types; senior apartments, apartments, villas, and rowhomes. The Project site would have an overall residential density of 37 units per acre. Below is a description of each housing type proposed.

- **Senior apartments** would be situated within one, 4-story building on the western portion of the Project site (west of Valley Boulevard). The ground floor would provide on-site parking and one residential unit, as well as commercial uses described later in this section. The floors above would be comprised of residential units. A total of 90 units would be provided in the building, consisting of a mix of one and two-bedroom units ranging from approximately 600 to 825 square feet.
- **Apartments** are proposed on the east of Valley Boulevard, fronting on Valley Boulevard, E. Valley Parkway, and E. Grand Avenue. A total of 258 apartments would be provided within three buildings. The proposed buildings would be five levels, with four floors and a mezzanine. The apartment building located on the northern side of the Project site along E. Valley Parkway would include 70 units, the apartment building along Valley Boulevard would include 148 units and Building 18 along E. Grand Avenue would include 40 units. Apartment units would include one, two, and three-bedroom units ranging in size from approximately 650 to 1,550

square feet. Two of the apartment buildings would also include commercial and recreational uses, as described below.

- **Villas** would be located east of the apartments within the central area of the site. A total of 90 villas would be provided within 9, three-story buildings, including two and three-bedroom units. The villa units would range from approximately 1,100 to 1,650 square feet. Each villa would include a garage on the first floor, which is further discussed under parking, below.
- **Rowhomes** would be located in the southeastern area of the site, with frontage along E. Grand Avenue and N. Fig Street. Rowhomes would provide 72 dwelling units within 11, three-story buildings, including two- and three-bedroom units. Rowhomes would range in size from approximately 1,415 to 1,875 square feet.

2.2.2 *Commercial*

The Project would include up to 10,000 square-feet of commercial space. The proposed commercial space would be located at the northeast and northwest corners of the E. Grand Avenue/Valley Boulevard/E. Second Avenue intersection. Commercial space is proposed within the southern area of the senior apartment building as well as on the southern side of the apartment building proposed adjacent to this intersection. The commercial use areas could be used as a café, collaborative workspace, bar/restaurant, indoor farmers market or food market, and/or leasing space.

2.2.3 *Recreation and Open Space*

The Project includes recreational and open space amenities to support the proposed residential uses. The usable recreational and open space amenities include a centrally located pool/spa and community pavilion/clubhouse building, a gym within the main apartment building, a dog park located in the northeastern portion of the Project site and a pocket park near the southeastern corner of the Project site. A total of 40,226 square feet of recreational open space is provided on the Project site, with an additional 99,705 square feet of passive open space spread throughout the Project site in the form of walkways, courtyards, and open landscaped areas. A total of 45,375 square feet of private open space would be provided via balconies and patios associated with residential units. Overall, the Project would provide a total of 185,306 square feet of open space, or 363 square feet of space per unit, which would exceed the 300 square feet per unit minimum identified in the Downtown Specific Plan.

2.2.4 *Parking*

Parking would be provided throughout the site. Parking for senior units would be provided within the first floor of the building and would be provided at a rate of 0.75 spaces per one-bedroom unit and 1.5 spaces per two0bedroom unit. Parking for the proposed multi-family units would include 1.5 spaces per one-bedroom unit, 1.75 spaces per two-bedroom unit, and 2 spaces per three-bedroom unit. Parking for the multi-family units would be provided in garages on the first floor of the apartment buildings, in attached garages in the rowhomes and villas, and in surface lots within the interior area of the site. Each apartment unit would have one covered parking space (in the first-floor garage), and each villa and rowhome would have a private two-car garage. Guest parking would be provided at a

ratio of approximately 0.17 spaces per unit, which is less than the 0.25 parking spaces per unit required by the Downtown Specific Plan. Overall, the Project would provide 891 parking spaces via garage, open, and parallel spaces. The project would also include accessible parking spaces and electric vehicle charging stations as required by state and local codes. Four bike racks would also be provided along Valley Boulevard. The Project has been designed to reduce the visibility of parking areas by maximizing the inclusion of parking within structures and within the interior of the site.

In addition to the on-site parking, the Project modifications to Valley Boulevard would involve changes to street parking. Currently there is street parking allowed along Valley Boulevard with 10 spaces provided along the west side and 9 spaces along the east side. With the implementation of the Project circulation and access improvements identified below, parking along Valley Boulevard would be increased to 21 spaces.

2.2.5 *Project Circulation and Access*

Primary vehicular and pedestrian access would be provided to the Project site at the intersection of E. Valley Parkway/N. Hickory Street/ Valley Boulevard. This entrance would include signage and landscaping to demarcate it as the main entrance. Other vehicular and pedestrian access points would be provided at two locations along E. Grand Avenue and a public alley west of Valley Boulevard. Valley Boulevard and N. Fig Street would provide pedestrian-only access to the Project site. In addition, pedestrian access would be provided at the northeastern corner of Valley Boulevard and E. Grand Avenue via the plaza and the parking garage. The Project would make improvements to Valley Boulevard and E. Grand Avenue.

The Valley Boulevard improvements would include removal of the southbound lane in order to provide 21 parking spaces along the west side of the roadway, improve and widen the sidewalk, provide a northbound bike lane, and reduce the pedestrian crossing width. Due to the low southbound traffic volumes, the elimination of the southbound lane would have minimal effects to capacity. With the implementation of the Project, Valley Boulevard would become a one-way northbound roadway. Valley Boulevard would have a 66 right-of-way that would include, from west to east, an 6.5-foot sidewalk, 8.5-foot parallel parking stalls with adjacent 3-foot wide buffer, two 12-foot wide northbound traffic lanes, a 5-foot northbound bike lane with adjacent 2-foot wide buffers, 8.5-foot wide parallel parking or bus pull out, 6.5-foot sidewalk. In addition, a 24-foot parkway outside of the right-of-way on the Project site east side of Valley Boulevard would be provided for pedestrian usage. The Project would also include a bulb out at the intersection of Valley Boulevard and E. Grand Avenue in order to reduce the pedestrian crossing width and calm traffic conditions. These improvements to Valley Boulevard also involve relocating existing infrastructure such as street lights and traffic signals.

The project would include half width frontage improvements to E. Grand Avenue along the project frontage to Collector standards per the City's adopted Mobility and Infrastructure Element of the General Plan. The proposed frontage improvement to E. Grand Avenue would include widening the two west-bound vehicular lanes adjacent to the Project site to 32-feet total and improving the sidewalk. In addition, a painted median would be provided on E. Grand Avenue along the Project frontage, as

well as two raised median "pork chops" at the N. Hickory Street/E. Grand Avenue and the N. Fig Street/E. Grand Avenue intersections. The N. Hickory Street/E. Grand Avenue raised median would control turn movements in a manner that provides a dedicated left-turn pocket into the Project's Private Drive B along E. Grand Avenue, prohibits travel from N. Hickory Street into Private Drive B or westbound E. Grand Avenue, and restricts outbound Private Drive B traffic to right-out only. The N. Fig Street/E. Grand Avenue pork chop restricts outbound Private Drive E traffic to right-in and right-out only. The sidewalk improvements along E. Grand Avenue would result in an eight-foot wide pedestrian corridor with a five-foot-wide sidewalk. As a part of this, the Project would include a small street dedication area just north of the Grape Street and E. Grand Avenue intersection. These improvements to E. Grand Avenue also involve relocating existing infrastructure such as utility poles, fire hydrant and a traffic signal (corner of N. Fig Street and E. Grand Avenue).

The Project would not include any hardscape improvements to N. Fig Street but grading within the right-of-way on the west side of the sidewalk may be necessary. The Project would include a General Plan Amendment to N. Fig Street.

The Project would include internal pedestrian linkages. These walkways would connect the proposed residential units to on-site recreational amenities, as well as to the sidewalks along the perimeter of the site. Due to the site topography, pedestrian connections are limited in some areas. The project includes a pedestrian ramp on the eastern side of the site in order to provide a connection to N. Fig Street. In addition to sidewalks along the driveway at the main project entrance, the project includes pedestrian access from the proposed northern apartment building to the E. Valley Parkway sidewalk, and multiple connections are provided from the other two apartment buildings to Valley Boulevard and E. Grand Avenue. The senior housing building includes a network of walkways to the north and south of the building that connect to the sidewalk system as well. Pedestrian connections along E. Grand Avenue in the vicinity of the rowhomes are limited to the private driveway access location due to topographical differences. Overall, the Project provides internal pedestrian connections and maximizes pedestrian connections to the adjacent areas as feasible based on project design.

Overall, the proposed improvements are intended to improve multi-modal transportation, and promote pedestrian and bikeway connections to the downtown area.

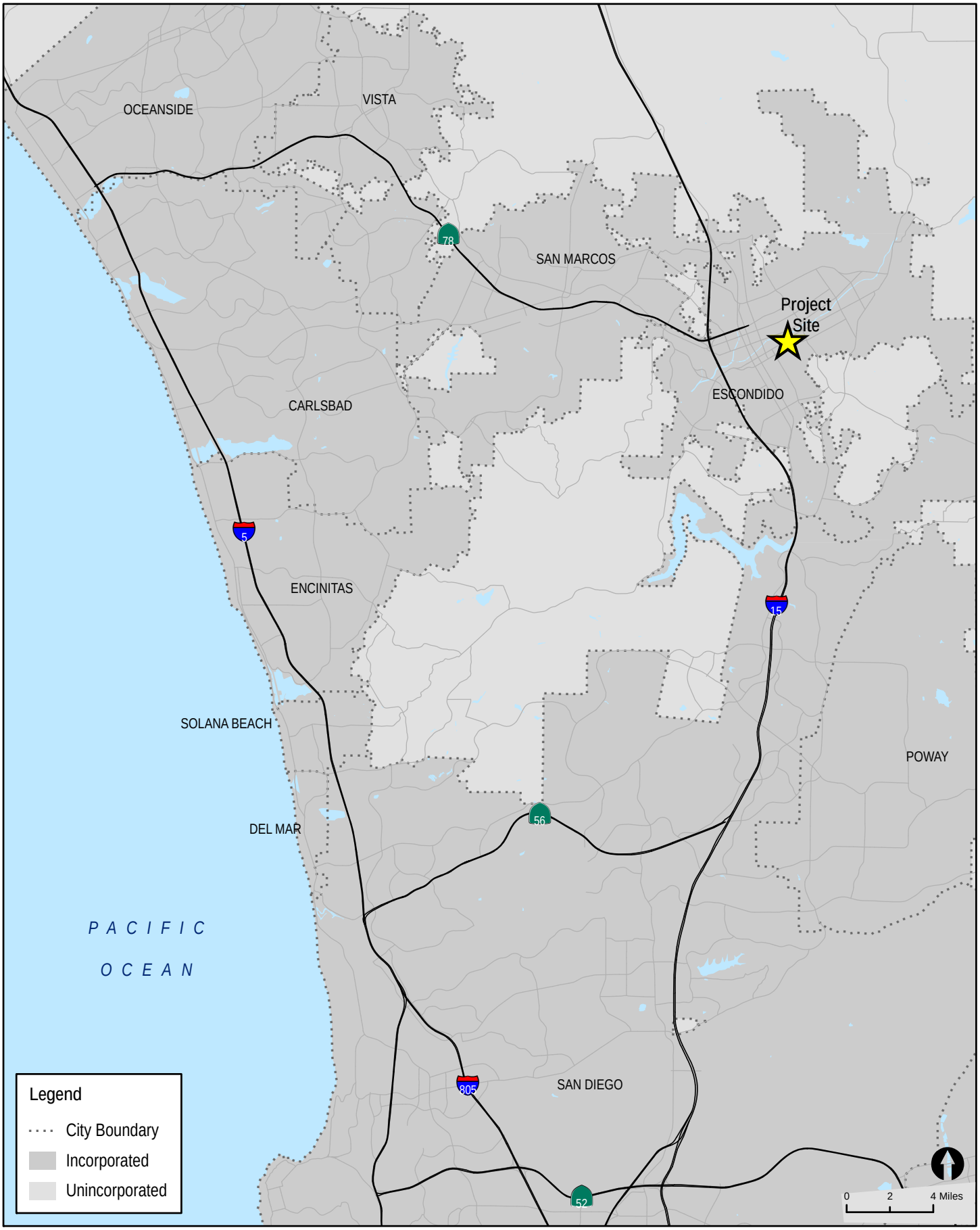

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Figure 2-1

Vicinity Map

PALOMAR HEIGHTS

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Figure 2-2

Project Area Map

PALOMAR HEIGHTS

OPEN SPACE REQUIRED

510DU X 300SF= 153,000 SF

OPEN SPACE PROVIDED

PRIVATE

FAMILY APARTMENTS		
PLAN 1	140 SF X 129 =	18060 SF
PLAN 2	75 SF X 96 =	7200 SF
PLAN 3	75 SF X 33 =	2475 SF
SENIOR APARTMENTS		
PLAN 2	80 SF X 29 =	2320 SF
PLAN 3	65 SF X 15 =	975 SF
PLAN 4	55 SF X 11 =	605 SF
PLAN 5	65 SF X 9 =	585 SF
ROWHOMES		
PLAN 1	110 SF X 22 =	2420 SF
PLAN 2	135 SF X 22 =	2970 SF
PLAN 3	100 SF X 12 =	1200 SF
PLAN 4	90 SF X 16 =	1440 SF
VILLAS		
PLAN 1	55 SF X 55 =	3025 SF
PLAN 2	60 SF X 18 =	1080 SF
PLAN 3	60 SF X 17 =	1020 SF
SUBTOTAL		45,375 SF

COMMON

ACTIVE	40,226 SF
PASSIVE	99,705 SF
SUBTOTAL	139,931 SF

TOTAL **185,306 SF**

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Figure 2-3

Site Plan

Palomar Heights

3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed *Project* requires an understanding of the existing transportation system within the project area. ***Figure 3–1*** shows an existing conditions diagram, including signalized intersections and lane configurations.

3.1 Existing Street Network

The following is a description of the existing street network in the study area.

Juniper Street is classified as a Collector Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a two-lane undivided roadway with a two-way-left-turn lane. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 25 mph.

Ivy Street is classified as a Local Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. No speed limit is posted.

N. Hickory Street is classified as a Local Collector in the Escondido Circulation Element in the project vicinity. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 25 mph.

Valley Boulevard is classified as a Collector Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a three-lane undivided roadway (one SB lane and two NB lanes) between Valley Parkway and Grand Avenue. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway between Grand Avenue and Hickory Street.

Valley Boulevard is currently built as a three-lane road linking Valley Parkway and Grand Avenue, with one lane southbound and two lanes northbound. curb, gutter and sidewalks are provided. Curbside parallel parking is permitted on both sides of the roadway.

It is proposed to prohibit southbound traffic and only provide two northbound lanes on this road. All near-term and long-term analyses assume no southbound traffic on Valley Boulevard, and consequently, all southbound traffic is reassigned to surrounding roadways and intersections.

Fig Street is classified as a Collector Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a two-lane undivided roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 25 mph.

Valley Parkway is classified as a Collector Street between Tulip Street and Hickory Street and as a 4-Lane Major-Road between Hickory Street and Midway Drive, in the Escondido Circulation Element. It is currently constructed as three-lane one-way (WB) roadway between Tulip Street and Hickory Street and as a 4-Lane undivided road between Hickory Street and Fig Street and a 4-Lane Major-Road between Fig Street and Midway Drive. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 35 mph in the Project vicinity.

E. Grand Avenue is classified as a Collector Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a four-lane divided road west of Valley Boulevard. Between Valley Boulevard and Hickory Street, E. Grand Avenue is built as a two-lane undivided roadway. East of this intersection, E. Grand Avenue is a three-lane undivided roadway with two lanes, one westbound and two eastbound. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 30 mph.

2nd Avenue is classified as a Collector Street in the Escondido Circulation Element in the project vicinity. It is currently constructed as a three-lane one-way roadway. Sidewalks are provided on both sides of the roadway. Bike lanes are not provided. Curbside parking is permitted on both sides of the roadway. The posted speed limit is 30 mph.

3.2 Existing Bicycle Network

There are no bicycle facilities within the street segments in the study area. A Class I bike path, a regional link in the Bicycle Network system parallels the Sprinter route, just north of Valley Parkway, in the Project vicinity. This bike path ends at the Escondido Transit Center approximately 0.9 miles west of the Project site. However, a bike path also parallels the Escondido Creek, which is approximately 500 feet north of the Project site.

3.3 Existing Pedestrian Conditions

Sidewalks are provided along the both sides of all segments in the study area.

3.4 Existing Transit Conditions

Transit service is provided to the area by bus Routes 351 & 352 Bus Route. Route 351 & 352 provide bus service to the area via Grand Avenue with stops at the Escondido Transit Center, Palomar Health Campus, Orange Glen High School Midway Drive & Valley Parkway and Washington Avenue & Harding Street. The Route runs between 5:00 AM and 5:30 PM with a frequency of 30 minutes.

Transit service is also provided to the area via the Route 357, 371, & 388. Routes 357, 371, & 388 provides bus service to the area via Valley Parkway with stops at Escondido Transit Center, Valley Parkway & Escondido Boulevard, Valley Parkway & Broadway, and Valley Parkway & Juniper Street. The Route runs between 5:00 AM and 5:30 PM with a frequency of 30 minutes.

Transit service is also provided to the area via the Route 358 & 359. Route 358 & 359 provides bus service to the area via Broadway with stops at Broadway & El Norte Parkway, and Broadway & Pennsylvania Avenue. The Route runs between 5:00 AM and 5:30 PM with a frequency of 30 minutes.

The Project proposes to make improvements to the existing NCTD bus stops and include a public transit bus turn-out on Valley Boulevard north of E. Grand Avenue.

3.5 Existing Traffic Volumes

Table 3–1 is a summary of the most recent available average daily traffic volumes (ADTs) conducted in March 2018 and September 2018 counts provided by the City of Escondido. Manual hand counts at the study area intersections, including bicycle and pedestrian counts, were conducted in February and March 2018 and May 2019 when schools were in session.

Figure 3–2 shows the Existing Traffic Volumes. ***Appendix A*** contains the manual count sheets.

It is planned to close the southbound lane on Valley Boulevard from Valley Parkway to Grand Avenue. As a result, this southbound traffic was rerouted to Valley Parkway and other adjacent roadways. ***Figure A*** depicts this rerouted traffic and is included in *Appendix A*. Counts were also conducted at all existing site driveways in order to determine the amount of traffic currently generated by the site. These trips will be eliminated and replaced by the Project trips. There are currently 13 existing driveways to the site. Daily counts were conducted at 9 of the 13 driveways and only peak hour counts were conducted at four driveway locations. The daily counts were estimated at these four driveways based on the peak hour traffic. ***Table 3-2*** summarizes the daily and peak hour counts at the 13 driveways. As seen in *Table 3-2*, the existing site is observed to generate a daily ADT of 2,120, with 160 AM peak hour trips (82 inbound and 78 outbound) and PM peak hour trips (inbound and outbound).

The locations of the driveways and counts sheets are included in *Appendix A*.

Figure 3-3 depicts the future geometry at the E. Grand Avenue / Valley Boulevard and E. Grand Avenue / Grape Street intersections.

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT [a]	
	Existing	Rerouted [b]
Juniper Street		
Valley Pkwy to Grand Ave	5,870	5,870
Grand Ave to 2nd Ave	6,810	6,810
N. Hickory Street		
W. Washington Ave to Valley Pkwy	4,810 [c]	4,810
N. Fig Street		
W. Washington Ave to Valley Pkwy	7,950 [c]	7,950
Valley Pkwy to Grand Ave	5,660	5,660
Valley Boulevard		
Grand Ave to Valley Pkwy	9,980	8,750
Valley Parkway		
Juniper St to Ivy St	14,790	15,895
Ivy St to Hickory St	13,610	14,840
Hickory St to Fig St	23,680	23,680
Grand Avenue		
Juniper St to Ivy St	9,550	8,445
Valley Blvd to Grape St	9,450	8,220
Grape St to Fig St	15,130	15,130
2nd Avenue		
Juniper St to Ivy St	13,680	13,680
Ivy St to Grand Ave	13,070	13,070

Footnotes:

a. Average Daily Traffic (ADT) volume counts conducted on March 22, 2018.

b. Highlighted cells indicate change in ADT due to closure of the southbound lane on Valley Boulevard.

c. ADT volume counts conducted on September 25, 2018, provided by the City.

General Note:

Shaded cell indicates change in ADT due to rerouting of traffic as a result of closing southbound traffic on Valley Boulevard.

