

LOCAL TRANSPORTATION STUDY
OCEAN KAMP PROJECT
Oceanside, California
July 14, 2021

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EXECUTIVE SUMMARY

Linscott, Law & Greenspan, Engineers (LLG) has prepared the following Local Transportation Study (LTS) to determine and evaluate the potential effects to the local roadway system due to the proposed Ocean Kamp project, consistent with the City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020. This City document provides guidance for the preparation of LTSs to identify any off-site infrastructure improvements in the project vicinity that may be triggered with the development of the project as well as to analyze site access and circulation and evaluate the local multi-model network available to serve to project.

The Ocean Kamp Project proposes a mix of commercial and residential uses. Commercial uses would be located within the central/southwestern portion of the site, and are proposed to include a 300-room resort hotel; approximately 126,000 SF of retail / commercial uses; and a wave lagoon. Multi-family residential uses are proposed to include approximately 700 units within the northern and eastern portions of the site. Access to the site is proposed primarily via Foussat Road at SR 76 and via Ocean Pointe at Mission Avenue.

During the week, the Project is calculated to generate 19,040 ADT with 1,057 AM peak hour trips (453 inbound / 604 outbound) and 1,834 total PM peak hour trips (1,053 inbound / 781 outbound) at the Project driveways. During the weekend, the Project is calculated to generate 14,426 ADT with 1,319 peak hour trips (684 inbound / 635 outbound).

Near-term conditions include eight (8) cumulative development projects selected in coordination with City of Oceanside staff.

Per the City of Oceanside's traffic thresholds for the determination of the need for roadway improvements, and the analysis methodology presented in this report, the addition of Project and cumulative traffic is calculated to contribute to operational deficiencies at the following locations:

Intersections

- Intersection #4. SR 76 / Canyon Drive
- Intersection #5. SR 76 / Benet Road
- Intersection #6. SR 76 / Airport Road
- Intersection #7. SR76 / Foussat Road
- Intersection #8. SR 76 / Douglas Drive
- Intersection #9. SR76 / Rancho Del Oro Drive
- Intersection #21. Mission Avenue / Rancho Del Oro Drive
- Intersection #24. Foussat Road / Foussat Road (North)
- Intersection #25. Foussat Road / Alex Road

Segments

- Segment #5. SR 76: Airport Road to Foussat Road
- Segment #21. Foussat Road: Alex Road to SR 76

The improvements presented in *Table 13-1* are recommended to reduce the Project's effect on the locations listed above to less than substantial.

TABLE OF CONTENTS

SECTION	PAGE
1.0 Introduction.....	8
2.0 Project Description	9
2.1 Project Location	9
2.2 Project Background.....	9
2.3 Project Description.....	9
3.0 Local Transportation Study Methodology & Substantial Effect Thresholds	14
3.1 Study Area	14
3.1.1 Weekday	14
3.1.2 Weekend	16
3.2 Analysis Scenarios	17
3.3 Analysis Methodology	17
3.3.1 Intersections	17
3.3.2 Street Segments.....	17
3.4 Thresholds for the Determination of the Need for Roadway Improvements.....	18
4.0 Existing Conditions.....	19
4.1 Existing Street System	19
4.2 Existing Bicycle Network.....	21
4.3 Existing Transit Conditions	21
4.4 Existing Traffic Volumes.....	22
5.0 Analysis of Existing Conditions	28
5.1 Weekday	28
5.1.1 Peak Hour Intersection Operations	28
5.1.2 Daily Street Segment Operations.....	28
5.2 Weekend	28
5.2.1 Peak Hour Intersection Operations	28
5.2.2 Daily Street Segment Operations.....	28
6.0 Near-Term Cumulative Projects Conditions.....	36
6.1 Description of Near-Term Cumulative Projects	36
7.0 Trip Generation/Distribution/Assignment	42
7.1 Previously Approved Trip Generation.....	42
7.2 Proposed Project Trip Generation.....	42
7.2.1 Weekday	42
7.2.2 Weekend	43
7.3 Trip Distribution/Assignment	48