TABLE 3–2
SUMMARY OF EXISTING TRAFFIC AT ALL DRIVEWAYS AT THE PALOMAR HEIGHTS SITE

Driveway	Daily			AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
#1	427	545	972	28	67	95	49	14	63
#2	11	11	22	0	0	0	1	1	2
#3	165	153	318	11	3	14	8	12	20
#4	81	61	142	11	0	11	0	3	5
#5	17	28	45	0	0	0	1	0	1
#6	40	29	69	1	0	1	0	4	4
#7	6	53	59	0	0	0	0	9	9
#8	49	16	65	1	0	1	2	0	2
#9	30	26	56	2	0	2	3	3	6
#10			128	11	3	14	5	2	7
#11			110	10	2	12	2	4	6
#12			40	0	3	3	0	3	3
#13			93	7	0	7	1	6	7
Total			**2,120**	**82**	**78**	**160**	**72**	**61**	**133**

Note: ADT at Driveways #10 through #13 were estimated using the peak hour volumes, assuming the AM peak hour is 10% and PM peak hour is 6% of the ADT based on the comparison of the daily versus the peak hour counts at the other driveways..

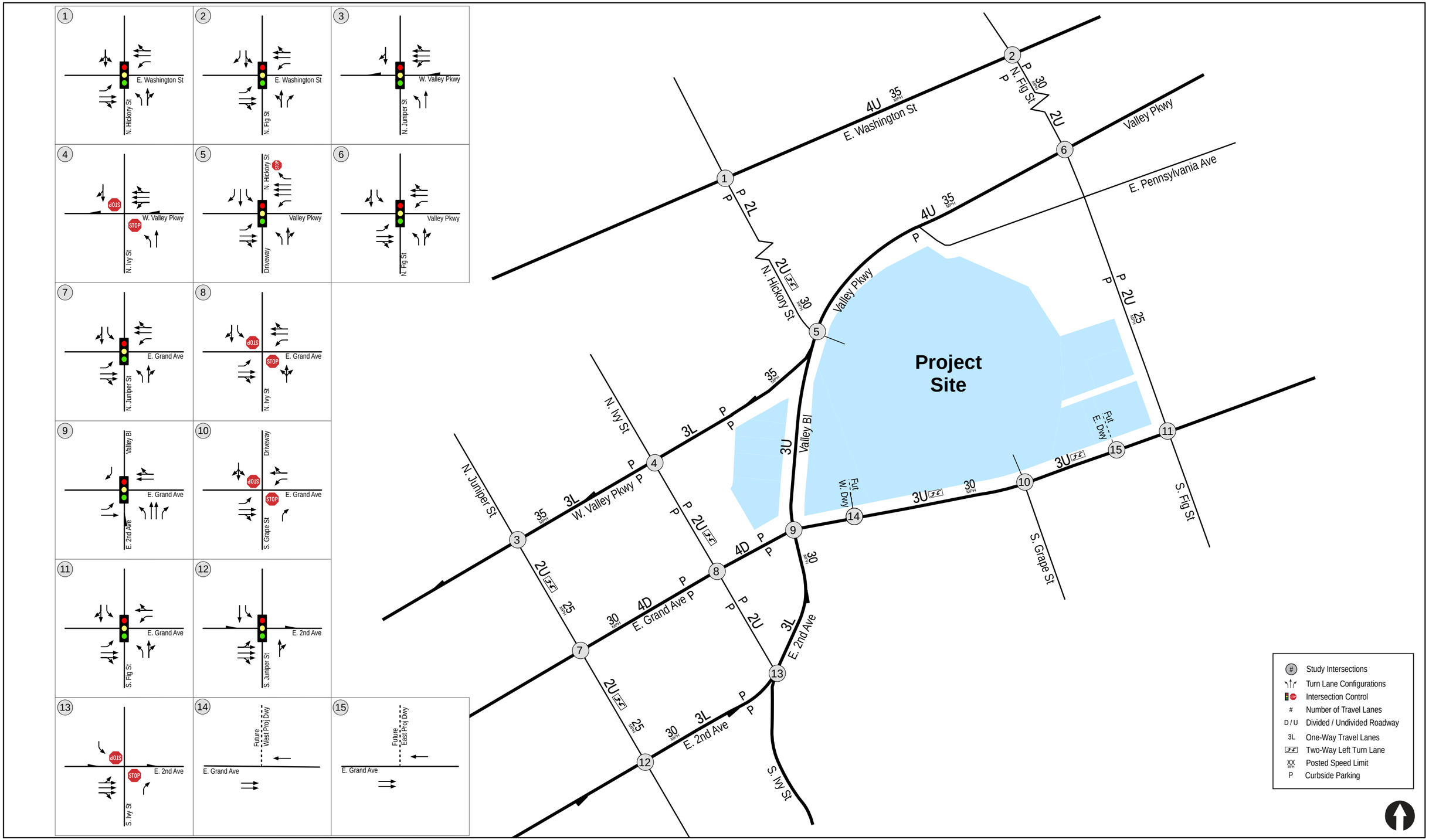

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Figure 3-1

Existing Conditions Diagram

PALOMAR HEIGHTS

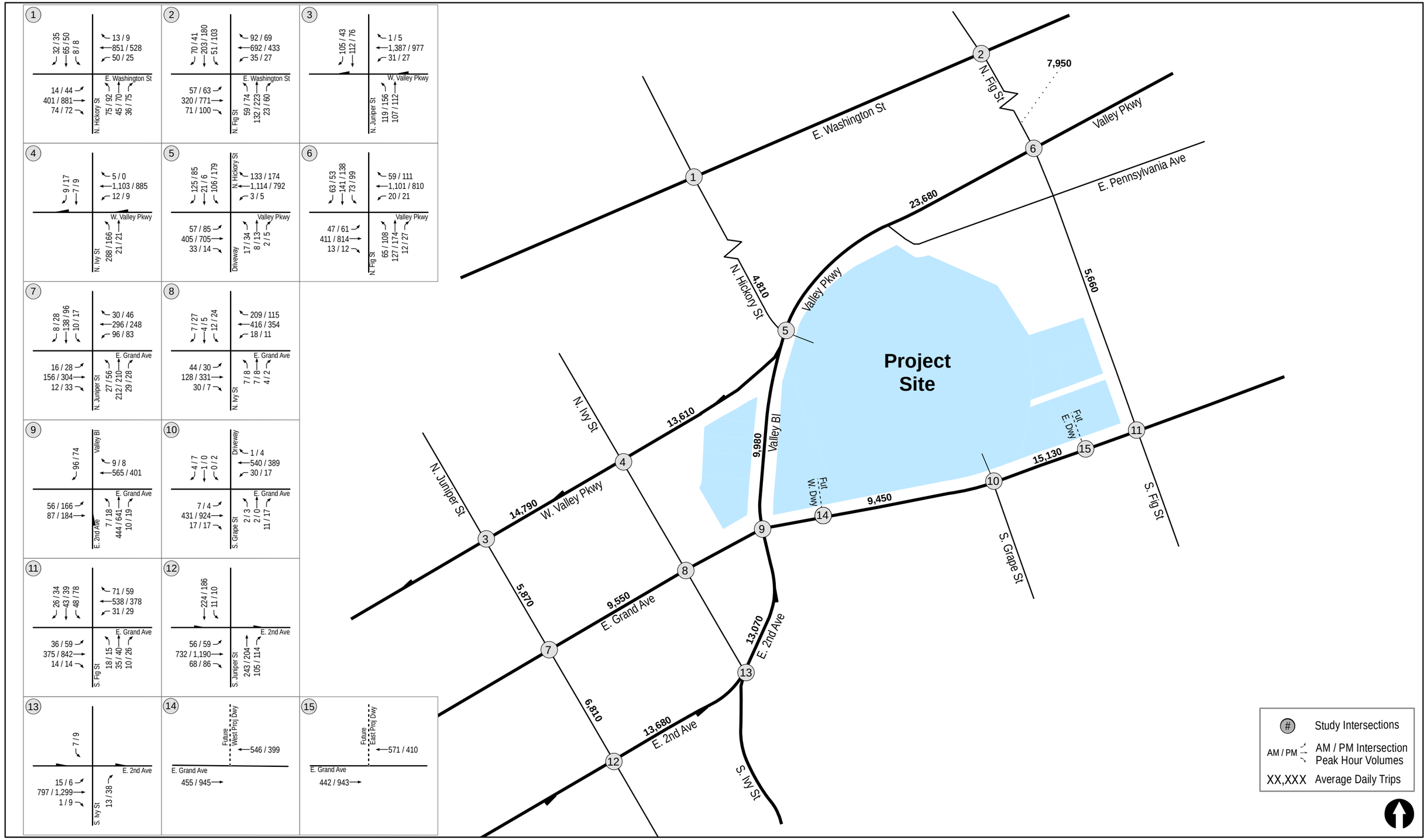

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Figure 3-2

Existing Traffic Volumes

PALOMAR HEIGHTS

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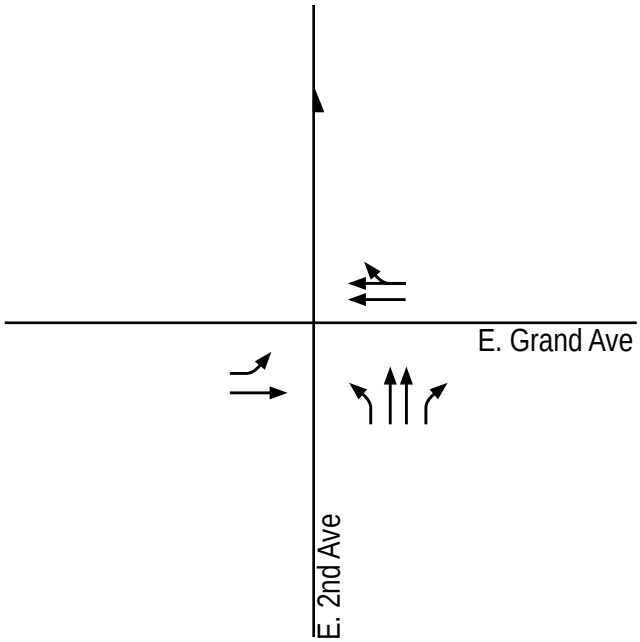

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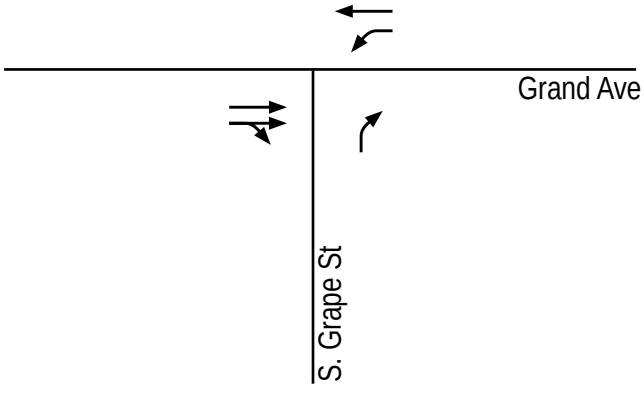

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Figure 3-3

Future Conditions

PALOMAR HEIGHTS

4.0 STUDY AREA, ANALYSIS SCENARIOS AND ANALYSIS APPROACH / METHODOLOGY

4.1 Study Area

For any development, passenger vehicle trips shall be estimated using the rates and methodologies outlined in "Trip Generation Rates for San Diego Region", latest edition, published by SANDAG (if rates not available, ITE rates shall be used). Since based on the adopted 2013 General Plan of the City of Escondido, the goal Level-of-Service is C, a Traffic Impact Analysis (TIA) must be prepared for any project that generates and adds more than 2% of the ADT for LOS C to any street segment within the preliminary study area identified by the City staff. Based on the above-mentioned threshold, the following table contains the trigger-points for Traffic Impact Analysis within the City of Escondido for different street classifications.

PROPOSED A.D.T. THRESHOLDS FOR ROADWAY SEGMENTS TO TRIGGER TRAFFIC IMPACT ANALYSIS FOR NEW DEVELOPMENTS

Street Classification	Lanes	Cross Sections (ft.)	TIA Trigger-Points (ADT generation)
Prime Arterial	(8 lanes)	116/136 (NP)	900
	(6 lanes)	106/126 (NP)	800
Major Road	(8 lanes)	90/110 (NP)	700
	(4 lanes)	82/102 (NP)	500
Collector	(4 lanes)	64/84 (NP)	500
	(4 lanes)	(WP)	250
Local Collector and other	(2 lanes)	42/66 (NP)	200
	(2 lanes)	(WP)	

A Traffic Impact Analysis should be undertaken for any type of development that generates daily trips more than the above-mentioned trigger-points. Certain types of projects which generate less than 500 ADTs may be considered by the City staff for a TIA waiver only where the affected segments and intersections operate at LOS C or better. On the contrary, City staff may require a TIA for any kind of development if the possible traffic impact of the project is believed to be considerable. The study area would be identified based on the fact that any complete transportation impact analysis should include at least all site access points and major intersections (signalized and un-signalized) adjacent to the site in the study area. Below are the proposed trigger-points to identify if an intersection should be included in the TIA or not.

PROPOSED A.D.T. THRESHOLDS FOR INTERSECTIONS TO BE INCLUDED IN THE TRAFFIC IMPACT ANALYSIS

Intersection Classification (Minor leg of the intersection)	TIA Trigger-Points (AM or PM peak hour trips added to any leg)
Prime Arterial	50
Major Road	40
Collector	30
Local Collector	20

General Notes:

* 2% of A.D.T. for LOS "C" has been used as a guide to calculate the trigger-point values
* Study area can be expanded by City Engineer

Based on the above Trigger-Points, the following intersections and segments are included in the Project study area:

INTERSECTIONS:

1. N. Hickory Street / Washington Avenue
2. N. Fig Street / Washington Avenue
3. N. Juniper Street / Valley Parkway
4. N. Ivy Street / Valley Parkway
5. N. Hickory Street / Valley Parkway
6. N. Fig Street / Valley Parkway
7. S. Juniper St / E. Grand Avenue
8. S. Ivy Street / E. Grand Avenue
9. Valley Boulevard / E. Grand Avenue
10. S. Grape Street / E. Grand Avenue
11. S. Fig Street / E. Grand Avenue
12. S. Juniper St / E. 2nd Avenue
13. S. Ivy Street / E. 2nd Avenue
14. West Project Driveway / E. Grand Avenue
15. West Project Driveway / E. Grand Avenue

SEGMENTS:

1. Juniper Street: Valley Parkway to Grand Avenue
2. Juniper Street: Grand Avenue to 2nd Avenue
3. N. Hickory Street: Washington Avenue to Valley Parkway
4. Fig Street: Washington Avenue to Valley Parkway
5. Fig Street: Valley Parkway to Grand Avenue
6. Valley Boulevard: Grand Avenue to Valley Parkway
7. Valley Parkway: Juniper to Ivy Street

8. Valley Parkway: Ivy Street to Hickory Street
9. Valley Parkway: Hickory Street to Fig Street
10. Grand Avenue: Juniper Street to Ivy Street
11. Grand Avenue: Valley Boulevard to Grape Street
12. Grand Avenue: Grape Street to Fig Street
13. 2nd Avenue: Juniper Street a to Ivy Street
14. 2nd Avenue: Ivy Street to Grand Avenue

The Project does not add more than 150 peak hour trips in either direction to any mainline freeway locations, or more than 20 peak hour trips to any metered freeway on-ramps. Hence, no mainline freeway segments or metered freeway on-ramps were analyzed.

4.2 Analysis Scenarios

The following scenarios will be analyzed in this report:

- Existing
- Existing + Project
- Opening Year (2022) without Project
- Opening Year (2022) with Project
- Year 2035 without Project
- Year 2035 with Project

4.3 Analysis Approach / Methodology

There are various methodologies used to analyze signalized intersections, unsignalized intersections, and street segments. The measure of effectiveness for intersection and segment operations is level of service (LOS), which denotes the operating conditions which occur at a given intersection or on a given roadway segment under various traffic volume loads.

LOS is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Levels of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. In the Highway Capacity Manual 6th Edition, (HCM 6), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

4.3.1 *Signalized Intersections*

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Table 4–1 summarizes the signalized intersections levels of service descriptions. ***Table 4–2*** depicts the intersection LOS and corresponding delay ranges, which are based on overall intersection delay (signalized intersections) and the average control delay for any particular minor movement (unsignalized intersections), respectively. LOS relative to signalized and unsignalized intersection is further described below.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

TABLE 4–1
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS

Level of Service	Description
A	Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Occurs generally with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Results generally when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Results generally in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with oversaturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

TABLE 4–2
INTERSECTION LOS & DELAY RANGES

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	**Unsignalized Intersections**
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: 2000 Highway Capacity Manual

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. *Signal cycle failure (or overflow) is an interrupted traffic condition in which a number of queued vehicles are unable to depart due to insufficient capacity during a signal cycle.* The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher volume (demand) / capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

4.3.2 *Unsignalized Intersections*

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement: LOS is not defined for the intersection as a whole. Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

4.3.3 *Street Segments*

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido's *Roadway Classification, Level of Service, and ADT Table* (***Table 4–3***) and the San Diego County Average Daily Vehicle Trips table (***Table 4–4***). This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

TABLE 4–3
CITY OF ESCONDIDO ROADWAY CLASSIFICATION, LEVEL OF SERVICE AND AVERAGE DAILY TRIP THRESHOLDS
STREET CLASSIFICATION LANES CROSS SECTIONS LEVEL OF SERVICE

Street Classification	Lanes	Cross Sections [1]	Level of Service/ADT Threshold				
			A	B	C	D	E
Prime Arterial	(8 lanes)	116/136 (NP)	23,800	37,800	51,800	62,300	70,000
Prime Arterial	(6 lanes)	106/126 (NP)	20,400	32,400	44,400	53,400	60,000
Super Major Road	(6 lanes)	90/110 (NP)	17,000	27,000	37,000	44,500	50,000
Major Road	(4 lanes)	82/102 (NP)	12,600	20,000	27,400	32,900	37,000
Collector	(4 lanes)	64/84 (NP)	11,600	18,500	25,300	30,400	34,200
Collector	(4 lanes)	(WP)	6,800	10,800	14,800	17,800	20,000
Local Collector	(2 lanes)	42/66 (NP)	5,100	8,100	11,100	13,400	15,000
Local Collector	(2 lanes)	(WP)	3,400	5,400	7,400	8,900	10,000
Rural Collector	(2 lanes)						

(1) Cross sections define the configuration of a proposed roadway at right angles to the centerline. Street cross sections assist in choosing the appropriate design standards for a particular street.
NP = No Parking WP = With Parking
ADT = Average Daily Trips
Source: LLG 2011a

LOS	V/C Ratio
A	0.00 ≥ 0.34
B	0.35 ≥ 0.54
C	0.55 ≥ 0.74
D	0.75 ≥ 0.89
E	0.90 ≥ 1.00
F	>1.00

4.4 Significance Criteria

For purposes of this TIA, the criteria established in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), Transportation, will apply to the analysis of direct, indirect, and cumulative impacts. As such, a significant impact to transportation and traffic-related facilities would result if the Project would:

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

B. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (regarding the use of vehicles miles traveled (VMT) as a criterion for analyzing transportation impacts).

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

D. Result in inadequate emergency access.

For Item A, the Project's consistency (i.e., potential conflicts) with relevant programs, plans, ordinances, and/or policies relating to transit, roadway, bicycle, and pedestrian facilities is addressed in this section.

Specific to roadway conflicts, the Project's consistency with the General Plan Mobility and Infrastructure Element will be addressed, as well as consistency with the City's Traffic Impact Analysis Requirements Guidelines. A component of this analysis includes consideration of whether LOS targets identified in the General Plan and Traffic Guidelines would be achieved or whether the Project would conflict with such targets. To assist in that analysis, the Significance Criteria shown in ***Table 4-4*** below are utilized to assess potential conflicts and related impacts.

TABLE 4–4CITY OF ESCONDIDO TRANSPORTATION SIGNIFICANCE CRITERIA

Level of Service with Project	Allowable Change due to Project Impact		
	Roadway Segments		Intersections Delay (sec.)
	V/C	Speed (mph)	
D, E, or F	0.02	1	2

Source: See City of Escondido.
Notes: V/C = volume to capacity ratio (use LOS E for capacity).
No Significant Impact occurs at areas in GP Downtown Specific Area that operate at LOS "D" or better.
Mitigation measures should also be considered for any segment or intersection operating at LOS "F" subject to less than significant impact.

As to Item B, as the City has not yet adopted VMT analysis guidelines, including thresholds of significance, for the limited purposes of this EIR, analysis of the Project's impacts relative to VMT was conducted utilizing the recommended methodology and significance thresholds provided in the OPR Technical Advisory, as well as the SANTEC/ITE Guidelines relevant to VMT. Per the San Diego ITE SB 743 Subcommittee guidelines, "The target is to achieve a project VMT per capita or

VMT per employee that is 85% or less of the appropriate average based on suggestions in [the] guidelines. Note that the lead agencies have discretion for choosing a VMT metric and threshold."

Based on discussions with City staff, in combination with consideration of the OPR Technical Advisory and SANTEC/ITE Guidelines, the Project is presumed to have a less-than-significant impact if the Project VMT per capita is less than 15 percent of the existing City VMT per capita. Thus, the threshold for significance would be exceeded if the Project's VMT per capita is higher than 85 percent of the Citywide average VMT per capita.

Regarding Items C and D, analysis of design hazards, incompatible uses, and emergency access are evaluated based on a review of the Project by LLG Engineers.

5.0 VEHICLE MILES TRAVELED (VMT) ANALYSIS

VMT is defined as a measurement of miles traveled by vehicles within a specified region for a specified time period and is a measure of network use or efficiency. There are multiple ways to express VMT, although generally VMT is calculated by multiplying all vehicle trips generated by a project by their associated trip lengths, or by multiplying traffic volumes on roadway links by the associated trip distance of each link. VMT accounts for two-way (round trip) travel and is often estimated for a typical weekday for the purposes of measuring transportation impacts.

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. These changes, which are implemented through the CEQA Guidelines, include the elimination of auto delay, LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant transportation impacts. As previously noted, the CEQA Guidelines identify VMT as the most appropriate CEQA transportation metric.

The justification for this paradigm shift is that when significant impacts are identified under a LOS and delay-based analysis, the mitigation is often to provide road improvements, which increase roadway capacity that inherently accommodates more vehicular traffic resulting in additional greenhouse gas emissions. In contrast, under a VMT based analysis, mitigation typically takes the form of strategies intended to reduce vehicle traffic, rather than accommodate such traffic, thereby reducing vehicle traffic and associated emissions.

To implement the directives set by the Legislature in SB 743, in December 2018, the state Office of Planning and Research (OPR) approved revised CEQA Guidelines and a related Technical Advisory, which, taken together provide the guidance necessary to conduct a CEQA-compliant VMT analysis. Relatedly, in May 2019, San Diego's local Institute of Transportation Engineers (ITE) SB 743 Subcommittee updated its Guidelines for Transportation Impact Studies in the San Diego Region consistent with CEQA's VMT requirements. The City has elected to utilize the OPR Technical Advisory and ITE guidelines regarding VMT as interim guidelines until the City formally adopts a VMT threshold. The analysis provided herein is based on these two guidance documents.

5.1 Statewide VMT Guidelines

This section provides an introduction to evaluating potential transportation impacts of a project as proposed by the California Governor's Office of Planning and Research (OPR) to implement California State Law Senate Bill (SB) 743. OPR proposes that metrics based on Vehicle Miles Traveled (VMT) be used to evaluate a project's transportation effects, and that projects in proximity to transit are presumed to result in less-than-significant impacts. OPR also suggests thresholds of significance and technical methodologies to calculate VMT.

5.1.1 *VMT Background and Induced Travel*

VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMT's are calculated based on individual vehicle trips generated and their associated trip lengths.

VMT accounts for two-way (round trip) travel and is often estimated for a typical weekday for the purposes of measuring transportation impacts.

Induced travel occurs where roadway capacity is expanded in an area of present or projected future congestion. The effect typically manifests over several years. Lower travel times make the modified facility more attractive to travelers, resulting in potential trip-making changes. Each of these effects has implications for the total amount of vehicle travel.

- **Longer Trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are farther away, increasing trip length and vehicle travel.
- **Changes in Mode Choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases vehicle travel.
- **Route Changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- **Newly Generated Trips.** Increasing travel speeds can induce additional trips, which increases vehicle travel. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those tasks via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development farther along that corridor; that new development generates and attracts longer trips, which increases vehicle travel. Over several years, this growth component of induced vehicle travel can be substantial.

5.1.2 *Senate Bill 743*

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes include the elimination of Auto Delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of Auto Delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

In January 2016, the OPR issued Draft Guidance, which provided recommendations for updating the State's CEQA Guidelines in response to SB 743 and recommended practice for VMT analysis in an accompanying *Technical Advisory on Evaluating Transportation Impacts in CEQA*. OPR released an update to the CEQA Guidelines and Technical Advisory in December 2018. The technical advisory is publicly available on the state's website[1].

[1] *Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018.* http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

Per OPR's proposed revisions to the CEQA guidelines, a lead agency may elect to be governed by the VMT guidelines immediately. However, beginning July 1, 2020, the VMT guidelines shall apply statewide.

5.1.3 *Revised CEQA Guidelines*

The following is an excerpt from the *New Section 15064.3 Determining the Significance of Transportation Impacts*, Update 2018. This represents regulatory CEQA guidelines on evaluating transportation impacts using VMT.

Subdivision (a): Purpose

This section describes specific considerations for evaluating a project's transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay does not constitute a significant environmental impact.

Subdivision (b): Criteria for Analyzing Transportation Impacts

While subdivision (a) sets forth general principles related to transportation analysis, subdivision (b) focuses on specific criteria for determining the significance of transportation impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology.

Subdivision (b)(1): Land Use Projects

Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. 11 Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact

Subdivision (b)(2): Transportation Projects

Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, a lead agency may tier from that analysis as provided in Section 15152 .

Subdivision (b)(3): Qualitative Analysis

If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

Subdivision (b)(4): Methodology

A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

Subdivision (c): Applicability

The provisions of this section shall apply prospectively as described in Section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

5.1.4 *Technical Guidance: Recommended Methodology, Significance Thresholds, Mitigation, and Alternatives*

The following information is sourced from the *Technical Advisory on Evaluating Transportation Impacts in CEQA*. This represents a non-regulatory technical advisory on evaluating transportation impacts using VMT, with emphasis on larger-scale land development projects.

RECOMMENDATIONS REGARDING METHODOLOGY

The following section provides methodology recommendations to evaluate VMT for various technical areas and project types.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT. To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives.

Trip and Tour Based VMT

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally the most common, method of counting VMT. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *Tour-based* assessment counts the entire home-back-to-home tour that includes the project and any trips within the tour. Examples include Tour 1: Home → Coffee Shop → Work → Home; Tour 2: Home → Store → Home. Together, all tours comprise *household* VMT. A tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development

located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Vehicle Types

Vehicle Miles Traveled refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation.

Residential and Office Projects

Tour- and trip-based approaches offer the best methods for assessing VMT from residential/office projects and for comparing those assessments to VMT thresholds. When available, tour-based assessment is ideal because it captures travel behavior more comprehensively. But where tour-based tools or data are not available for all components of an analysis, a trip-based assessment of VMT serves as a reasonable proxy.

When a trip-based method is used to analyze a residential project, the focus can be on home-based trips. Similarly, when a trip-based method is used to analyze an office project, the focus can be on home-based work trips. When tour-based models are used to analyze an office project, either employee work tour VMT or VMT from all employee tours may be attributed to the project. This is because workplace location influences overall travel.

For office projects that feature a customer component, such as a government office that serves the public, a lead agency can analyze the customer VMT component of the project using the methodology for retail development (see below).

Considerations for All Projects

Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries. Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Analyses should also consider a project's both short- and long-term effects on VMT.

RECOMMENDATIONS REGARDING SIGNIFICANCE THRESHOLDS

Lead agencies have the discretion to set or apply their own thresholds of significance. However, the criteria for determining the significance of transportation impacts should promote:

- Reduction of greenhouse gas emissions;
- Development of multimodal transportation networks; and
- A diversity of land uses.

The OPR Advisory describes the analysis for the following circumstances which may or may not be applicable to the Project.

PRESUMPTION OF LESS THAN SIGNIFICANT IMPACT NEAR TRANSIT STOPS

CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT.

Major Transit Stop refers to an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

A High-Quality Transit Corridor refers to a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. One key indicator may be inconsistency with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization). If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds.

RECOMMENDED NUMERIC THRESHOLDS FOR RESIDENTIAL PROJECTS

Residential Projects: Per the OPR guidelines, a proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as Regional VMT per capita or as City VMT per capita.

5.2 Local/Regional VMT Guidelines

5.2.1 *Transition to SB 743 Guidelines*

Local and regional agencies, as well as transportation professionals, have already begun transitioning to SB 743. To date, like most cities, the City of Escondido has not yet adopted significance criteria or technical methodologies for VMT analysis. However, the City of Escondido, along with SANDAG, San Diego County, and other local agencies, are actively participating in San Diego's local Institute of Transportation Engineers (ITE) SB 743 Subcommittee. Through the collaboration of the subcommittee, an update to the *Guidelines for Transportation Impact Studies in the San Diego Region, May 2019*, has been completed consistent with CEQA VMT requirements. Though, this document has yet to be officially adopted by local agencies as it has just recently been published. The guidelines are generally consistent with the OPR thresholds for VMT significance, including that lead agencies have the discretion to choose a VMT metric and threshold. Key differences between the OPR and San Diego ITE Subcommittee guidelines are:

1. Minimum Project Size Based on Previous TIS Guidelines – Under this alternative, projects would be subjected to different levels of VMT analysis, depending on the size of the project and whether the project is consistent with the local jurisdiction's General Plan or Community Plan. Projects that are consistent with the General Plan or Community Plan are also considered to be consistent with the RTP/SCS. The determination of minimum project size for VMT

analysis differs from the Statewide guidance. The Subcommittee guidelines are listed on the next page.

2. Projects proposed within ½-mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project would still generate significant levels of VMT. In addition, the distance between the project site and the transit station is typically based on direct walking distance without missing sidewalks or physical barriers.

Projects Inconsistent with General Plan or Community Plan	
ADT	**Level of Analysis**
0 – 500	VMT Analysis Not Needed/VMT Impacts Presumed Less than Significant
500 and Greater	VMT Analysis Recommended
Projects Consistent with General Plan or Community Plan	
ADT	**Level of Analysis**
0 – 1,000	VMT Analysis Not Needed/VMT Impacts Presumed Less than Significant
1,000 and Greater	VMT Analysis Recommended

*Statewide guidance can still be applied per lead agency.

3. The lead agency may choose that VMT comparisons be made at a community level rather than a citywide level, providing flexibility as compared to the Statewide guidelines.

4. These guidelines recommend that VMT/employee comparisons be made at both the regional and citywide level (or community level), where the Statewide guidelines suggestion regionwide only.

5.2.2 *Significance Criteria*

Based on OPR guidance and San Diego ITE Subcommittee guidelines, described in the preceding sections, significance thresholds were developed for the Project. Using *Figure 4-1 VMT Analysis for Individual Land Development Projects* from the Subcommittee guidelines, as shown below, the Palomar Heights Project was screened for VMT impacts.

Based on the anticipated trip generation of greater than 2,400 ADT and the Project's inconsistency with the General Plan, a Project-specific SANDAG model run is required.

Per the San Diego ITE SB 743 Subcommittee guidelines, "The target is to achieve a project VMT per capita or VMT per employee that is 85% or less of the appropriate average based on suggestions in [the] guidelines. Note that the lead agencies have discretion for choosing a VMT metric and threshold." Based on discussions with City staff, the Project would be presumed to have a less-than-

significant impact if the Project VMT per capita is less than 15 percent of the City VMT per capita. *Thus, the threshold for significance for projects located within the City of Escondido would be exceeded if a project's VMT per capita is higher than 85 percent of the Citywide average VMT per capita.*

It should be noted that mitigation measures for VMT impacts are proposed through implementation of a Transportation Demand Management (TDM) Plan. The TDM Plan measures allow for a global maximum reduction in VMT of 15 percent. Thus, by default, any project exceeding the Citywide average VMT per capita would be significant and unmitigable as a reduction greater than 15 percent would be unattainable.

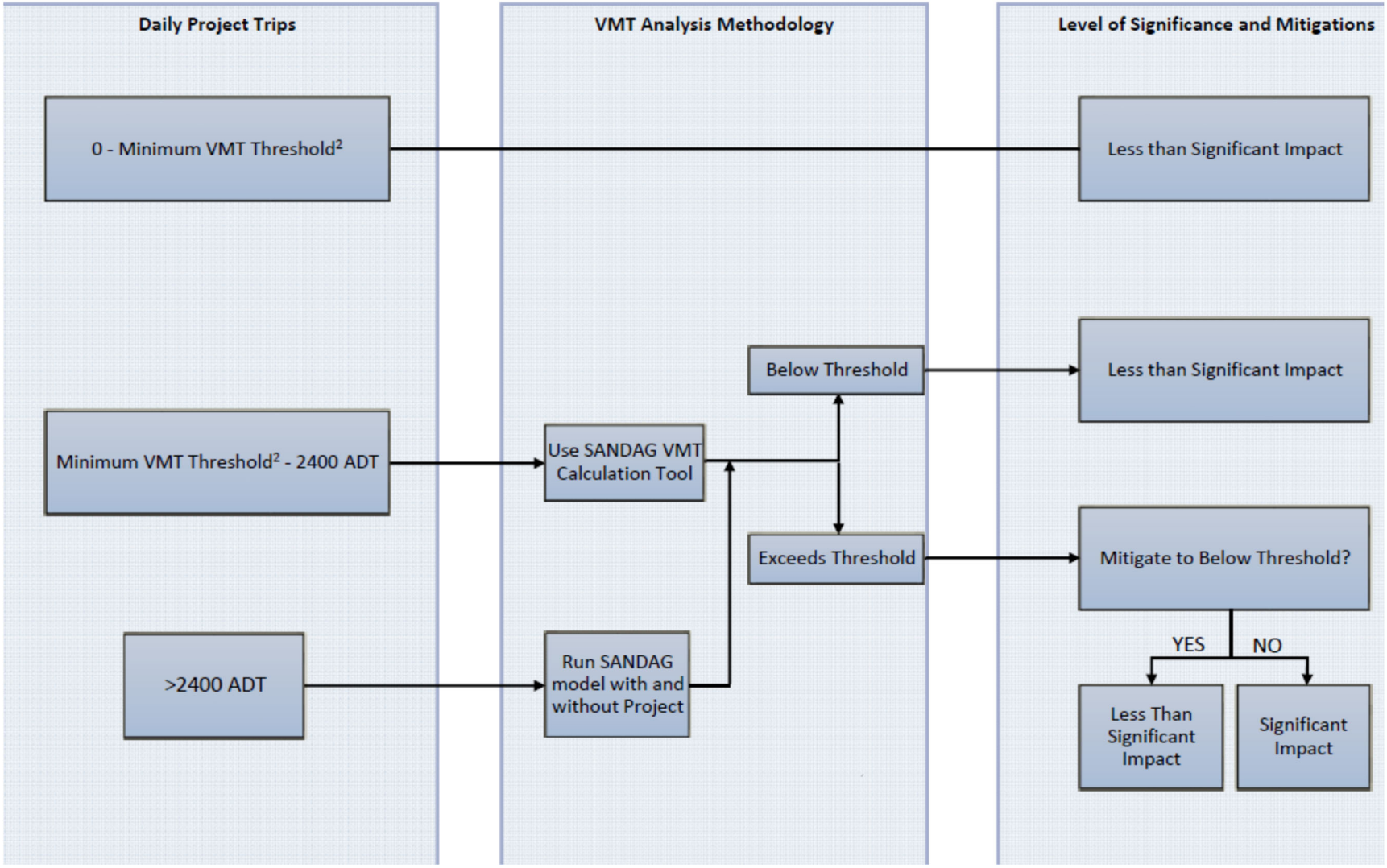
5.2.3 *Technical Methodology*

As discussed in the previous sections, both the OPR Statewide and the recently published San Diego ITE SB 743 Subcommittee guidelines were reviewed. This section discusses key technical methodologies and approaches for some of these criteria, as appropriate. The over-arching technical approach for the Project can be broken down into several components:

- Adherence to OPR's Technical Advisory
- Adherence to the San Diego ITE SB 743 Subcommittee's Guidelines
- Utilize local, independent resources and data science (i.e. GPS/Navigation data analytics)
- Account for the Total Site Population
- Review the VMT analysis on the near-term conditions, which represents the worst-case scenario as average trip lengths and mode splits will reduce auto-dependency and associated VMT over time.

Guidelines for Transportation Impact Studies in the San Diego Region – Figure 4-1

VMT Analysis for Individual Land Development Projects[1]



Footnotes:

1. VMT impacts presumed to be less than significant for certain local-serving retail projects, affordable housing projects, and projects within transit priority areas. See text.
2. Minimum VMT threshold to be determined by lead agency.

Adherence to OPR Guidelines

The existing baseline VMT analysis was based on the OPR's Technical Advisory that have been detailed in the preceding sections. The reason for utilizing OPR's Statewide guidance for existing baseline impacts was due to the reliance on data science for existing travel behavior, population, and other statistical information.

Adherence to San Diego ITE SB 743 Subcommittee Guidelines

The long-term Project VMT analysis was based on the Subcommittee guidelines that have been detailed in the preceding sections. The reason for utilizing the Subcommittee guidance for long-term impacts was due to the Project exceeding the ADT threshold requiring the use of a Project-specific forecast travel demand SANDAG model to generate VMT per capita.

Utilize Local Independent Resources and Data

GPS data analytics was a key tool in determining average trip length for trip based VMT calculations VMT calculations in the existing baseline. This data source is commonly referred to as "data science" analytics. The existing baseline VMT analysis was conducted for the Project considering all population types (i.e. residents and employees.)

Account for All Project Population Types

As recommend in both guiding documents, the VMT calculations were conducted for all site users – Residents, Students, Retail Patrons, and Employees Population comprising of the total population.

5.3 Palomar Heights VMT Analysis

The proposed Project is inconsistent with the City of Escondido General Plan and generates greater than 500 ADT. Therefore, a full VMT analysis is required. The Project generates a total of 4,264 ADT. However, the site is currently occupied by a hospital that generates 2,120 ADT. Hence the Project will add a net of 2,144 new ADT. Thus, a SANDAG Project-specific traffic model was run for the long-term VMT analysis.

5.3.1 *VMT Project Context Screening*

Prior to any detailed VMT analysis, OPR and the San Diego ITE SB 743 Subcommittee guidelines recommend "screening thresholds" to help identify if a project is expected to result in a less-than-significant impact. To that end, the Palomar Heights Project was reviewed. Specifically, the surrounding land uses, population density, transportation infrastructure and Project-specific design was considered. These elements, collectively, shape mobility behavior and provide a strong indication of expected Project VMT.

In general, higher density and mix of land uses with access to mobility options are expected to generate lower VMT. ***Table 5–1*** summarizes the key elements relative to the Palomar Heights Project.

TABLE 5–1
VMT PROJECT CONTEXT SCREENING

Project Context Elements	Notes
Surrounding Area Land Use Mix	The area adjacent to the Project site includes retail and employment centers, three (3) transit routes, 355, 371 and 388, on Valley Parkway with a bus stop at the Project entrance, provide a good land use mix with transit options that are likely to promote a lower VMT than the regional average.
Mobility Options	Transit service is provided along the Project frontage. The Project will provide pedestrian and bicycle facilities. Overall, the Project may provide enhanced mobility options.
Project-Specific Design Elements	The proposed Project will replace an existing hospital with 510 multifamily dwelling units and 10,000 SF retail uses and some infrastructure improvements including roadway frontage improvements.

5.3.2 *Proximity to Transit*

Public transportation improves mobility and reduces congestion in the community and the region. Per the significance criteria, if a project is within ½ mile of a major transit stop or a stop along a high-quality transit corridor, it should be presumed to have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. A transit stop can include a planned and funded stop that is included in an adopted regional transportation improvement program.

> *Major transit stop refers to a location containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.*
>
> *A High-Quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.*

For the Palomar Heights Project, bus service is provided by the North County Transit District (NCTD), along the Project frontage on Valley Boulevard within 400 feet of the driveway on Valley Parkway and the Escondido Transit Center located on Valley Parkway is 0.9 miles west of the Project site. Bus Routes 351 & 352 provide 30-minute headways during the peak commuter periods. Based on the above criteria, this would not constitute a major transit stop.

5.3.3 *Baseline VMT per Capita*

A detailed VMT analysis was conducted based on a combination of both OPR's guidelines and the San Diego ITE SB 743 Subcommittee guidelines. In order to calculate the existing baseline VMT per capita, the VMT average trip lengths were determined.

CITY OF ESCONDIDO VMT

Baseline and Future VMT reports were obtained from SANDAG. These reports are included in ***Appendix H***. ***Table 5-2*** summarizes the Baseline VMT report provided by SANDAG using the Series 13 model. As seen in *Table 5-2*, the existing baseline City of Escondido VMT per capita is 15.29 miles per resident and the baseline regionwide VMT per capita is 17.53 miles. For the purpose of determining the significance of VMT impacts, the Project VMT per capita would need to be 85% below the Citywide average, which is 13.01 VMT per capita (resident), or, 85% below the regionwide average, which equates to 14.90 VMT per capita (resident).

PROJECT VMT

Similar to the City calculations, the Palomar Heights Project VMT per capita was determined. Currently, there is a hospital at the Project site that generates VMT. However, the Proposed Project will replace this hospital with 510 units multi-family residential, senior housing units and 10,000 SF retail.

5.3.4 *Year 2025 VMT per Capita*

For the forecast Year 2025, VMT calculations for the Palomar Heights Project were obtained from the SANDAG Series 13 model. The model generates a Project-specific average trip length as well as an average daily volume, which ultimately calculates the total Project VMT.

The Project is a residential project and hence the comparison is to the VMT per resident. As shown in *Table 5–2*, the Palomar Heights Year 2025 VMT per capita is 9.93 miles. This is below 85% of the City of Escondido VMT per resident (13.01 miles). Therefore, the Project VMT is calculated does not result in a significant transportation impact.