8.0	Analysis of Weekday Existing + Project Scenarios.....	54
8.1	Existing + Project.....	54
8.1.1	Peak Hour Intersection Operations	54
8.1.2	Daily Street Segment Operations.....	54
9.0	Analysis of Weekday Near-Term Scenarios.....	61
9.1	Existing + Near-Term Cumulative Projects.....	61
9.1.1	Peak Hour Intersection Operations	61
9.1.2	Daily Street Segment Operations.....	61
9.2	Existing + Near-Term Cumulative Projects + Project	61
9.2.1	Peak Hour Intersection Operations	61
9.2.2	Daily Street Segment Operations.....	62
10.0	Analysis of Weekend Conditions	71
10.1	Weekend Existing + Project	71
10.1.1	Peak Hour Intersection Operations	71
10.1.2	Daily Street Segment Operations.....	71
10.2	Weekend Existing + Near-Term Cumulative Projects.....	71
10.2.1	Peak Hour Intersection Operations	72
10.2.2	Daily Street Segment Operations.....	72
10.3	Weekend Existing + Near-Term Cumulative Projects + Project.....	72
10.3.1	Peak Hour Intersection Operations	72
10.3.2	Daily Street Segment Operations.....	72
11.0	Year 2035 Discussion	81
12.0	Access Assessment and On-Site Circulation.....	82
13.0	Substantial Effects and Recommended Improvements.....	83

APPENDICES

APPENDIX

- A. Intersection and Segment Count Sheets, Caltrans Traffic Data, and Signal Timing Sheets
- B. City of Oceanside Roadway Classification Table
- C. Intersection Analysis Worksheets – Weekday Existing
- D. Intersection Analysis Worksheets – Weekend
- E. Supplementary Wave Lagoon Trip Generation Information
- F. Intersection Analysis Worksheets – Weekday Existing + Project
- G. Intersection Analysis Worksheets – Weekday Existing + Near-Term Cumulative Projects
- H. Intersection Analysis Worksheets – Weekday Existing + Near-Term Cumulative Projects + Project
- I. SANDAG TAZ Information
- J. Intersection Analysis Worksheets – Weekday Existing + Near-Term Cumulative Projects + Project + Improvements
- K. Conceptual Drawings of the Proposed Improvements, Fair Share Calculations, and Cost Estimates
- L. Cumulative Projects Information

LIST OF FIGURES

SECTION—FIGURE #	PAGE
Figure 2–1 Vicinity Map	11
Figure 2–2 Project Area Map	12
Figure 2–3 Conceptual Site Plan	13
Figure 4–1a Existing Conditions Diagram (Street Segments)	23
Figure 4–1b Existing Conditions Diagram (Intersections)	24
Figure 4–2a Existing Weekday Traffic Volumes (Daily Street Segment Volumes).....	25
Figure 4–2b Existing Weekday Traffic Volumes (Peak Hour Intersection Volumes).....	26
Figure 4–3 Existing Weekend Traffic Volumes.....	27
Figure 6–1 Near-Term Cumulative Projects Location Map.....	39
Figure 6–2a Near-Term Cumulative Projects Traffic Volumes (Daily Street Segment Volumes)...	40
Figure 6–2b Near-Term Cumulative Projects Traffic Volumes (Peak Hour Intersection Volumes)	41
Figure 7–1a Project Traffic Distribution (Street Segments).....	49
Figure 7–1b Project Traffic Distribution (Intersections)	50
Figure 7–2a Weekday Project Traffic Volumes (Daily Street Segment Volumes).....	51
Figure 7–2b Weekday Project Traffic Volumes (Peak Hour Intersection Volumes).....	52
Figure 7–3 Weekend Project Traffic Volumes.....	53
Figure 8–1a Weekday Existing + Project Traffic Volumes (Daily Street Segment Volumes).....	59
Figure 8–1b Weekday Existing + Project Traffic Volumes (Peak Hour Intersection Volumes) ..	60
Figure 9–1a Existing Weekday + Cumulative Projects Traffic Volumes (Daily Street Segment Volumes)	67
Figure 9–1b Existing Weekday + Cumulative Projects Traffic Volumes (Peak Hour Intersection Volumes)	68
Figure 9–2a Existing Weekday + Cumulative Projects + Project Traffic Volumes (Daily Street Segment Volumes).....	69
Figure 9–2b Existing Weekday + Cumulative Projects + Project Traffic Volumes (Peak Hour Intersection Volumes).....	70
Figure 10–1 Weekend Existing + Project Traffic Volumes	78
Figure 10–2 Weekend Existing + Near-Term Cumulative Projects Traffic Volumes	79
Figure 10–3 Weekend Existing + Near-Term Cumulative Projects + Project Traffic Volumes...	80