Description		**VMT per Resident (In Miles)**	
			85%
Baseline (2012)			
Baseline VMT per Resident (Regionwide)	=	17.53	14.90
Baseline VMT per Resident (City of Escondido)	=	15.29	13.01
Future (2025)			
Project VMT per Resident (Year 2025)	=	9.93	< 85% of City and Region Wide VMT

TABLE 5-2
VEHICLE MILES OF TRAVEL REPORT

		Scenario ID	Residents	Total Person Trips	Person Miles of Travel	Vehicle Miles of Travel	VMT per Resident
Existing Base Year 2012							
Regionwide		989	3,129,417	11,211,651	73,624,387	54,858,289	17.53
Jurisdiction	ESCONDIDO	989	146,057	514,234	2,992,253	2,233,878	15.29
Future Year 2025							
Site	Project Site (TAZ 1134)	959	2,193	7,840 [a]	31,634	21,772	**9.93**

Source: SANDAG, July 24, 2019.

Note:

a. Number of person trips. This is nearly 3.0 to 3.5 times (based on the land use) the number of vehicular trips and therefore will not match the Project daily trips.

6.0 ANALYSIS OF EXISTING CONDITIONS

6.1 Peak Hour Intersection Levels of Service

Table 6-1 summarizes the Existing peak hour intersection operations. As seen in *Table 6-1*, the following signalized intersections or minor street left turn movements at unsignalized intersections are calculated to currently operate at LOS D, E or F:

- N. Ivy Street / Valley Parkway (unsignalized) – minor street left-turn movement operates at LOS F during the AM peak hour and LOS D during the PM peak hour

Appendix B contains the Existing intersection analysis worksheets.

6.2 Daily Street Segment Levels of Service

Table 6-2 summarizes the Existing segment operations. As seen in *Table 6-2*, the Valley Parkway segment between Hickory Street and Fig Street is calculated to operate at LOS E. The remaining study area segments are calculated to currently operate at LOS D or better.

TABLE 6–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
1. N. Hickory St / W. Washington Ave	Signal	AM	10.4	B
		PM	15.2	B
2. N. Fig St / W. Washington Ave	Signal	AM	51.0	D
		PM	43.5	D
3. N. Juniper St / Valley Pkwy	Signal	AM	6.3	A
		PM	5.7	A
4. N. Ivy St / Valley Pkwy	TWSC [c]	AM	50.7	F
		PM	27.2	D
5. N. Hickory St / Valley Pkwy	Signal	AM	9.4	A
		PM	13.9	B
6. N. Fig St / Valley Pkwy	Signal	AM	12.8	B
		PM	13.8	B

CONTINUED ON THE NEXT PAGE

TABLE 6–1 (CONTINUED)
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay [a]	LOS [b]
7. S. Juniper St / E. Grand Ave	Signal	AM	5.5	A
		PM	7.4	A
8. S. Ivy St / E. Grand Ave	TWSC [c]	AM	21.9	C
		PM	18.4	C
9. Valley Blvd / E. Grand Ave	Signal	AM	20.0	B
		PM	27.8	C
10. S. Grape St / E. Grand Ave	TWSC	AM	10.3	B
		PM	12.4	B
11. S. Fig St / E. Grand Ave	Signal	AM	11.2	B
		PM	12.1	B
12. S. Juniper St / E. 2nd Ave	Signal	AM	16.0	B
		PM	16.8	B
13. S. Ivy St / E. 2nd Ave	TWSC	AM	12.8	B
		PM	18.8	C
14. West Project Dwy / E. Grand Ave	TWSC	AM	DNE	DNE
		PM	DNE	DNE
15. East Project Dwy / E. Grand Ave	TWSC	AM	DNE	DNE
		PM	DNE	DNE

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.

General Note:

DNE – Does not Exist

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS

Segment	Functional Classification [a]	LOS E [b] Capacity	Volume	LOS [c]	V/C [d]
Juniper Street					
Valley Pkwy to Grand Ave	2 TWLTL(WP)	19,000	5,870	A	0.309
Grand Ave to 2nd Ave	2 TWLTL(WP)	19,000	6,810	B	0.358
N. Hickory St					
E. Washington Ave to Valley Pkwy	Local Collector (WP)	10,000	4,810	B	0.481
N. Fig Street					
E. Washington Ave to Valley Pkwy	Local Collector (WP)	10,000	7,950	D	0.795
Valley Pkwy to Grand Ave	Local Collector (WP)	10,000	5,660	C	0.566
Valley Boulevard					
Valley Pkwy to Grand Ave [e]	Local Collector (NP)	17,500	9,980	C	0.570
Valley Parkway					
Juniper St to Ivy St	3-Ln One-Way Coll (WP)	30,000	14,790	B	0.493
Ivy St to Hickory St	3-Ln One-Way Coll (WP)	30,000	13,610	B	0.454
Hickory St to Fig St	4-Ln Collector (WP)	25,000	23,680	E	0.947
Grand Avenue					
Juniper St to Ivy St	4-Lane Divided (WP)	20,000	9,550	B	0.478
Valley Blvd to Grape St	3-Ln Undivided-TWLTL (NP)	25,000	9,450	A	0.315
Grape St to Fig St	3-Ln Undivided-TWLTL (NP)	25,000	15,130	B	0.504
2nd Avenue					
Juniper St to Ivy St	3-Ln One-Way Coll (WP)	30,000	13,680	B	0.456
Ivy St to Grand Ave	3-Ln One-Way Coll (WP)	30,000	13,070	B	0.436

Footnotes:

a. The City of Escondido roadway classification at which the roadway currently functions.
b. The capacity of the roadway at Level of Service E.
c. Level of Service.
d. The Volume to Capacity ratio.
e. This is a three-lane road with 2-lanes northbound and one lane southbound. Average of the capacity of a 4-Lane Collector and a 2-Lane Collector is used.

7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

7.1 Trip Generation

Trip generation rates for Condominium, Apartment, Commercial Office, Specialty Retail, Strip Commercial, and Delicatessen from the (*Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002, by SANDAG were used to estimate the trip generation for the proposed project.

Currently, a functioning hospital exists on this site and traffic counts were conducted at 13 driveways to determine the total existing traffic generated by the site.

7.1.1 *Project Trip Generation*

The trip rate corresponding to a standard Commercial Office are used for the collaborative work-space since that is the most appropriate rate available. The trip rate corresponding to Specialty Retail / Strip Commercial is used for the retail portion of the Project. While the total retail / commercial / restaurant square footage is known, the individual square-footages are not known at this time. For the purposes of this report, the square-footages shown in the trip generation table are assumed. The trip rate corresponding to a Delicatessen is used for the proposed deli. This too will mostly be used by residents. However, members of the public will also be able to use it. The rate for Sit-Down Restaurant (High Turnover) was used for the Bar / Restaurant. As explained in Section 2.0, Project Description, the 2,000 SF gym is for the use of residents and non-residents will not be permitted to use the facility.

Table 7–1 summarizes the Project trip generation, As seen in *Table 7-1*, the proposed Project is calculated to generate approximately 4,264 ADT with 327 AM peak hour trips (100 inbound / 208 outbound) and 370 PM peak hour trips (241 inbound / 129 outbound). These are the volumes prior to deducting the existing site trip generation.

7.1.2 *Existing Site Traffic*

As mentioned above, currently, the site is occupied by a hospital and other related medical uses. Traffic counts were conducted at the existing site driveways in November 2018 to determine the traffic currently generated by the site.

As mentioned in the Section 3.0 Existing Conditions, the Existing land uses on the site (hospital) are observed to generate a total of 2,120 ADT, with 160 AM peak hour trips (82 inbound and 78 outbound) and 133 PM peak hour trips (72 inbound and 61 outbound). These trips will be deducted from the total Project trips to obtain the net new trips generated by the Project.

7.1.3 *Net New Trips*

As seen in *Table 7–1,* the Project is estimated to generate approximately a net 2,144 ADT with 167 AM peak hour trips (18 inbound / 149 outbound) and 237 PM peak hour trips (169 inbound / 68 outbound).

7.2 Trip Distribution

A series 13 Select Zone Assignment (SZA) was obtained from SANDAG. The distribution percentages were revised based on discussions with City staff. This distribution was developed based on the roadway network, (one-way streets), the location of employment centers, area schools, shopping, desire to access the freeway for work, etc. Broadly, it was assumed that 20% of the Project trips will be oriented west on SR 78, 35% south on I-15, 7% north on I-15 and the remaining will be oriented to destinations within the City of Escondido.

7.3 Trip Assignment

The project consists of two portions. The majority of the project site is located between Valley Parkway and Grand Avenue, east of Valley Boulevard. The remaining portion of the site (Senior Apartments) is located between Valley Parkway and Grand Avenue just west of Valley Boulevard.

Traffic to and from the Hospital site and the Senior Apartments were assigned the Project study area intersections and segments separately based on the available access driveways and added to obtain the total Project traffic assignment.

Traffic to the Main Site was assigned to the main Project access at the Hickory Street / Valley Parkway intersection and the West Project Driveway and East Project Driveway on Grand Avenue. Inbound traffic to the Senior Apartments from the north was assigned primarily via Valley Parkway and from the south and west via Ivy Street. Inbound traffic from the Senior Apartments to the north was assigned primarily via Ivy Street and to the south and west via Ivy Street and Grand Avenue.

Figure 7–1 depicts the Project Traffic Distribution for the Hospital Site, while ***Figure 7–2*** depicts the Project Traffic Distribution for the Senior Apartments. ***Figure 7–3*** depicts the Project Traffic Volume assignment for the Hospital Site and ***Figure 7–4*** depicts the Project Traffic Volumes for the Senior Apartments. ***Figure 7–5*** depicts the Total Project Traffic Volumes and ***Figure 7–6*** depicts the Existing + Project Traffic Volumes.

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate [a]	Volume	% of ADT [a]	In:Out Split	Volume			% of ADT [a]	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
A. Proposed													
Apartments	258 DU	6 /DU	1,548	8%	20 : 80	25	99	124	9%	70 : 30	97	42	139
Townhomes	162 DU	8 /DU	1,296	8%	20 : 80	21	83	104	10%	70 : 30	91	39	130
Senior Apartments	90 DU	4 /DU	360	5%	40 : 60	7	11	18	7%	60 : 40	15	10	25
Subtotal Residential	*510 DU*		*3,204*			*53*	*193*	*246*			*203*	*91*	*294*
Retail													
Collaborative Work-Space (Office) [b]	3,000 SF	20 /KSF	60	15%	90 : 10	8	1	9	15%	20 : 80	2	7	9
Retail [c]	2,000 SF	40 /KSF	220	3%	60 : 40	4	3	7	9%	50 : 50	10	10	20
Café [d]	2,000 SF	150 /KSF	300	9%	60 : 40	16	11	27	3%	30 : 70	3	6	9
Bar / Restaurant [e]	3,000 SF	160 /KSF	480	8%	50 : 50	19	19	38	8%	60 : 40	23	15	38
Subtotal Retail	*10,000 SF*		*1,060*			*47*	*34*	*81*			*38*	*38*	*76*
Total Proposed			**4,264**			**100**	**227**	**327**			**241**	**129**	**370**
B. Land Uses to be Demolished													
Hospital/Medical Campus [g]			(2,120)			(82)	(78)	(160)			(72)	(61)	(133)
Net Project			**2,144**			**18**	**149**	**167**			**169**	**68**	**237**

Footnotes:

a. Rates are based on the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*, SANDAG.
b. Rates for a standard Commercial Office are used.
c. Rates for Specialty Retail / Strip Commercial are used.
d. Rates for Delicatessen is used. This too will mostly be used by residents. However, members of the public will also be able to use it.
e. Rates for Restaurant - Sit-Down, High Turnover is used.
f. Existing land use to be demolished. Trip credit is based on counts conducted in November 2018 at the existing driveways.