LIST OF TABLES

SECTION—TABLE #	PAGE
Table 3–1 City of Oceanside Determination of the Need for Roadway Improvements	18
Table 5–1 Weekday Existing Intersection Operations.....	29
Table 5–2 Weekday Existing Daily Street Segment Operations	32
Table 5–3 Weekend Existing Intersection Operations.....	34
Table 5–4 Weekend Existing Daily Street Segment Operations	35
Table 6-1 Cumulative Projects.....	38
Table 7–1 Previously Approved Project Site Trip Generation	45
Table 7–2 Weekday Project Trip Generation	46
Table 7–3 Weekend Project Trip Generation	47
Table 8–1 Weekday Existing + Project Intersection Operations	55
Table 8–2 Weekday Existing + Project Street Segment Operations.....	57
Table 9–1 Weekday Near-Term Cumulative Intersection Operations	63
Table 9–2 Weekday Near-Term Cumulative Street Segment Operations	65
Table 10–1 Weekend Existing + Project Intersection Operations	74
Table 10–2 Weekend Existing + Project Street Segment Operations.....	75
Table 10–3 Weekend Near-Term Cumulative Intersection Operations	76
Table 10–4 Weekend Near-Term Cumulative Street Segment Operations	77
Table 13-1 Recommended Improvements	84
Table 13–2 Post Improvement Intersection Analysis	87
Table 13–3 Post Improvement Street Segment Analysis.....	88

LOCAL TRANSPORTATION STUDY OCEAN KAMP PROJECT

Oceanside, California
July 14, 2021

1.0 INTRODUCTION

The following Local Transportation Study (LTS) has been prepared to determine and evaluate the potential effects to the local circulation system due to the development of the Ocean Kamp project (proposed “Project”). The Project site is located north of Mission Avenue and State Route 76 (SR 76), immediately east of Foussat Road and west of Fireside Street in the City of Oceanside.

Included in this traffic study are the following:

- Project Description
- Local Transportation Study Methodology & Substantial Effect Thresholds
- Existing Conditions
- Analysis of Existing Conditions
- Near-Term Cumulative Projects
- Project Trip Generation, Distribution & Assignment
- Analysis of Weekday Existing + Project Conditions
- Analysis of Weekday Near-Term Conditions
- Analysis of Weekend Conditions
- Year 2035 Discussion
- Access Assessment and On-Site Circulation
- Substantial Effects and Recommended Improvements.

A Vehicle Miles Traveled (VMT) study was also prepared to determine the potential VMT impacts of the proposed Ocean Kamp project, consistent with CEQA and City of Oceanside guidelines. This study is provided under separate cover.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The approximately 92-acre project site is located north of Mission Avenue and State Route 76 (SR 76), immediately east of Foussat Road and west of Fireside Street in the City of Oceanside. Surrounding land uses include the San Luis Rey River located north and west of the property, the Oceanside Municipal Airport to the west, Oceanside Fire Department Station No. 7 to the south (between SR 76 and Mission Avenue), the City of Oceanside's Mission Basin Groundwater Purification Facility located to the northeast, and a combination of single-family residential and commercial development and open space located to the east and south. A portion of the San Diego Gas & Electric (SDG&E) transmission line easement traverses the center of site in a north-south trend. The site has previously been used as a drive-in movie theater and swap meet.

Figure 2-1 shows the vicinity map. *Figure 2-2* shows a more detailed Project area map.

2.2 Project Background

An Environmental Impact Report (EIR) addressing development of the site was certified by the City of Oceanside in 2008 (State Clearinghouse No. 2006111033). The Pavilion at Oceanside project described in the EIR consisted of a 950,000-square foot (SF) shopping center with a variety of retail uses. The project application included a Tentative Parcel Map, Development Plan, five Conditional Use Permits (movie theater, health club, and three drive-through uses), and an Underground Waiver request for the existing high-voltage electrical transmission lines located on the site. The Tentative Parcel Map proposed to divide the project site into 10 parcels for leasing purposes, where each commercial parcel included building, hardscape/landscape, and parking areas. The Ocean Kamp project is updating the 2008 EIR with a Supplemental EIR.

A Traffic Impact Analysis Report dated March 2008 was prepared by RBF Consulting in conjunction with the certified EIR in which the Pavilion at Oceanside project was calculated to generate 32,175 Average Daily Trips (ADT). Mitigation measures were identified to address potential impacts to the surrounding street system.

The site is currently being graded pursuant to the conditions of the previously approved Pavilion at Oceanside project.