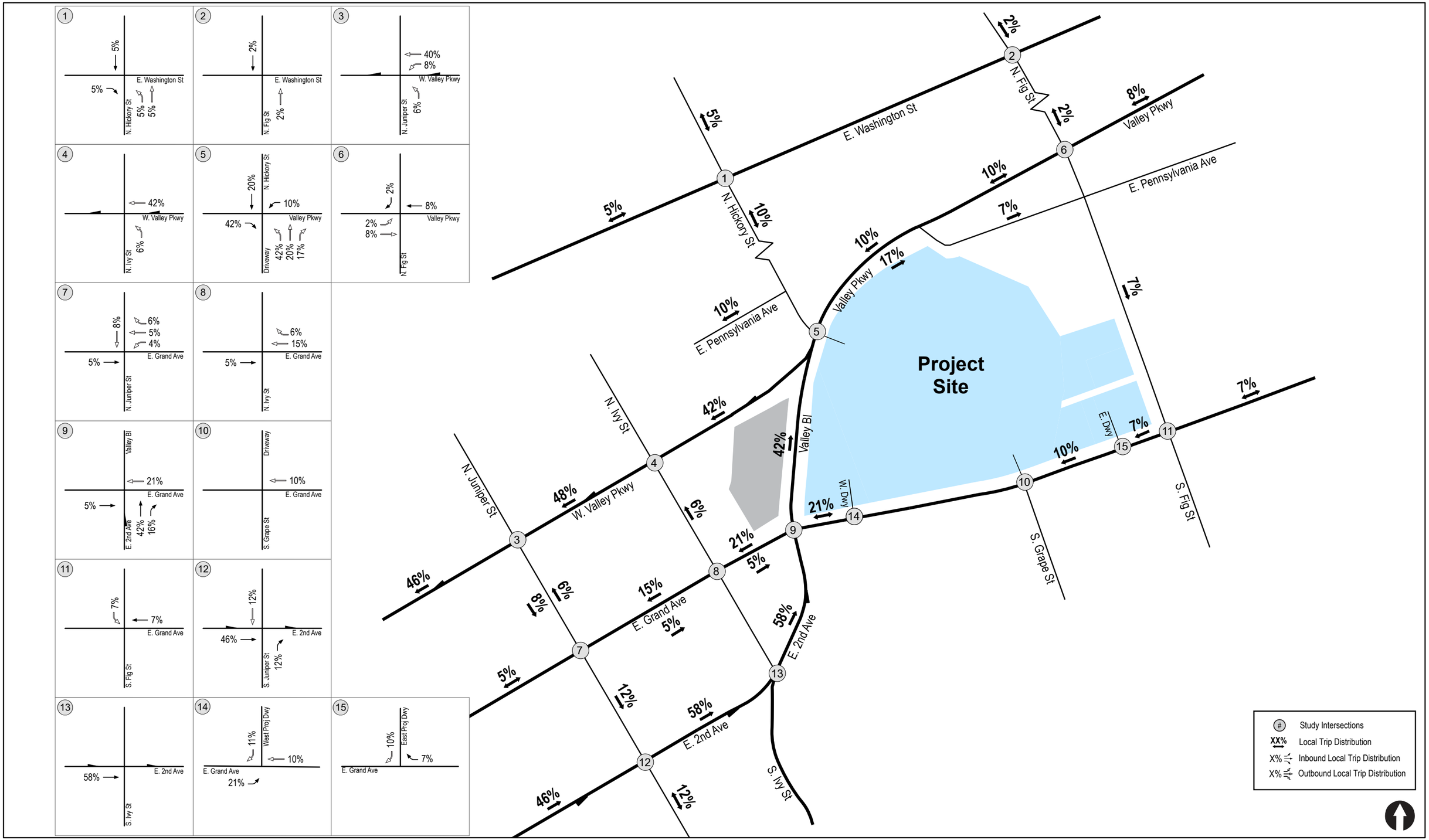


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Figure 7-1

Project Traffic Distribution

Hospital Site

Palomar Heights

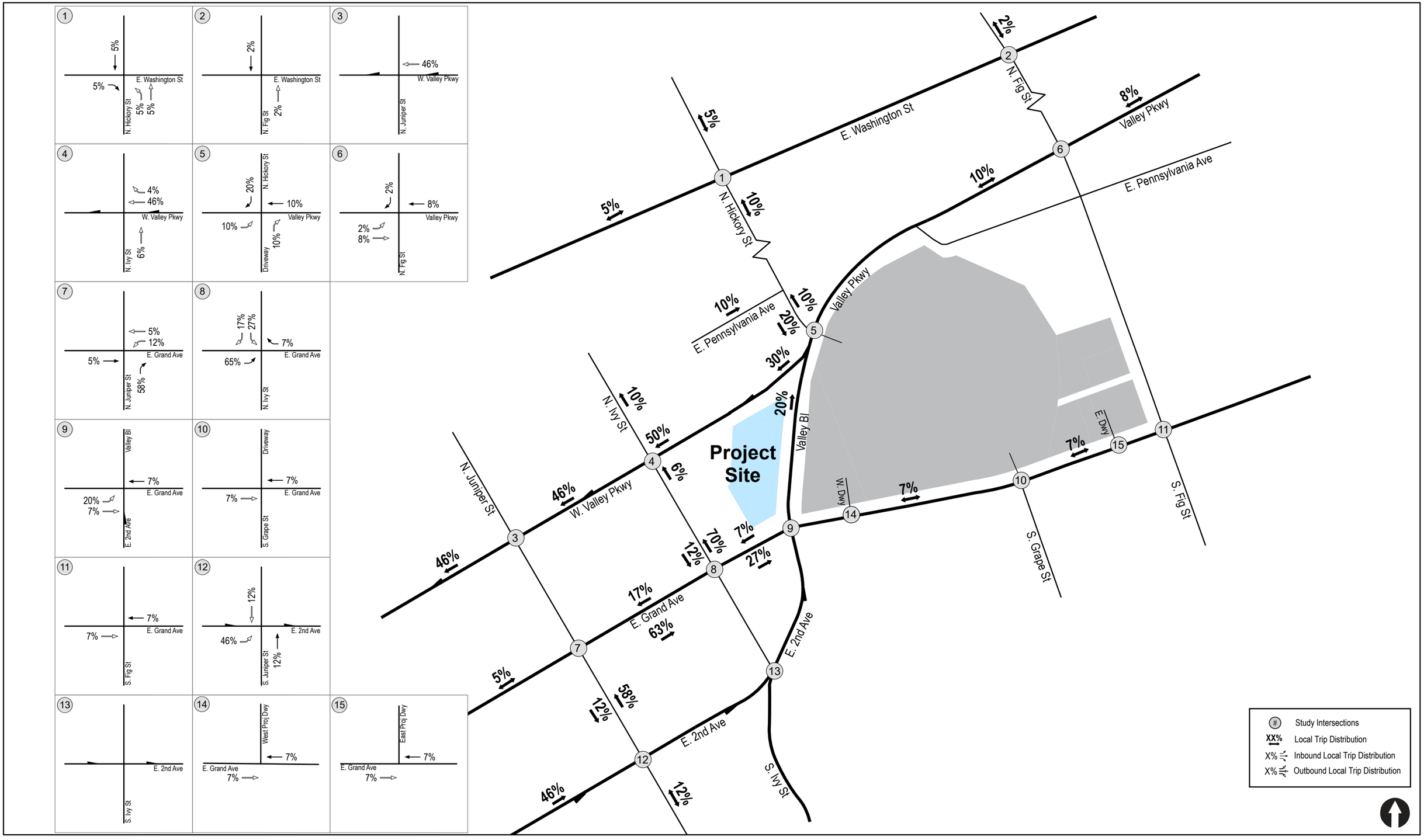

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Figure 7-2

Project Traffic Distribution

Senior Apartments

Palomar Heights

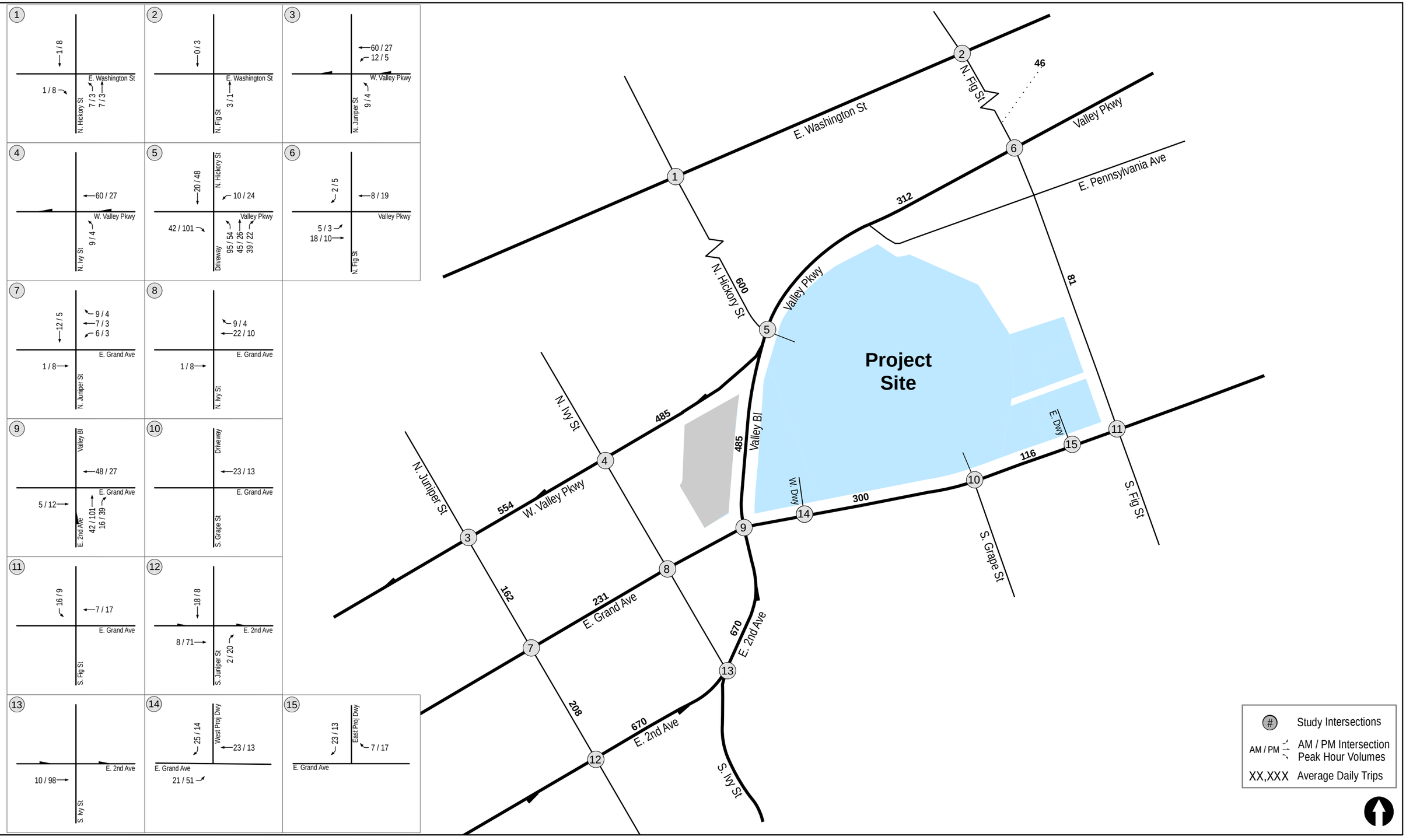

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Figure 7-3

Project Traffic Volumes

Hospital Site

PALOMAR HEIGHTS

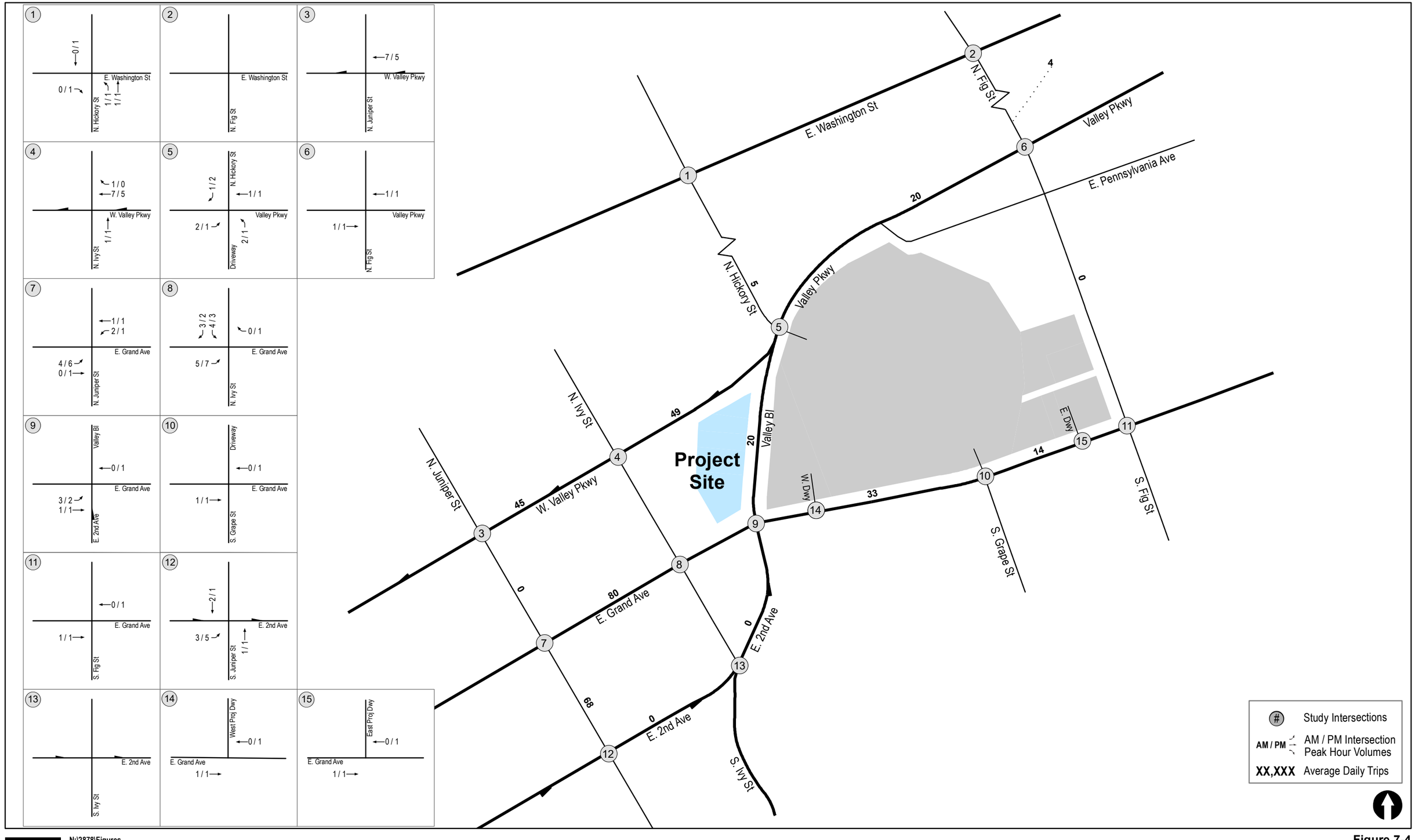

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Figure 7-4

Project Traffic Volumes

Senior Apartments

Palomar Heights

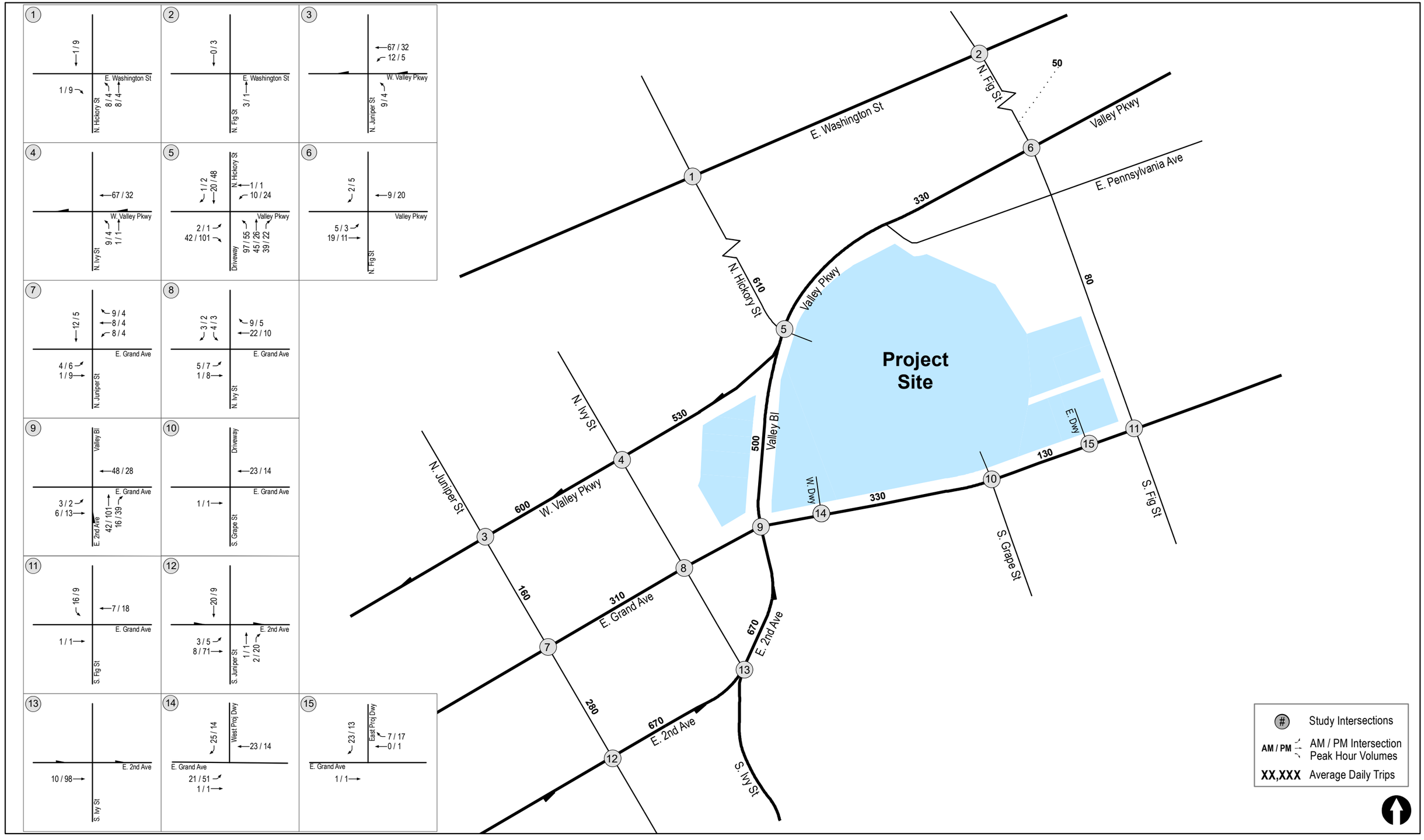

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Figure 7-5

Total Project Traffic Volumes

Palomar Heights

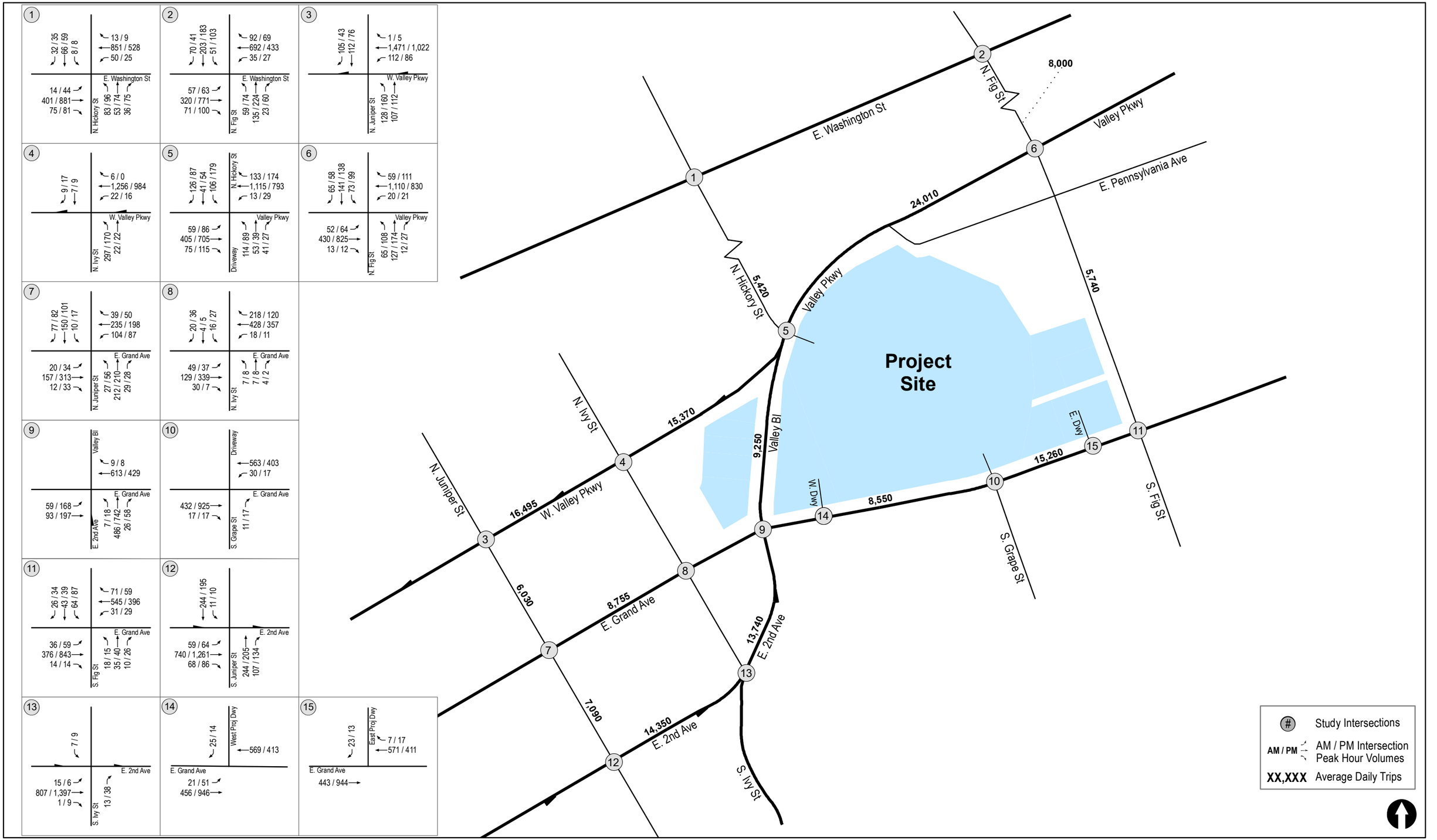

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Figure 7-6

Existing + Project Traffic Volumes

Palomar Heights

8.0 OPENING YEAR 2022 VOLUMES

Based on coordination with City of Escondido staff, the following planned projects were identified. Following are brief descriptions of the projects.

8.1 Description of Projects

The following are brief descriptions of the cumulative projects included in this analysis.

1. Escondido Gateway Mixed-Use

The Escondido Gateway Mixed-Use Project is located at 700 W. Grand Avenue and includes 126 DU of apartments and 1 KSF of convenience market. This project is estimated to generate 1,006 ADT with 80 trips (22 inbound and 58 outbound) during the AM peak hour and 88 trips (58 inbound and 30 outbound) during the PM peak hour.

2. Hotel La Terraza

The Hotel La Terraza Project is located at 300 La Terraza Boulevard and includes a 105-room hotel. This project is estimated to generate 735 ADT with 59 trips (24 inbound and 35 outbound) during the AM peak hour and 66 trips (40 inbound and 26 outbound) during the PM peak hour.

3. La Terraza Office

The La Terraza Office Project is located at 300 La Terraza Boulevard and includes 36.614 KSF of office. This project is estimated to generate 732 ADT with 103 trips (93 inbound and 10 outbound) during the AM peak hour and 95 trips (19 inbound and 76 outbound) during the PM peak hour.

4. Touchstone – Aspire

The Touchstone – Aspire Project is located at 137 West Valley Parkway and includes 131 DU of residential and 4.289 KSF of specialty retail. This project is estimated to generate 814 ADT with 57 trips (13 inbound and 44 outbound) during the AM peak hour and 73 trips (49 inbound and 24 outbound) during the PM peak hour.

5. Touchstone – The Ivy

The Touchstone – The Ivy Project is located at 343 East 2nd Avenue and includes 127 DU of residential and 1.175 KSF of specialty retail. This project is estimated to generate 809 ADT with 62 trips (13 inbound and 49 outbound) during the AM peak hour and 73 trips (50 inbound and 23 outbound) during the PM peak hour.

6. Starbucks Drive-Through

The Starbucks Drive-Through Project is located at 350 W. Valley Parkway and includes 1.9 KSF of fast-food with drive-thru. This project is estimated to generate 1,555 ADT with 218 trips (109 inbound and 109 outbound) during the AM peak hour and 67 trips (34 inbound and 33 outbound) during the PM peak hour.

7. Quince Street Senior Housing

The Quince Street Senior Housing Project is located at 220 N. Quince Street and includes 147 DU of senior apartments. This project is estimated to generate 590 ADT with 30 trips (12 inbound and 18 outbound) during the AM peak hour and 41 trips (25 inbound and 16 outbound) during the PM peak hour.

8. Toyota Used Car Dealership

The Toyota Used Car Dealership Project is located at 125 E. Lincoln Avenue and includes 1.8 acres of used car dealership. This project is estimated to generate 720 ADT with 58 trips (41 inbound and 17 outbound) during the AM peak hour and 79 trips (32 inbound and 47 outbound) during the PM peak hour.

9. Grand Avenue Apartments

The Grand Avenue Apartments Project is located at 1316 E. Grand Avenue and includes 15 DU of apartments. This project is estimated to generate 90 ADT with 7 trips (1 inbound and 6 outbound) during the AM peak hour and 8 trips (6 inbound and 2 outbound) during the PM peak hour.

10. W. Grand Mixed-Use

The W. Grand Mixed-Use Project is located at 555 W. Grand Avenue and includes 32 DU of apartments and 0.6 KSF of office. This project is estimated to generate 199 ADT with 16 trips (4 inbound and 12 outbound) during the AM peak hour and 18 trips (12 inbound and 6 outbound) during the PM peak hour.

11. 2nd Avenue Mixed-Use

The 2nd Avenue Mixed-Use Project is located at 510 W. 2nd Avenue and includes 5 DU of residential and 2 KSF of commercial/retail. This project is estimated to generate 110 ADT with 4 trips (1 inbound and 3 outbound) during the AM peak hour and 10 trips (6 inbound and 4 outbound) during the PM peak hour.

12. California Bank and Trust

The California Bank and Trust Project is located at 150 N. Quince Street and includes 5 KSF of bank. This project is estimated to generate 1,000 ADT with 50 trips (30 inbound and 20 outbound) during the AM peak hour and 100 trips (50 inbound and 50 outbound) during the PM peak hour.

13. Pine Street Apartments

The Pine Street Apartments Project is a 198-unit apartment complex located on the west side of Pine Street between 2nd Avenue and 3rd Avenue. This project is estimated to generate 1,188 ADT with 95 trips (19 inbound and 76 outbound) during the AM peak hour and 107 trips (75 inbound and 32 outbound) during the PM peak hour.

8.2 Summary of Cumulative Projects Trips

The cumulative project listed above are estimated to generate a total of 9,549 ADT with 839 trips (382 inbound and 457 outbound) during the AM peak hour and 825 trips (456 inbound and 369 outbound) during the PM peak hour.

8.3 Opening Year 2022 Traffic Volumes

The traffic generated by the cumulative projects were assigned to the Project study area intersections and segments and then added to the Existing traffic (Existing + Cumulative projects) to obtain the Opening Year (2022) traffic volumes.

Figure 8-1 depicts the cumulative projects location map. ***Figure 8-2*** depicts the cumulative projects traffic assignment. ***Figure 8-3*** depicts the Near-Term (Opening Year 2022) without project traffic volumes, while ***Figure 8-4*** depicts the Near-Term (Opening Year 2022) with Project traffic volumes.

TABLE 8-1
CUMULATIVE PROJECTS TRIP GENERATION SUMMARY

Land Use	Size		Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
			Rate [a]	Volume	% of ADT [a]	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
							In	Out	Total			In	Out	Total
1. Escondido Gateway Mixed-Use														
Apartments	126	DU	6 /DU	756	8%	20 : 80	12	48	60	9%	70 : 30	48	20	68
Convenience Market	1	KSF	500 /KSF[c]	250	8%	50 : 50	10	10	20	8%	50 : 50	10	10	20
2. Hotel La Terraza	105	Rooms	7 /Room	735	8%	40 : 60	24	35	59	9%	60 : 40	40	26	66
3. La Terraza Office	36,614	SF	20 /KSF	732	14%	90 : 10	93	10	103	13%	20 : 80	19	76	95
4. Touchstone -Aspire														
Apartments	131	DU	6 /DU[e]	668	8%	20 : 80	11	42	53	9%	70 : 30	42	18	60
Specialty Retail	4.289	KSF	40 /KSF[e]	146	3%	60 : 40	2	2	4	9%	50 : 50	7	6	13
5. Touchstone -The Ivy														
Apartments	127	DU	6 /DU	762	8%	20 : 80	12	49	61	9%	70 : 30	48	21	69
Specialty Retail	1.175	KSF	40 /KSF	47	3%	60 : 40	1	0	1	9%	50 : 50	2	2	4
6. Starbucks-Drive Through	1.9	KSF	818.5 /KSF	1,555	14%	50 : 50	109	109	218	4.3%	50 : 50	34	33	67
7. Quince Satreet Senior Housing	147	DU	4 /DU	590	5%	40 : 60	12	17	29	7%	60 : 40	25	16	41
8. Toyota Used Car Dealership	1.8	Acres	400 /Acre	720	8%	70 : 30	41	17	58	11%	40 : 60	32	47	79
9. Grand Ave. Apartments	15	DU	6 /DU	90	8%	20 : 80	1	6	7	9%	70 : 30	6	2	8
10. W. Grand Mixed Use														
Apartments	32	DU	6 /DU	192	8%	20 : 80	3	12	15	9%	70 : 30	12	5	17
Office	0.6	KSF	12 /KSF	7	13%	90 : 10	1	0	1	13%	20 : 80	0	1	1
11. 2nd Ave Mixed-Use														
Apartments	5	DU	6 /DU	30	8%	20 : 80	0	2	2	9%	70 : 30	2	1	3
Commercial / Retail	2	KSF	40 /KSF	80	3%	60 : 40	1	1	2	9%	50 : 50	4	3	7

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TABLE 8-1 (CONTINUED)
CUMULATIVE PROJECTS TRIP GENERATION SUMMARY

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate [a]	Volume	% of ADT [a]	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
12. California Bank and Trust	5 KSF	200 /KSF	1,000	5%	60 : 40	30	20	50	10%	50 : 50	50	50	100
13. Pine Street Apartments	198 DU	6 /DU	1,188	8%	20 : 80	19	76	95	9%	70 : 30	75	32	107
Total Proposed			**9,549**			**382**	**457**	**839**			**456**	**369**	**825**

Footnotes:

a. Rates are based on the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*, SANDAG.

See **Section 7.0** for a detailed description of Cumulative Projects

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Figure 8-1

Cumulative Projects Location Map

PALOMAR HEIGHTS

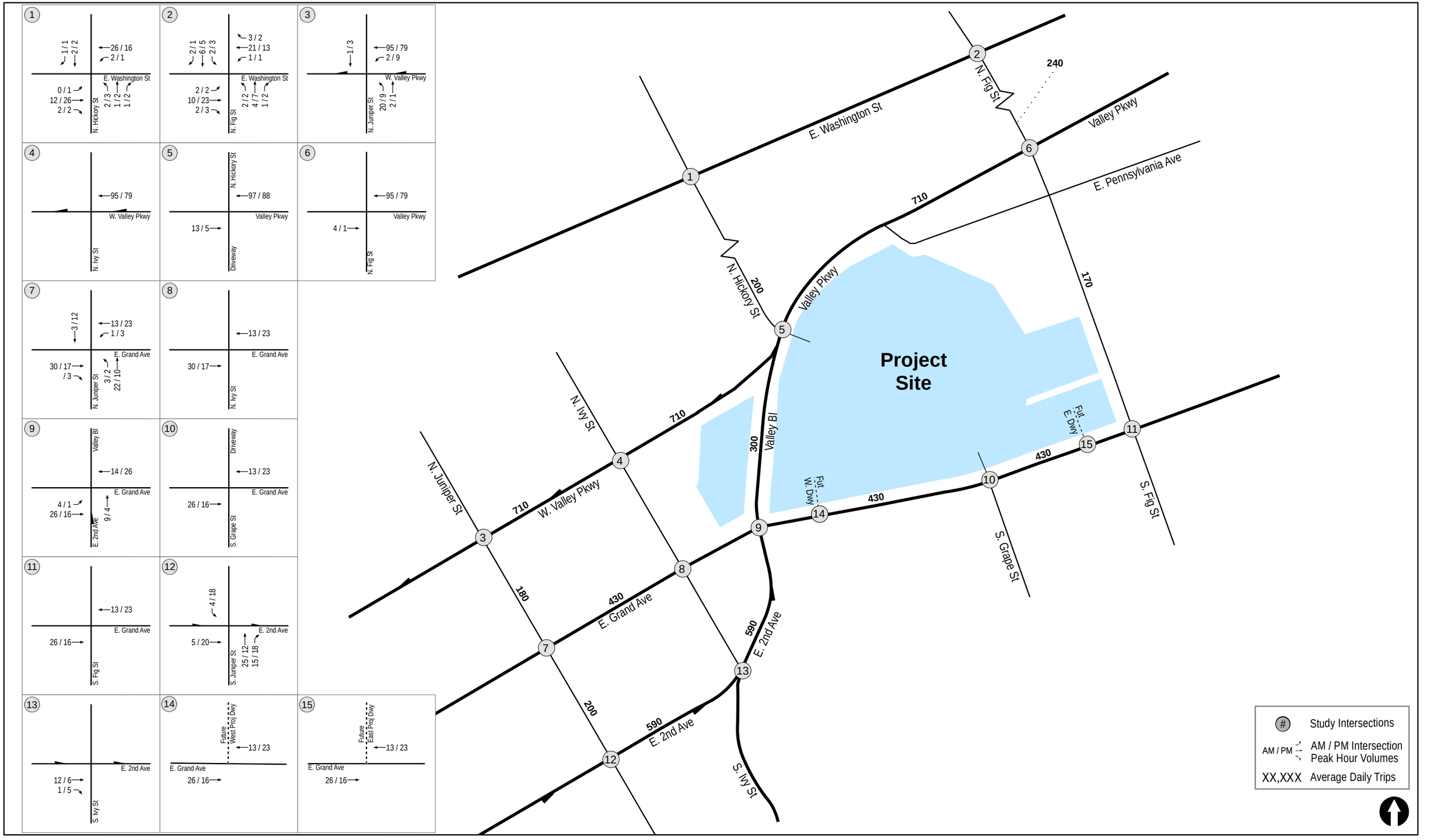

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Figure 8-2

Cumulative Projects Traffic Volumes

PALOMAR HEIGHTS

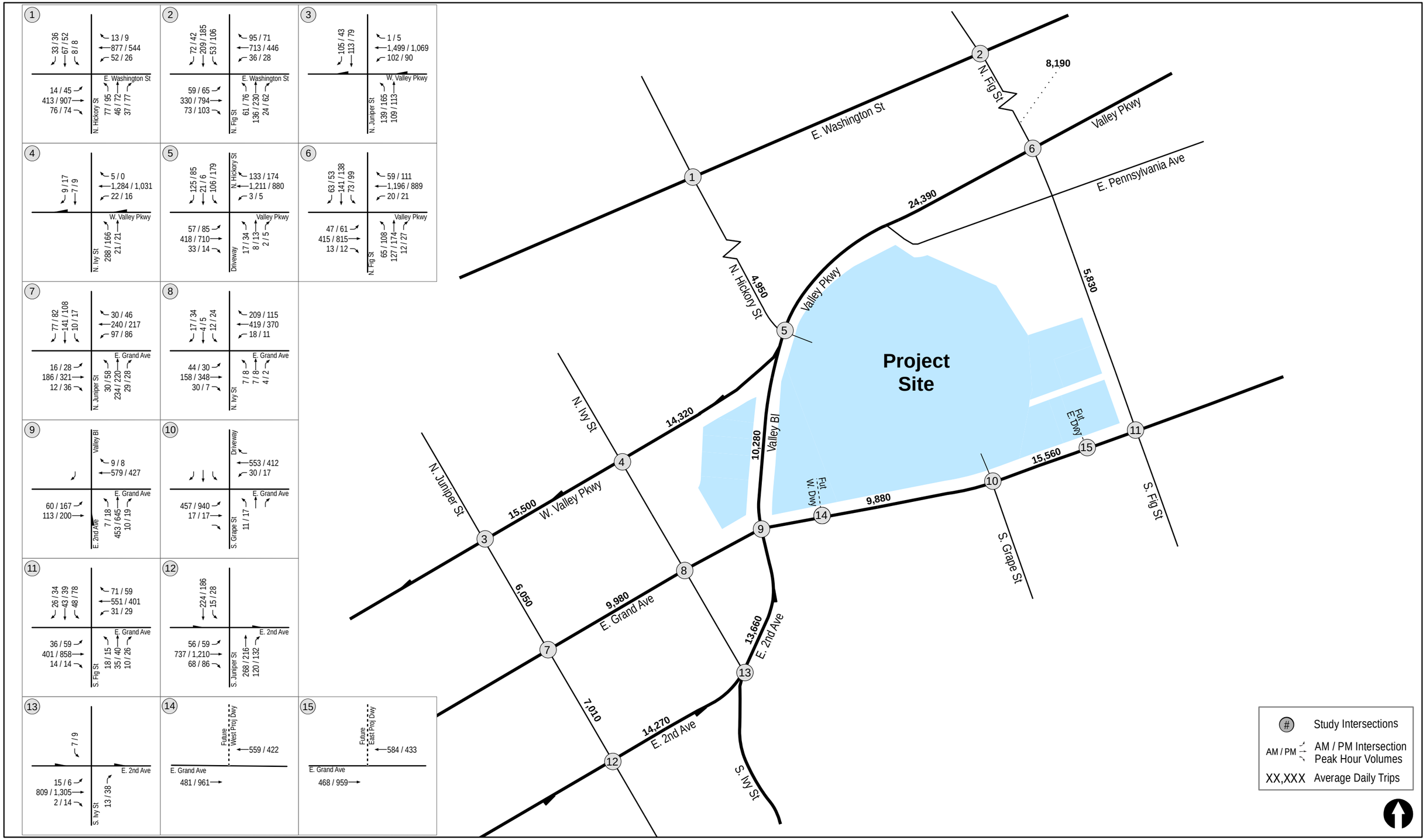

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Figure 8-3

Opening Year (2022) without Project Traffic Volumes

PALOMAR HEIGHTS

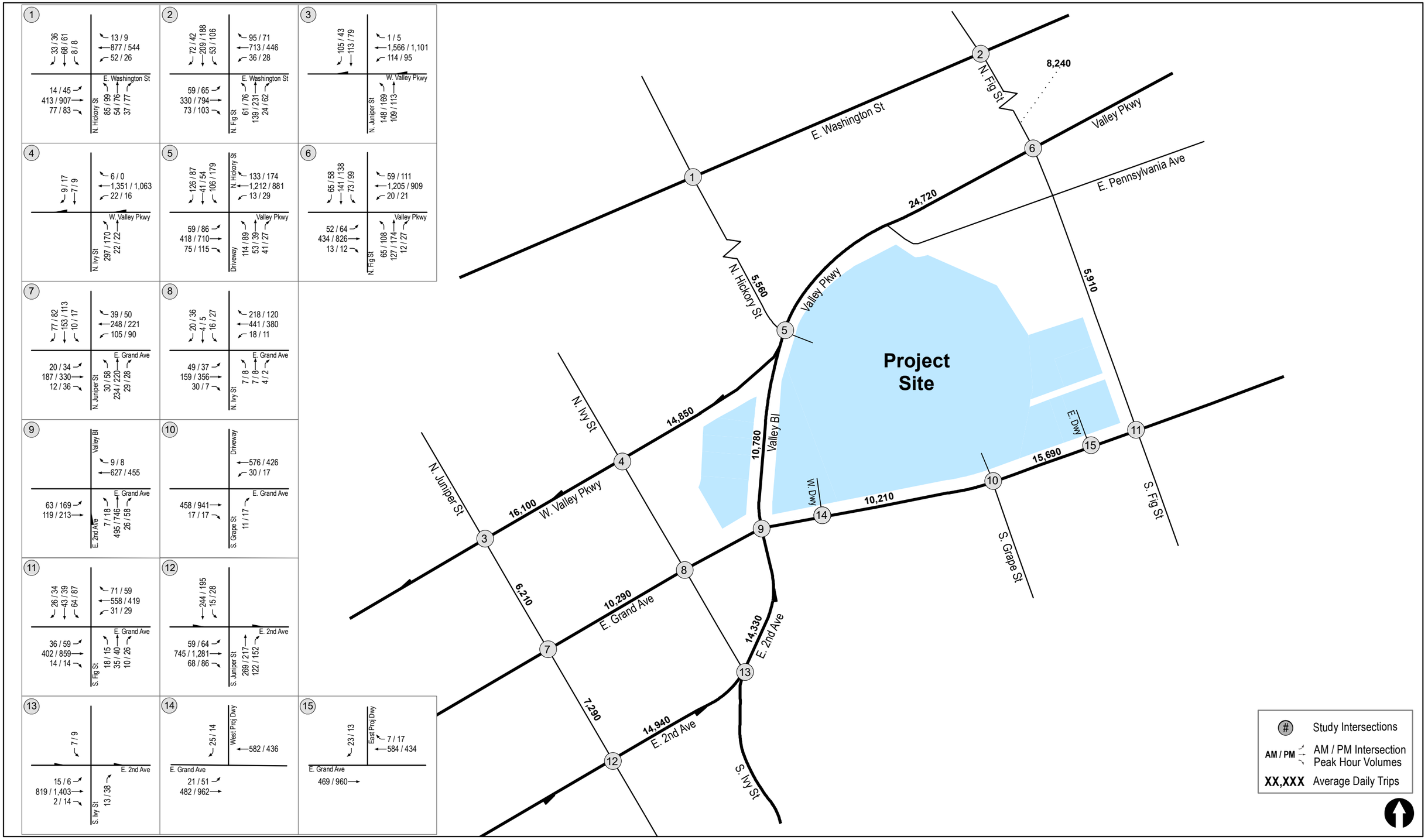

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Figure 8-4

Opening Year (2022) with Project Traffic Volumes

Palomar Heights

9.0 ANALYSIS OF NEAR-TERM SCENARIOS

9.1 Existing + Project

9.1.1 *Intersection Analysis*

Table 9-1 summarizes the Existing + Project peak hour intersection operations. As seen in *Table 9-1*, with the addition of Project traffic, the following signalized intersections or minor street left turn movements at unsignalized intersections are calculated to currently operate at LOS D, E or F:

- **N. Ivy Street / Valley Parkway (signalized) – Minor street left-turn movement operates at LOS F during the AM peak hour**

  The increase due to the Project at this intersection is more than 2.0 seconds during the AM peak hour. Hence, there is a General Plan, Mobility and Infrastructure Element inconsistency at this intersection during the AM peak hour.

Appendix C contains the Existing + Project intersection analysis worksheets.

9.1.2 *Daily Street Segment Levels of Service*

As explained previously, the Valley Boulevard segment between Valley Parkway and Grand Avenue is a Three-Lane Road with two lanes northbound and one lane southbound. It is planned to close the southbound lane, as a result of which traffic in the southbound lane will be rerouted to other roads such as Valley Parkway. The current capacity of Valley Boulevard is 17,500 ADT (*Table 6-2*). With the closure of the southbound lane, there will be two lanes northbound and parking will be provided on both curbs. A capacity of 15,000 ADT is assumed to be appropriate since both lanes of travel and parking will be in the same direction and the parked vehicles will cause minimal friction with the cars in the travel lanes.

Table 9-2 summarizes the Existing + Project segment operations. The "with Project" scenario assumes the elimination of the southbound movement on Valley Boulevard and the consequent rerouting of this traffic to parallel routes. As seen in *Table 9-2*, with the addition of Project traffic, the following study area segment is calculated to continue to operate at LOS E:

- **Valley Parkway:** Hickory Street to Fig Street (LOS E)

There is no General Plan, Mobility and Infrastructure Element inconsistency at this segment since the increase in the v/c ratio is less than the allowable 0.02.

It may be noted that the Valley Boulevard segment and two segments of Grand Avenue will experience a decrease in ADT due to the rerouting of traffic as a consequence of eliminating the southbound movement on Valley Boulevard.

TABLE 9–1
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ Delay [d]	Sig?	Opening Year (2022) without Project		Opening Year (2022) with Project		Δ Delay [d]	GP, M, IE Incon? [e]
			Delay [a]	LOS [b]	Delay	LOS			Delay	LOS	Delay	LOS		
1. N. Hickory St / W. Washington Ave	Signal	AM	10.4	B	10.8	B	0.4	No	10.4	B	10.8	B	0.4	No
		PM	15.2	B	15.3	B	0.1	No	15.4	B	15.7	B	0.3	No
2. N. Fig St / W. Washington Ave	Signal	AM	51.0	D	51.0	D	0.0	No	54.3	D	54.3	D	0.0	No
		PM	43.5	D	43.6	D	0.1	No	47.0	D	47.0	D	0.0	No
3. N. Juniper St / Valley Pkwy	Signal	AM	6.3	A	6.5	A	0.2	No	6.6	A	6.9	A	0.3	No
		PM	5.7	A	5.8	A	0.1	No	6.0	A	6.0	A	0.0	No
4. N. Ivy St / Valley Pkwy	TWSC [c]	AM	**50.7**	**F**	**67.7**	**F**	**17.0**	**Yes**	**68.5**	**F**	**96.9**	**F**	**28.4**	**Yes**
		PM	27.2	D	34.3	D	7.1	Yes	26.3	D	**40.0**	**E**	**13.7**	**Yes**
5. N. Hickory St / Valley Pkwy	Signal	AM	9.4	A	11.4	B	2.0	No	9.4	A	11.2	B	1.8	No
		PM	13.9	B	15.5	B	1.6	No	13.7	B	15.7	B	2.0	No
6. N. Fig St / Valley Pkwy	Signal	AM	12.8	B	13.0	B	0.2	No	13.3	B	13.5	B	0.2	No
		PM	13.8	B	14.2	B	0.4	No	14.0	B	14.3	B	0.3	No
7. S. Juniper St / E. Grand Ave	Signal	AM	5.5	A	9.8	A	4.3	No	9.8	A	9.8	A	0.0	No
		PM	7.4	A	10.9	B	3.5	No	10.9	B	11.1	B	0.2	No
8. S. Ivy St / E. Grand Ave	TWSC	AM	21.9	C	23.9	C	2.0	No	18.6	C	25.2	D	6.6	No
		PM	18.4	C	19.3	C	0.9	No	18.6	C	20.2	C	1.6	No
9. Valley Blvd / E. Grand Ave	Signal	AM	20.0	B	19.1	B	(-) 0.9	No	18.5	B	21.6	C	3.1	No
		PM	27.8	C	18.0	B	(-) 9.8	No	17.1	B	18.1	B	1.0	No

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TABLE 9–1 (CONTINUED)
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Δ Delay [d]	Sig?	Opening Year (2022) without Project		Opening Year (2022) with Project		Δ Delay [d]	GP, M, IE Incon? [e]
			Delay [a]	LOS [b]	Delay	LOS			Delay	LOS	Delay	LOS		
10. S. Grape St / E. Grand Ave	TWSC	AM	10.3	B	10.3	B	0.0	No	10.4	B	10.4	B	0.0	No
		PM	12.4	B	12.4	B	0.0	No	12.4	B	12.5	B	0.1	No
11. S. Fig St / E. Grand Ave	Signal	AM	11.2	B	11.5	B	0.3	No	11.2	B	11.9	B	0.7	No
		PM	12.1	B	12.3	B	0.2	No	12.2	B	12.4	B	0.2	No
12. S. Juniper St / E. 2nd Ave	Signal	AM	16.0	B	16.2	B	0.2	No	16.3	B	16.4	B	0.1	No
		PM	16.8	B	17.8	B	1.0	No	17.1	B	17.8	B	0.7	No
13. S. Ivy St / E. 2nd Ave	TWSC	AM	12.8	B	12.8	B	0.0	No	12.8	B	12.9	B	0.1	No
		PM	18.8	C	20.3	C	1.5	No	15.4	C	20.5	C	5.1	No
14. West Project Dwy / E. Grand Ave	Signal	AM	DNE	DNE	12.8	B	NA	NA	DNE	DNE	13.0	B	NA	NA
		PM	DNE	DNE	11.1	B	NA	NA	DNE	DNE	11.3	B	NA	NA
15. East Project Dwy / E. Grand Ave	TWSC	AM	DNE	DNE	12.8	B	NA	NA	DNE	DNE	12.9	B	NA	NA
		PM	DNE	DNE	11.1	B	NA	NA	DNE	DNE	11.3	B	NA	NA

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.
d. Increase in delay due to Project traffic.
e. General Plan, Mobility, Infrastructure Element Inconsistency.
f. (-) x.x indicates decrease in delay as a result of rerouting existing traffic due to the elimination of the southbound movement on Valley Boulevard between Valley Parkway and Grand Avenue.