2.3 Project Description

The Ocean Kamp Project proposes a mix of commercial and residential uses. Commercial uses would be located within the central/southwestern portion of the site, and are proposed to include a 300-room resort hotel; approximately 126,000 SF of retail / commercial uses; and a wave lagoon. Multi-family residential uses are proposed to include approximately 700 units within the northern and eastern portions of the project site.

A comprehensive network of trails throughout the Project area proposed to connect residential neighborhoods with easy access to the local shops, dining, recreational, and fitness facilities at the

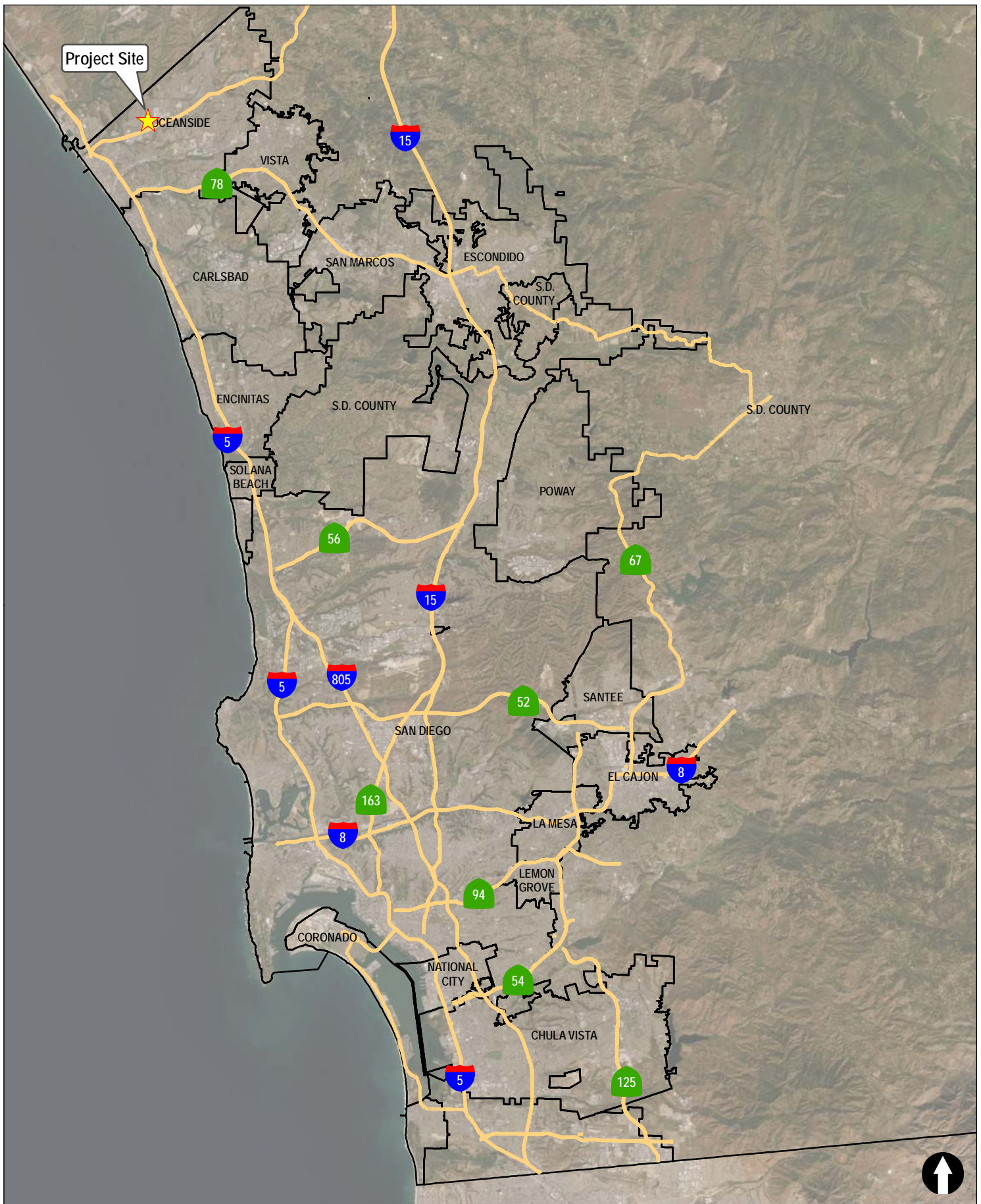
projects commercial center, while also providing additional recreational opportunity with access to the regional San Luis Rey River Trail. Paseos are proposed to create a finer pedestrian network between homes, neighborhoods and parks.