General Note:

DNE – Does not Exist

NA – Not Applicable

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 9–2
EXISTING + PROJECT STREET SEGMENT OPERATIONS

Segment	LOS E [b] Capacity	Existing			Existing + Project			Δ [e] V/C	GP, M, IE Inconsistency? [f]
		Volume	LOS [c]	V/C [d]	Volume	LOS	V/C		
Juniper Street									
Valley Pkwy to Grand Ave	19,000	5,870	A	0.309	6,030	A	0.317	0.008	No
Grand Ave to 2nd Ave	19,000	6,810	B	0.358	7,090	B	0.373	0.015	No
N. Hickory St									
E. Washington Ave to Valley Pkwy	10,000	4,810	B	0.481	5,420	B	0.542	0.061	No
N. Fig Street									
E. Washington Ave to Valley Pkwy	10,000	7,950	D	0.795	8,000	D	0.800	0.005	No
Valley Pkwy to Grand Ave	10,000	5,660	C	0.566	5,740	C	0.574	0.008	No
Valley Boulevard									
Valley Pkwy to Grand Ave	15,000 [g]	9,980	C	0.665	9,250	C	0.617	(-)0.048 [h]	No
Valley Parkway									
Juniper St to Ivy St	30,000	14,790	B	0.493	16,495	C	0.550	0.057	No
Ivy St to Hickory St	30,000	13,610	B	0.454	15,370	B	0.512	0.058	No
Hickory St to Fig St [i]	25,000	23,680	E	0.947	24,010	E	0.960	0.013	No
Grand Avenue									
Juniper St to Ivy St	20,000	9,550	B	0.478	8,755	B	0.438	(-)0.040	No
Valley Blvd to Grape St	25,000	9,450	A	0.315	8,550	A	0.285	(-)0.030	No
Grape St to Fig St	25,000	15,130	B	0.504	15,260	B	0.509	0.005	No

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TABLE 9–2 (CONTINUED)
EXISTING + PROJECT STREET SEGMENT OPERATIONS

Segment	LOS E [b] Capacity	Existing			Existing + Project			Δ V/C	GP, M, IE Inconsistency? [f]
		Volume	LOS [c]	V/C [d]	Volume	LOS	V/C		
2nd Avenue									
Juniper St to Ivy St	30,000	13,680	B	0.456	14,350	B	0.478	0.022	No
Ivy St to Grand Ave	30,000	13,070	B	0.436	13,740	B	0.458	0.022	No

Footnotes:

a. The City of Escondido roadway classification at which the roadway currently functions.
b. The capacity of the roadway at Level of Service E.
c. Level of Service.
d. The Volume to Capacity ratio.
e. Increase in V/C ratio due to Project traffic.
f. General Plan, Mobility, Infrastructure Element Inconsistency.
g. This roadway is currently a Three-Lane road with two northbound lanes and one southbound lane and has a LOS E capacity of 17,500. With the Project, the southbound lane will be removed and the capacity reduces to 15,000.
h. (-) 0.xxx indicates decrease in V/C ratio as a result of rerouting existing traffic due to the elimination of the southbound movement on Valley Boulevard between Valley Parkway and Grand Avenue.
i. The Project does not have an impact on this segment since increase in V/C ratio due to Project traffic is less than the allowed 0.02.

9.2 Opening Year (2022) Without Project

9.2.1 *Intersection Analysis*

Table 9-1 summarizes the Opening Year (2022) Without Project peak hour intersection operations. As seen in *Table 9-1*, the following signalized intersections or minor street left turn movements at unsignalized intersections are calculated to currently operate at LOS D, E or F:

- N. Ivy Street / Valley Parkway (signalized) – Minor street left-turn movement operates at LOS F during the AM peak hour.

Appendix D contains the Opening Year (2022) Without Project intersection analysis worksheets.

9.2.2 *Daily Street Segment Levels of Service*

Table 9-3 summarizes the Opening Year (2022) Without Project segment operations. The Opening Year without Project scenario assumes the elimination of the southbound movement on Valley Boulevard and the consequent rerouting of this traffic to parallel routes. As seen in *Table 9-3*, the following study area segment is calculated to operate at LOS E:

- **Valley Parkway:** Hickory Street to Fig Street (LOS E)

9.3 Opening Year (2022) with Project

9.3.1 *Intersection Analysis*

Table 9-1 summarizes the Opening Year (2022) with Project peak hour intersection operations. As seen in *Table 9-1*, the following signalized intersections or minor street left turn movements at unsignalized intersections are calculated to currently operate at LOS D, E or F:

- **N. Ivy Street / Valley Parkway – LOS F during the AM peak hour and LOS E during the PM peak hour**

  At the N. Ivy Street / Valley Parkway intersection the increase due to the Project is more than 2.0 seconds during the AM and PM peak hours. Therefore, there is a General Plan, Mobility and Infrastructure Element inconsistency at this intersection.

Appendix E contains the Opening Year (2022) with Project intersection analysis worksheets.

9.3.2 *Daily Street Segment Levels of Service*

Table 9-3 summarizes the Opening Year (2022) with Project segment operations. As seen in *Table 9-3*, the following study area segment is calculated to continue to operate at LOS E:

- **Valley Parkway:** Hickory Street to Fig Street (LOS E)

There is no General Plan, Mobility and Infrastructure Element inconsistency at this segment since the increase in the v/c ratio is less than the allowable 0.02 and the Project adds less than 200 ADT.

TABLE 9–3
OPENING YEAR (2022) STREET SEGMENT OPERATIONS

Segment	LOS E [a] Capacity	Opening Year (2022) without Project			Opening Year (2022) with Project			Δ [d] V/C	GP, M, IE Inconsistency? [e] [f]
		Volume	LOS [b]	V/C [c]	Volume	LOS	V/C		
Juniper Street									
Valley Pkwy to Grand Ave	19,000	6,050	A	0.318	6,210	A	0.327	0.008	No
Grand Ave to 2nd Ave	19,000	7,010	B	0.369	7,290	B	0.384	0.015	No
N. Hickory St									
E. Washington Ave to Valley Pkwy	10,000	4,950	B	0.495	5,560	C	0.556	0.061	No
N. Fig Street									
E. Washington Ave to Valley Pkwy	10,000	8,190	D	0.819	8,240	D	0.824	0.005	No
Valley Pkwy to Grand Ave	10,000	5,830	C	0.583	5,910	C	0.591	0.008	No
Valley Boulevard									
Valley Pkwy to Grand Ave [e]	15,000	10,280	C	0.685	10,780	C	0.719	0.033	No
Valley Parkway									
Juniper St to Ivy St	30,000	15,500	B	0.517	16,100	B	0.537	0.020	No
Ivy St to Hickory St	30,000	14,320	B	0.477	14,850	B	0.495	0.018	No
Hickory St to Fig St [f]	25,000	24,390	E	0.976	24,720	E	0.989	0.013	No
Grand Avenue									
Juniper St to Ivy St	20,000	9,980	B	0.499	10,290	B	0.515	0.016	No
Valley Blvd to Grape St	25,000	9,880	A	0.329	10,210	A	0.340	0.011	No
Grape St to Fig St	25,000	15,560	B	0.519	15,690	B	0.523	0.004	No

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TABLE 9–3 (CONTINUED)
OPENING YEAR (2022) STREET SEGMENT OPERATIONS

Segment	LOS E [a] Capacity	Opening Year (2022) without Project			Opening Year (2022) with Project			Δ [d] V/C	GP, M, IE Inconsistency? [e f]
		Volume	LOS [b]	V/C [c]	Volume	LOS	V/C		
2nd Avenue									
Juniper St to Ivy St	30,000	14,270	B	0.476	14,940	B	0.498	0.022	No
Ivy St to Grand Ave	30,000	13,660	B	0.455	14,330	B	0.478	0.022	No

Footnotes:

a. The capacity of the roadway at Level of Service E.
b. Level of Service.
c. The Volume to Capacity ratio.
d. The increase in V/C ratio due to Project traffic.
e. General Plan, Mobility, Infrastructure Element Inconsistency.
f. This roadway is currently a Three-Lane road with two northbound lanes and one southbound lane and has a LOS E capacity of 17,500. With the Project, the southbound lane will be removed and the capacity reduces to 15,000.
g. The Project does not have an impact on this segment since increase in V/C ratio due to Project traffic is less than the allowed 0.02.

10.0 ANALYSIS OF LONG-TERM SCENARIOS

10.1 Year 2035 Base Conditions

10.1.1 *Traffic Volumes*

LLG coordinated with City staff to determine the appropriate traffic model to use in the analysis. Upon review, it was determined that the Escondido General Plan Mobility Element Year 2035 traffic model was the most appropriate model, as buildout volumes in other model options were in many cases lower than existing volumes due to aggressive transit and transportation demand management assumptions. This General Plan model was utilized because it includes the approved land uses associated with the City of Escondido's approved General Plan (amended in 2012). The Year 2035 baseline volumes and analysis presented in this report are representative of the operations forecasted per the adopted General Plan, without implementation of the Project.

Figure 10–1 depicts Year 2035 Without Project traffic volumes. ***Figure 10–2*** depicts Year 2035 With Project traffic volumes.

Fig Street is classified as a 4-Lane Collector in the City of Escondido Circulation Element. A GPA to downgrade the section of Fig Street between Valley Parkway and Grand Avenue to a 2-lane Local Collector (With Parking) with a LOS capacity of 10,000 is part of this project. Therefore, this segment of Fig Street is analyzed as a Local Collector (WP).

10.1.2 *Network Conditions*

The model accounts for the Mobility Element network proposed at buildout of the City's General Plan. For Year 2035 conditions, the City of Escondido assumes that transportation facilities within the City will be improved to their Mobility Element classification, if not currently built as such. The City collects impact fees to fund future improvements, and it is the City's standard of practice to assume buildout of the Circulation Element in long-term traffic analyses.

10.2 Year 2035 without Project

10.2.1 *Intersection Analysis*

Table 10-1 summarizes the Year 2035 peak hour intersection operations. As seen in *Table 10-1*, with in the Year 2035, the following intersections are calculated to operate at LOS E or F:

- N. Fig Street / W. Washington Avenue LOS F during the AM and PM peak hours
- N. Ivy Street / Valley Parkway – LOS F during the AM and PM peak hours
- N. Ivy Street / Grand Avenue – LOS F during the AM and PM peak hours
- N. Ivy Street / 2nd Avenue – LOS E during the PM peak hour

Appendix G contains the Year 2035 intersection analysis worksheets.

10.2.2 *Daily Street Segment Levels of Service*

Table 10-2 summarizes the Year 2035 segment operations. The Year 2035 without Project scenario assumes the elimination of the southbound movement on Valley Boulevard and the consequent

rerouting of this traffic to parallel routes. As seen in *Table 10-2*, in the Year 2035, following study area segment is calculated to operate at LOS E:

- **Valley Parkway:** Hickory Street to Fig Street (LOS F)

10.3 Year 2035 with Project

10.3.1 *Intersection Analysis*

Table 10-1 summarizes the Year 2035 with Project peak hour intersection operations. As seen in *Table 10-1*, in the Year 2035, with the addition of Project traffic, the following intersections are calculated to continue to operate at LOS D, E or F:

- **N. Fig Street / W. Washington Avenue LOS F during the AM and PM peak hours**
  The increase in delay due to Project traffic is less than 2.0 seconds. Therefore, there is no General Plan, Mobility and Infrastructure Element inconsistency at this intersection.

- **N. Ivy Street / Valley Parkway – LOS F during the AM and PM peak hours**
  Based on the City of Escondido Significance criteria, there is a General Plan, Mobility and Infrastructure Element inconsistency at this intersection.

- **N. Ivy Street / Grand Avenue – LOS F during the AM and PM peak hours**
  Based on the City of Escondido Significance criteria, there is a General Plan, Mobility and Infrastructure Element inconsistency **N. Ivy Street / 2nd Avenue – LOS E during the PM peak hour**

  The increase in delay due to Project traffic is less than 2.0 seconds. Therefore, there is no General Plan, Mobility and Infrastructure Element inconsistency at this intersection.

Appendix G contains the Year 2035 with Project intersection analysis worksheets.

10.3.2 *Daily Street Segment Levels of Service*

Table 10-2 summarizes the Year 2035 segment operations. As seen in *Table 10-2*, in the Year 2035, with the addition of Project traffic, the following study area segment is calculated to continue to operate at LOS F:

- **Valley Parkway:** Hickory Street to Fig Street (LOS F)

There is no General Plan, Mobility and Infrastructure Element inconsistency at this segment since the increase in the v/c ratio is less than the allowable increase of 0.02.

TABLE 10–1
YEAR 2035 INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Year 2035 Without Project		Year 2035 With Project		Δ Delay [d]	GP, M, IE Inconsistency? [e]
			Delay [a]	LOS [b]	Delay	LOS		
1. N. Hickory St / W. Washington Ave	Signal	AM	30.8	C	31.0	C	0.2	No
		PM	36.8	D	37.7	D	0.9	No
2. N. Fig St / W. Washington Ave	Signal	AM	124.1	F	124.4	F	0.3	No
		PM	208.4	F	208.9	F	0.5	No
3. N. Juniper St / Valley Pkwy	Signal	AM	35.7	D	38.6	D	2.9	No
		PM	32.8	C	33.7	C	0.9	No
4. N. Ivy St / Valley Pkwy	TWSC [c]	AM	**>100.0**	**F**	**>100.0**	**F**	**>10.0**	**Yes**
		PM	**72.4**	**F**	**85.9**	**F**	**13.5**	**Yes**
5. N. Hickory St / Valley Pkwy	Signal	AM	46.0	D	52.6	D	6.6	No
		PM	36.0	D	38.5	D	2.5	No
6. N. Fig St / Valley Pkwy	Signal	AM	37.4	D	39.0	D	1.6	No
		PM	41.4	D	43.2	D	1.8	No
7. S. Juniper St / E. Grand Ave	Signal	AM	15.9	B	16.3	B	0.4	No
		PM	17.8	B	18.0	B	0.2	No
8. S. Ivy St / E. Grand Ave	TWSC	AM	**>100.0**	**F**	**>100.0**	**F**	**>10.0**	**Yes**
		PM	**>100.0**	**F**	**>100.0**	**F**	**>10.0**	**Yes**
9. Valley Blvd / E. Grand Ave	Signal	AM	21.9	C	23.1	C	1.2	No
		PM	25.9	C	29.1	C	3.2	No

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TABLE 10–1 (CONTINUED)
YEAR 2035 INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Year 2035 Without Project		Year 2035 With Project		Δ Delay [d]	GP, M, IE Inconsistency? [e]
			Delay [a]	LOS [b]	Delay	LOS		
10. S. Grape St / E. Grand Ave	TWSC	AM	10.7	B	10.7	B	0.0	No
		PM	14.0	B	14.1	B	0.1	No
11. S. Fig St / E. Grand Ave	Signal	AM	15.3	B	15.6	B	0.3	No
		PM	14.0	B	14.2	B	0.2	No
12. S. Juniper St / E. 2nd Ave	Signal	AM	21.6	C	26.8	C	5.2	No
		PM	43.3	D	50.1	D	6.8	No
13. S. Ivy St / E. 2nd Ave	TWSC	AM	14.9	B	17.1	C	2.2	No
		PM	38.9	E	40.4	E	1.5	No
14. West Project Dwy / E. Grand Ave	Signal	AM	DNE	DNE	14.0	B	NA	NA
		PM	DNE	DNE	11.6	B	NA	NA
15. East Project Dwy / E. Grand Ave	TWSC	AM	DNE	DNE	14.3	B	NA	NA
		PM	DNE	DNE	11.7	B	NA	NA

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two-Way Stop Controlled intersection. Minor street left turn delay is reported.
d. Increase in delay due to Project traffic.
e. General Plan, Mobility, Infrastructure Element Inconsistency.

General Note:
DNE – Does not Exist
NA – Not Applicable

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 10-2
YEAR 2035 STREET SEGMENT OPERATIONS

Segment	LOS E [b] Capacity	Year 2035 without Project			Year 2035 with Project			Δ V/C	GP, M, IE Inconsistency? [e f]
		Volume	LOS [c]	V/C [d]	Volume	LOS	V/C		
Juniper Street									
Valley Pkwy to Grand Ave	19,000	9,700	B	0.511	9,860	B	0.519	0.008	No
Grand Ave to 2nd Ave	19,000	14,000	C	0.737	14,280	D	0.752	0.015	No
N. Hickory St									
E. Washington Ave to Valley Pkwy	15,000	10,600	C	0.707	11,210	C	0.747	0.040	No
N. Fig Street									
E. Washington Ave to Valley Pkwy	34,200	20,300	C	0.594	20,350	C	0.595	0.001	No
Valley Pkwy to Grand Ave	10,000	7,860	D	0.786	7,940	D	0.794	0.008	No
Valley Boulevard									
Valley Pkwy to Grand Ave	15,000	11,310	D	0.754	11,810	D	0.787	0.033	No
Valley Parkway									
Juniper St to Ivy St	30,000	23,600	D	0.787	24,200	D	0.807	0.020	No
Ivy St to Hickory St	30,000	23,600	D	0.787	24,130	D	0.804	0.017	No
Hickory St to Fig St	37,000	38,800	F	1.049	39,130	F	1.058	0.009	No
Grand Avenue									
Juniper St to Ivy St	34,200	24,900	C	0.728	25,210	C	0.737	0.009	No
Valley Blvd to Grape St	34,200	17,600	B	0.515	17,930	B	0.524	0.009	No
Grape St to Fig St	34,200	17,600	B	0.515	17,730	B	0.518	0.003	No

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TABLE 10–2 (CONTINUED)
YEAR 2035 STREET SEGMENT OPERATIONS

Segment	LOS E [b] Capacity	Year 2035 without Project			Year 2035 with Project			Δ V/C	GP, M, IE Inconsistency? [e f]
		Volume	LOS [c]	V/C [d]	Volume	LOS	V/C		
2nd Avenue									
Juniper St to Ivy St	30,000	24,300	D	0.810	24,970	D	0.832	0.022	No
Ivy St to Grand Ave	30,000	24,300	D	0.810	24,970	D	0.832	0.022	No

Footnotes:

a. The City of Escondido roadway classification at which the roadway currently functions.
b. The capacity of the roadway at Level of Service E.
c. Level of Service.
d. The Volume to Capacity ratio.
e. General Plan, Mobility, Infrastructure Element Inconsistency.