The Project proposes a number of parks linked by a series of trails to create an open space network of play areas. The intent is to offer recreational opportunities for all ages while creating places for people. Approximately 20 acres of the 92-acre project site will be dedicated open space, offering opportunities for walking, hiking, running and biking.

Access to the site is proposed primarily via Foussat Road at SR 76 and via Ocean Pointe at Mission Avenue.

Figure 2–3 shows the conceptual site plan.

The Project proposes a reduced density of commercial uses compared to the 950,000 SF of commercial uses proposed under the approved Pavilion at Oceanside project and will generate significantly fewer ADT than the approved Pavilion project as discussed further in *Section 7* of this study. However, in order to provide a comprehensive assessment of the Project in relation to Existing conditions, the following LTS has been prepared.



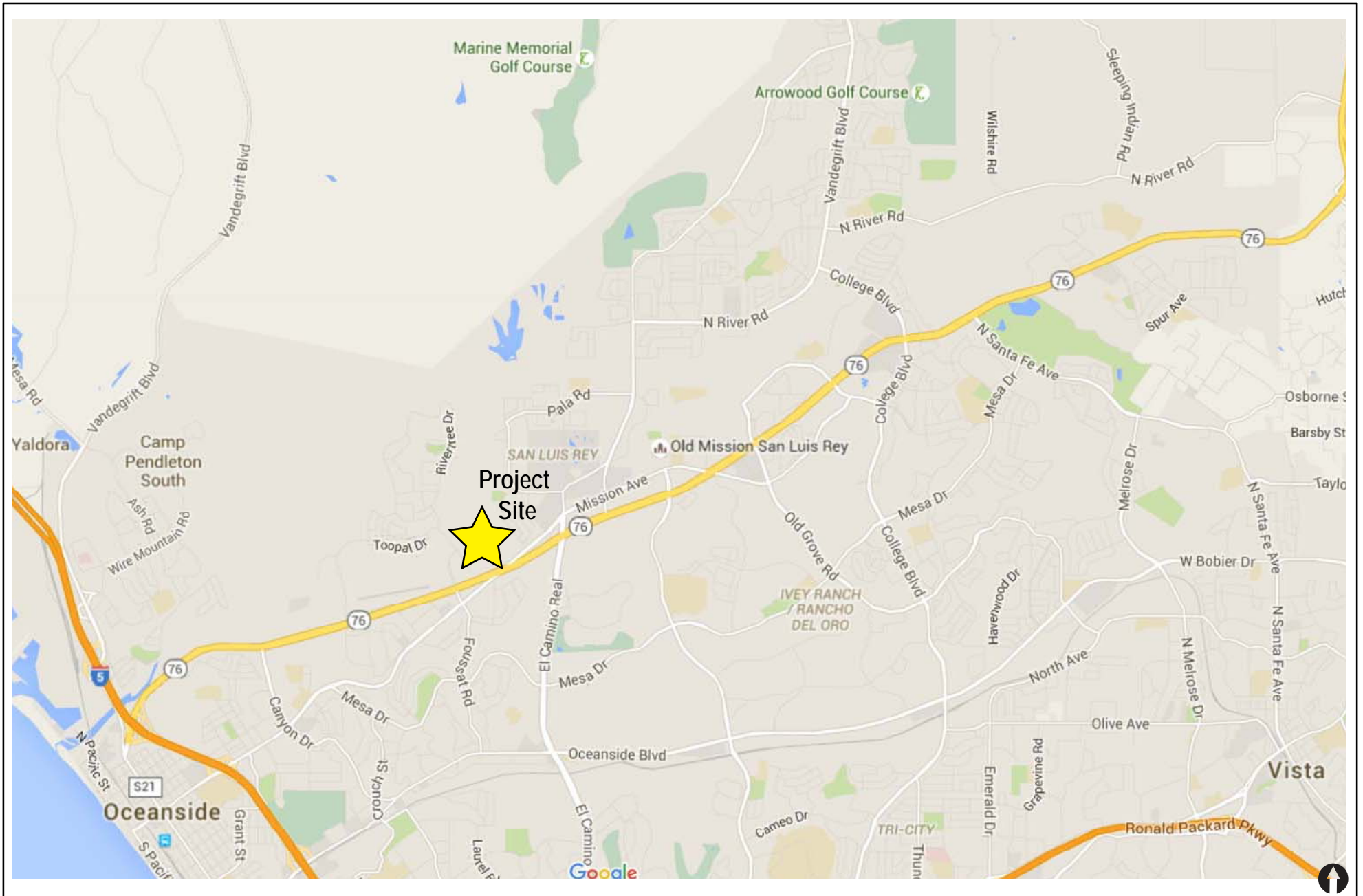


Figure 2-2

Project Area Map

OCEAN KAMP



3.0 LOCAL TRANSPORTATION STUDY METHODOLOGY & SUBSTANTIAL EFFECT THRESHOLDS

This Project-Specific Local Transportation Study (LTS) was prepared to analyze automobile delay and LOS. The LOS analysis was conducted to identify Project effects on the roadway operations in the Project study area and to recommend Project improvements to address noted deficiencies; however, the CEQA impact significance determination for the proposed Project is based only on VMT and not on LOS. A Vehicle Miles Traveled (VMT) study was also prepared to determine the potential VMT impacts of the proposed Ocean Kamp project, consistent with CEQA and City of Oceanside guidelines. This study is provided under separate cover. Both studies will be submitted to Caltrans for review following City approval.

3.1 Study Area

3.1.1 *Weekday*

The following study area was developed based on the anticipated assignment of Project traffic and locations which will carry the most Project traffic, per City of Oceanside staff coordination and scoping meetings.

Intersections

1. I-5 Southbound Ramps / SR 76
2. I-5 Northbound Ramps / SR 76
3. SR 76 / Loretta Street
4. SR 76 / Canyon Drive
5. SR 76 / Benet Road
6. SR 76 / Airport Road
7. SR 76 / Foussat Road
8. SR 76 / Douglas Drive