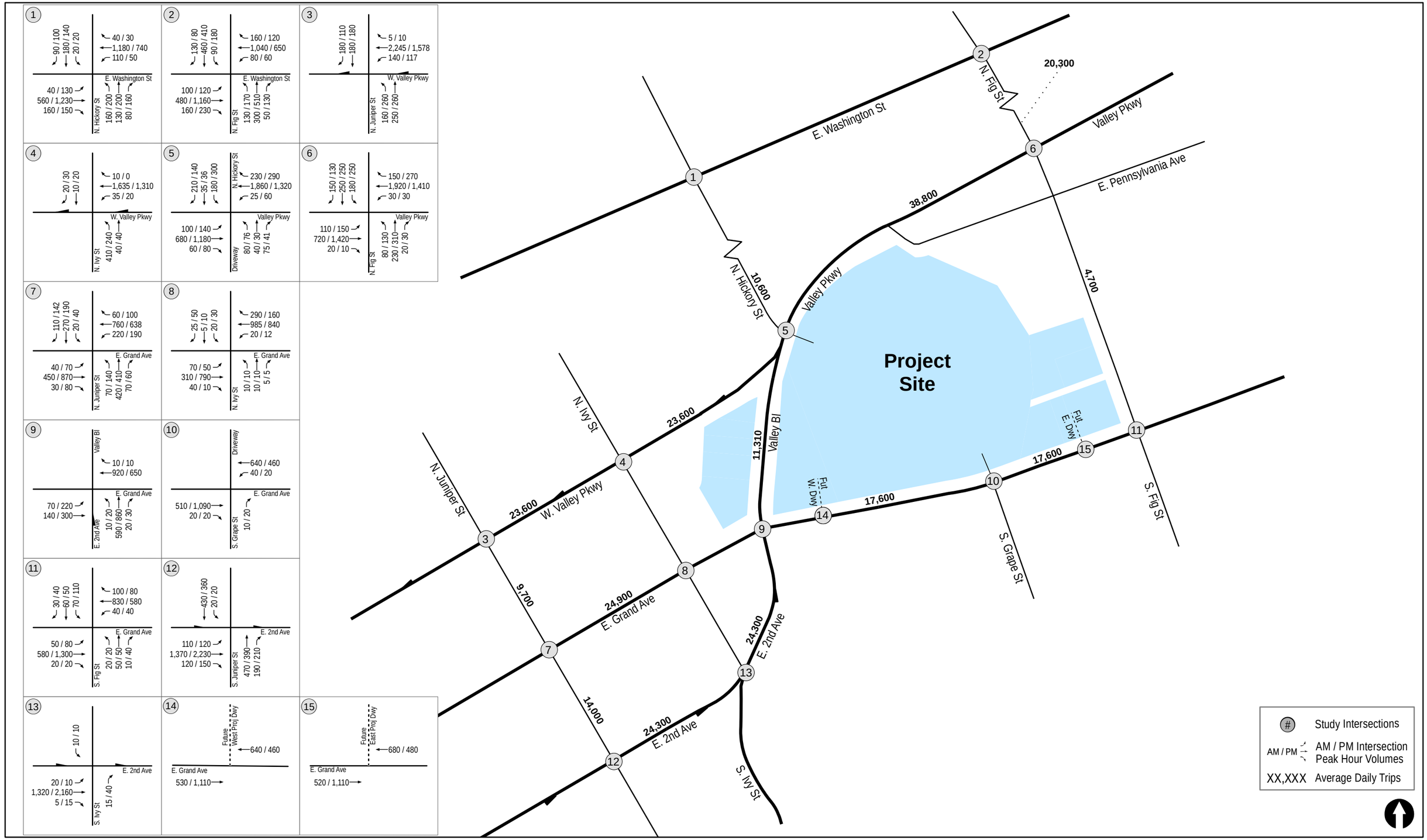

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Figure 10-1

Year 2035 without Project Traffic Volumes

PALOMAR HEIGHTS

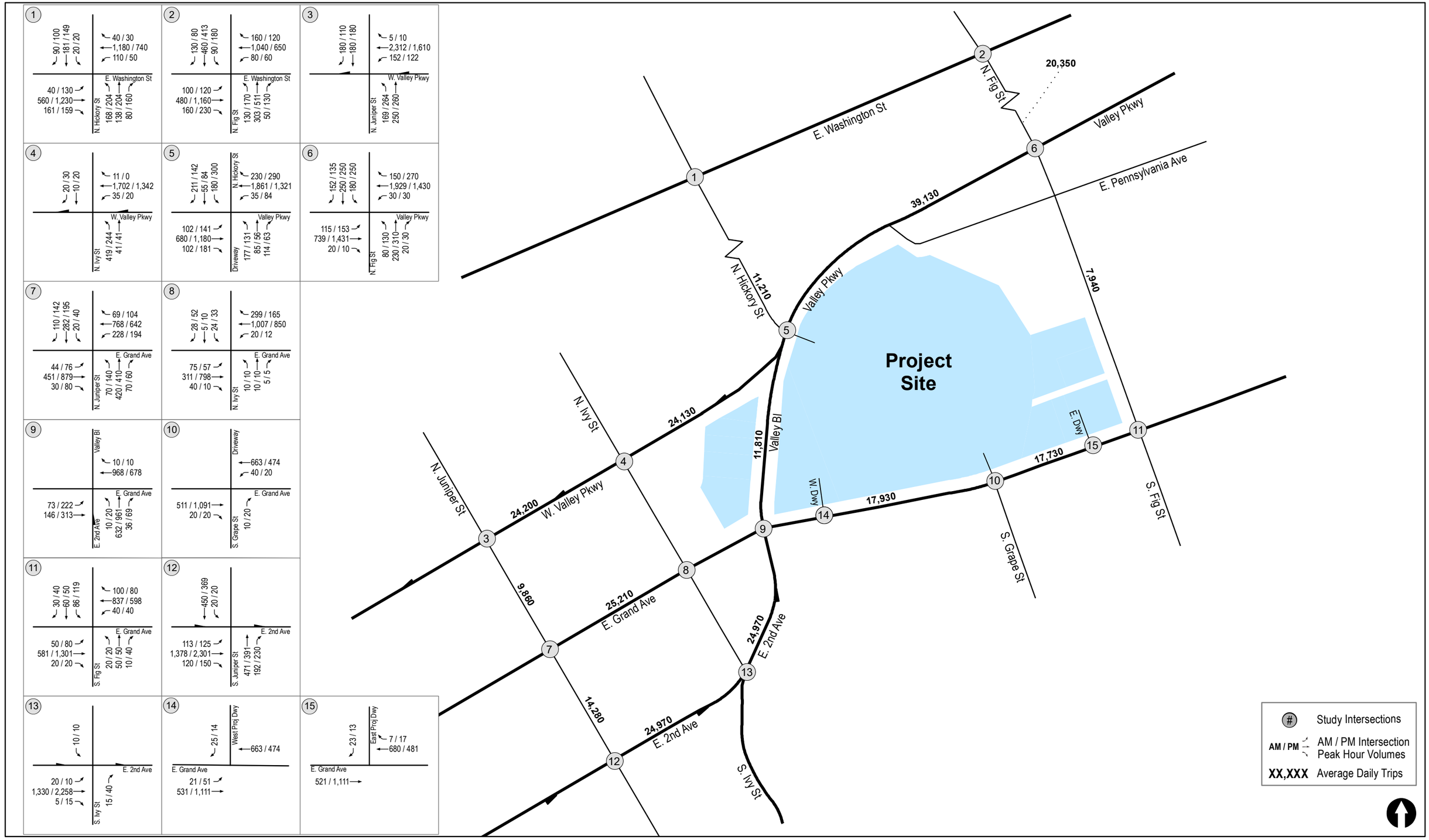

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Figure 10-2

Year 2035 with Project Traffic Volumes

Palomar Heights

11.0 ACCESS, PARKING, BICYCLE AND TRANSIT ASSESSMENT

11.1 Access Assessment

As mentioned in Section 2 Project Description, the following Project access are provided:

- **Valley Parkway / Hickory Street**

  A full signalized access is proposed at this intersection. This will form the main vehicular access to the Project site. This intersection was analyzed in all analysis scenarios and was calculated to operate at LOS B or better in the near-term and D or better in the long-term.

- **Grand Avenue Parkway / West Project Access**

  This is a Minor-Street-Stop-Controlled (MSSC) intersection with right-in / right-out and left-in only movements permitted. It is recommended that a raised median be provided on Grand Avenue as shown on ***Figure 11-1*** to allow left-turns into and prevent left-turns out of this driveway.

- **Grand Avenue Parkway / East Project Access**

  This is a Minor-Street-Stop-Controlled (MSSC) intersection with right-in / right-out only movements permitted. It is recommended that a raised median be provided on Grand Avenue as shown on *Figure 11-1* to allow only right-turns into and out of this driveway.

- **Grand Avenue Parkway / Senior Apartment Access**

  The senior apartment access is provided in the existing alleyway accessing Valley Parkway.

11.2 Parking

Parking ranging from 0.70 spaces per dwelling unit to 2.25 spaces per dwelling unit is proposed. Approximately 900 parking spaces are proposed on-site, with additional street parking to be provided on Valley Boulevard.

11.3 Bicycle Assessment

Bike lanes are not provided along the study area segments of Valley Parkway, Grand Avenue, 2nd Avenue, Juniper Avenue, Ivy Street, Hickory Street and Fig Street. A Class 1 bike path bike path is provided north of Washington Avenue. Per the *City of Escondido Bicycle Master Plan*, October 2012, this existing Class I bike path is described below:

> "Service on the Sprinter Light Rail system began in 2008 with two Escondido Stations. The Inland-Rail Trail, which is Class I bike path and a regional link in the system parallels the Sprinter route. The 6.5-mile section from Escondido to San Marcos is the first section complete and connects to the City's east-west Escondido Creek Class I bike path and the north-south Centre City Parkway (Old Hwy 395) Class II bike lane, which are designated as regional links

in the San Diego County Regional Bike Plan. These regional links provide the backbone for the Escondido bicycle system."

11.4 Transit Assessment

As explained previously in Section 3.0 Existing Conditions, transit service is provided to the area by bus Routes 351, 352, 357, 358, 359, 371 and 388. Most of these routes provide daily weekday and weekend services with a frequency of 30 minutes.

The Project proposes to make improvements to existing NCTD bus stops.

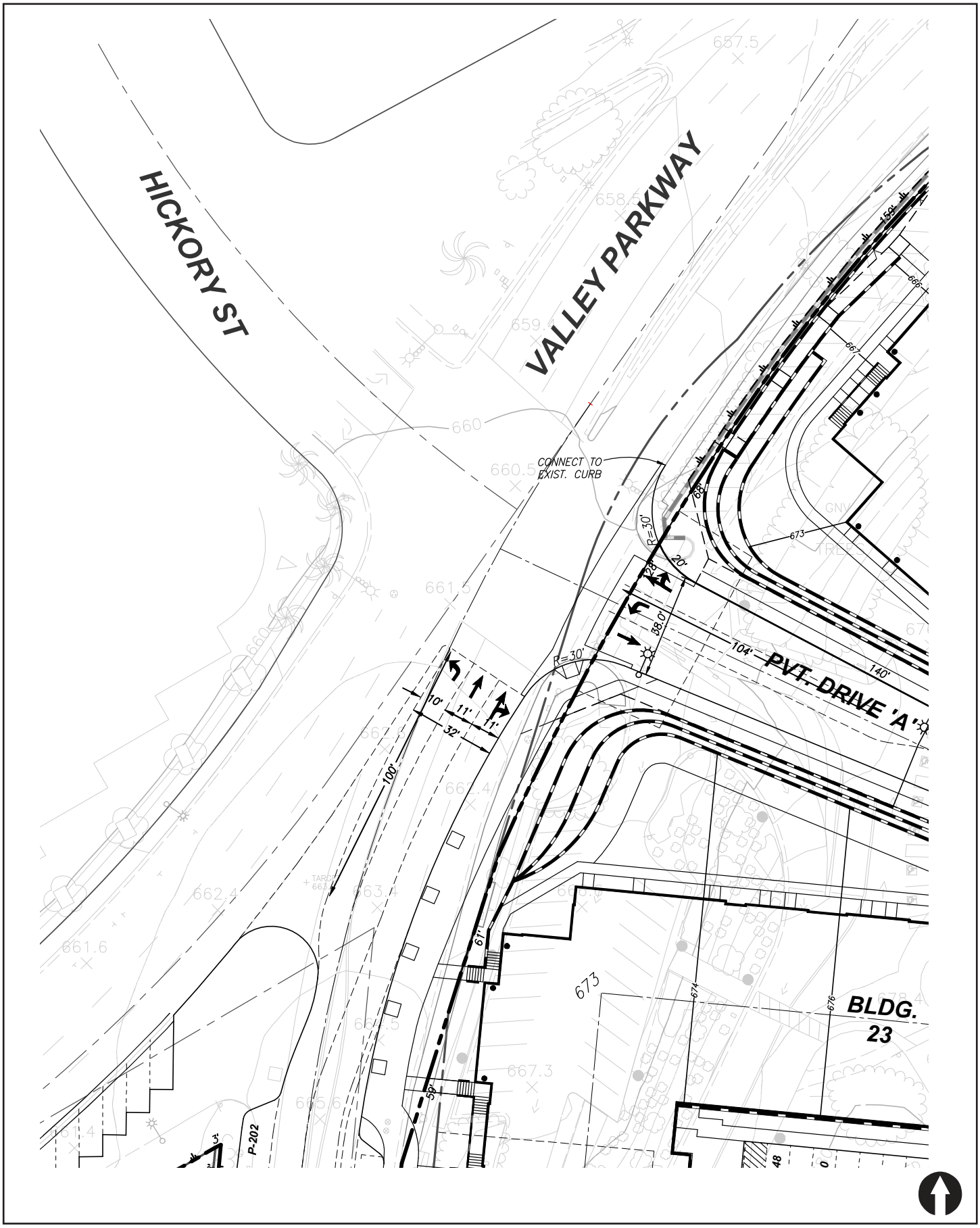

Figure 11-1

Valley Parkway / Hickory Street Intersection Geometry

Palomar Heights

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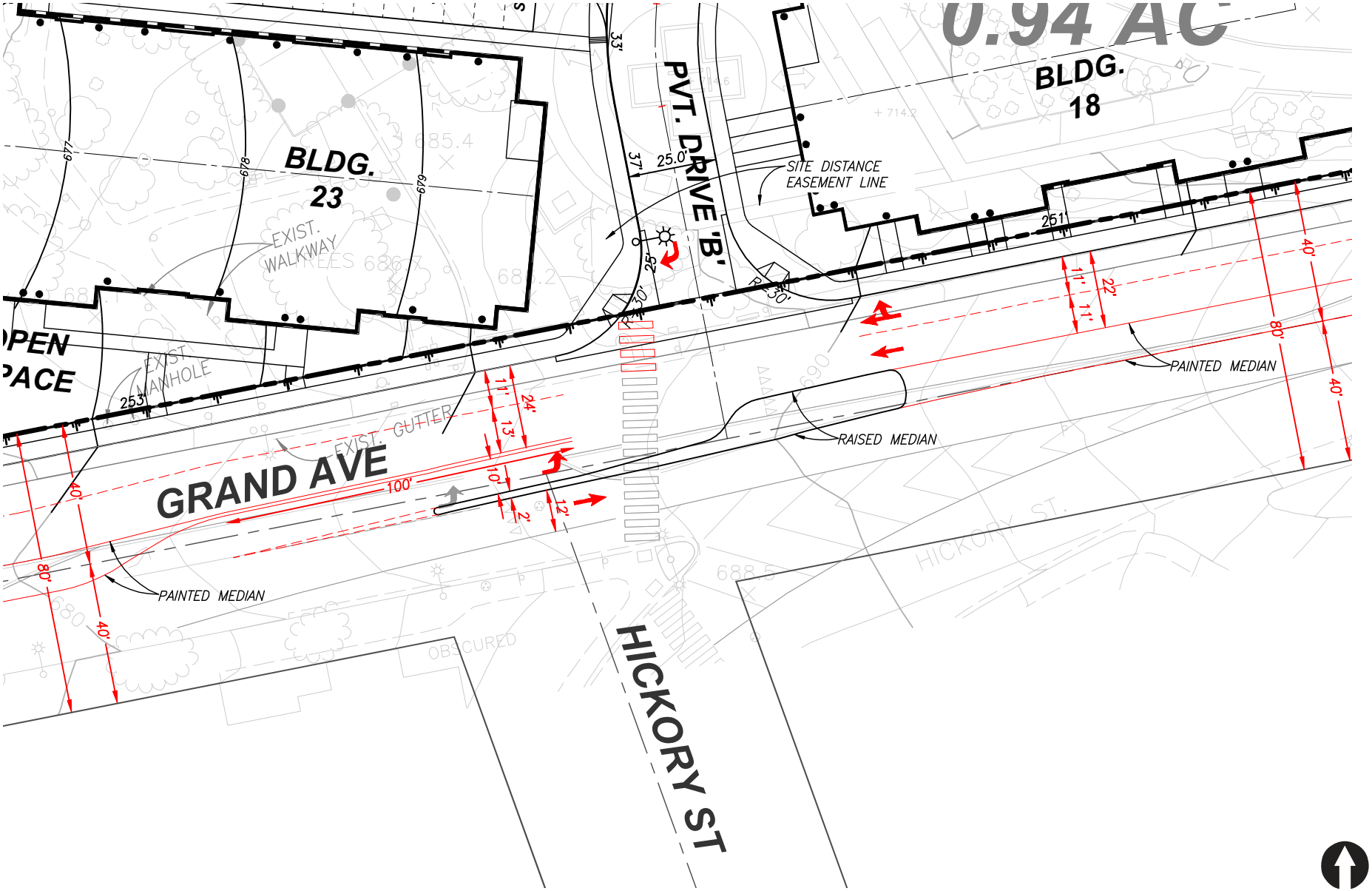

Figure 11-2

Grand Avenue / West Project Access Intersection Geometry

PALOMAR HEIGHTS

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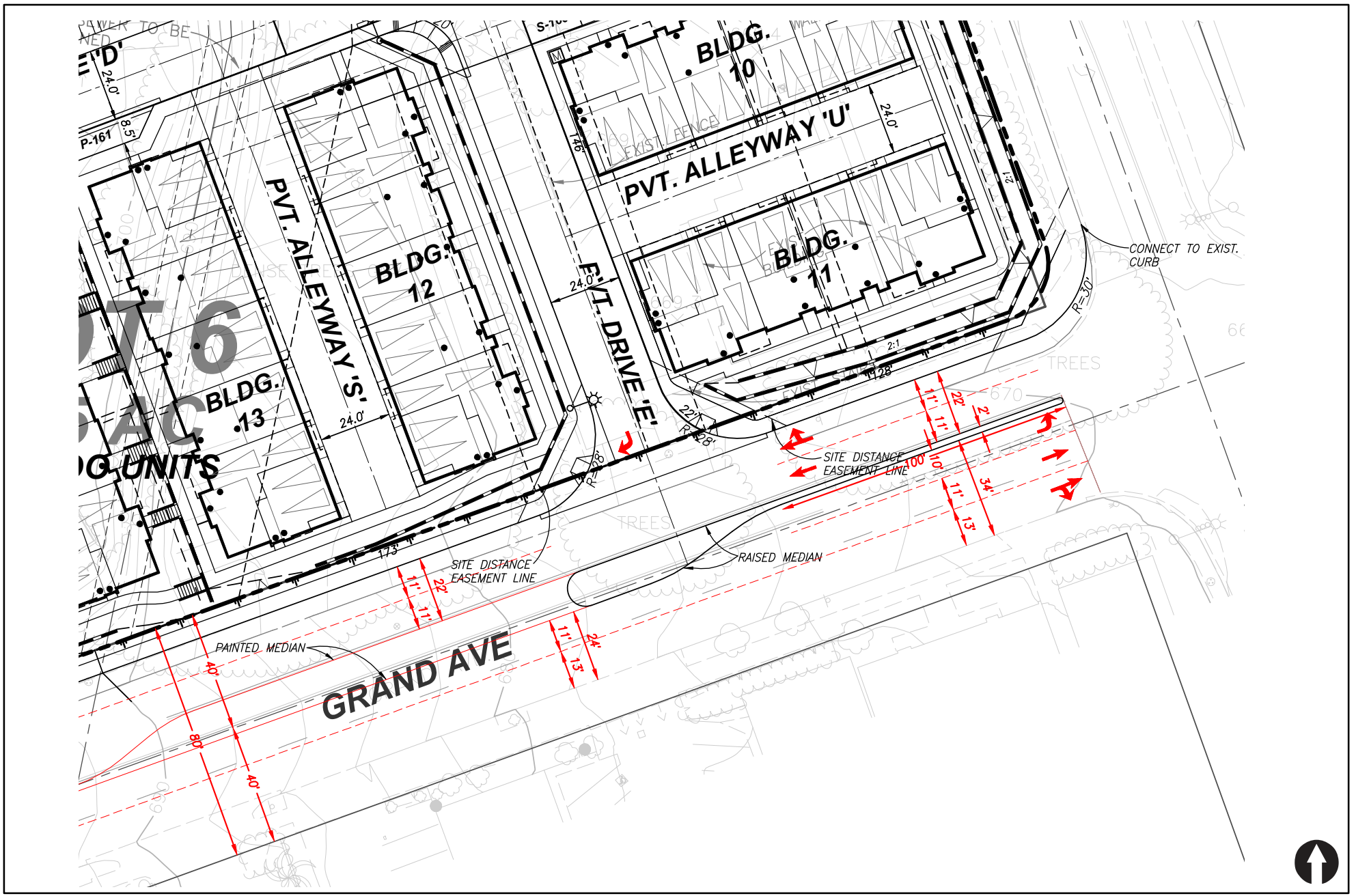

Figure 11-3

Grand Avenue / East Project Access Intersection Geometry

PALOMAR HEIGHTS

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12.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES

The VMT analysis indicates that the Project VMT does not result in a significant transportation impact.

The intersection and segment analysis indicated that the General Plan Mobility and Infrastructure Element inconsistencies at the following intersections:

I-1.N. Ivy Street / Valley Parkway

Based on the City of Escondido Significance criteria and compliance with the General Plan Mobility and Infrastructure Element Policy 7.8, the Project should provide improvements to this intersection of designing and constructing a new traffic signal at the N. Ivy Street / E. Valley Parkway intersection to the satisfaction of the City of Escondido. As such, the Project would be consistent with the General Plan, Mobility and Infrastructure Element Policy 7.8 and the associated City's Traffic Impact Analysis Requirements Guidelines. Further, CEQA Guidelines Section 15064.3 states "a project's effect on automobile delay shall not constitute a significant environmental effect."

I-2.N. Ivy Street / Grand Avenue Intersection

Based on the City of Escondido Significance criteria and compliance with the General Plan Mobility and Infrastructure Element Policy 7.8, the Project should contribute 4.6% towards the installation of a traffic signal, roundabout or other necessary improvement, as determined by the City Engineer, at the E. Grand Ave/Ivy St. intersection. Funds shall be deposited into the future public improvements trust deposit account and the applicant shall coordinate with the City to incorporate improvements at the E. Grand Ave/Ivy St. intersection in the City's future Capital Improvement Program (CIP) via the Project's Development Agreement. As such, the Project would be consistent with the General Plan, Mobility and Infrastructure Element Policy 7.8 and the associated City's Traffic Impact Analysis Requirements Guidelines.

In addition to the above, the Project should ensure the following:

- The ultimate widening of Grand Avenue along the Project frontage to Collector standards (32 feet from current 26 feet half street) per the City's adopted Circulation Element of the General Plan.

- The ultimate widening of Fig Street along the Project frontage to local Collector (With Parking) standards per the City's adopted Circulation Element of the General Plan.

12.1 Fair Share Calculations

It is recommended that the Project make a fair share contribution toward planned improvements at the Grand Avenue / Ivy Street intersection that is calculated to operate at LOS F during the AM and PM peak hours in long-term conditions. ***Table 12–1*** summarizes the fair share calculations for this location. The higher of the AM and PM fair share percentages is 4.6%. It is recommended that the Project pay a fair share contribution towards the future improvements at this intersection discussed in I-2 above.

TABLE 12–1
FAIR SHARE CALCULATIONS

Intersection	Peak Hour	Existing	Project	Year 2035 + Project	Increase	Fair Share %
		A	B	C	D = C-A	E = B/D%
8. Grand Ave / Ivy St	AM	886	44	1,834	948	**4.6%**
	PM	922	35	2,012	1,090	3.2%

END OF REPORT