9. SR 76 / Rancho Del Oro Drive
10. Mission Avenue / Canyon Drive
11. Mission Avenue / Mesa Drive / Amick Street
12. Mission Avenue / Airport Road
13. Mission Avenue / Roymar Road
14. Mission Avenue / Foussat Road
15. Mission Avenue / Copperwood Way
16. Mission Avenue / Frontier Drive
17. Mission Avenue / Ocean Pointe
18. Mission Avenue / Fireside Street
19. Mission Avenue / El Camino Real
20. Mission Avenue / Douglas Drive
21. Mission Avenue / Rancho Del Oro Drive
22. El Camino Real / Los Arbolitos Boulevard
23. Pala Road / Los Arbolitos Boulevard
24. Foussat Road / Foussat Road (North)
25. Foussat Road / Alex Road

26. Rancho Del Oro Drive / Via Rancho Road
27. Rancho Del Oro Drive / Mesa Drive
28. Mesa Drive / El Camino Real
29. Mesa Drive / Foussat Road
30. Mesa Drive / Barnwell Street

Segments

SR 76

1. I-5 Ramps to Loretta Street
2. Loretta Street to Canyon Drive
3. Canyon Drive to Benet Road
4. Benet Road to Airport Road
5. Airport Road to Foussat Road
6. Foussat Road to Douglas Drive
7. Douglas Drive to Rancho Del Oro Drive
8. Rancho Del Oro Drive to Old Grove Road

Canyon Drive

9. SR 76 to Mission Avenue

Mission Avenue

10. Canyon Drive to Mesa Drive
11. Mesa Drive to Airport Road
12. Airport Road to Roymar Road
13. Roymar Road to Foussat Road
14. Foussat Road to Copperwood Way
15. Copperwood Way to Frontier Drive
16. Frontier Drive to Ocean Pointe
17. Ocean Pointe to Fireside Street
18. Fireside Street to El Camino Real
19. El Camino Real to Douglas Drive
20. Douglas Drive to Rancho Del Oro Drive

Foussat Road

21. Alex Road to SR 76
22. SR 76 to Mission Avenue
23. Mission Avenue Tonopah Street
24. Tonopah Street to Mesa Drive

El Camino Real

25. Los Arbolitos Boulevard to Mission Avenue
26. Mission Avenue to Vista Oceana
27. Vista Oceana to Mesa Drive

Rancho Del Oro Drive

28. Mission Avenue to SR 76

- 29. SR 76 to Via Rancho Road
- 30. Via Rancho Road to Mesa Drive

Mesa Drive

- 31. Mission Avenue to Barwell Street
- 32. Barwell Street to Foussat Road
- 33. Foussat Road to El Camino Real
- 34. El Camino Real to Rancho Del Oro Drive

Douglas Drive

- 35. Mission Avenue to SR 76

Los Arbolitos Boulevard

- 36. Pala Road to El Camino Real

Alex Road

- 37. Eddy Jones Way to Foussat Road

Benet Road

- 38. SR 76 to Eddy Jones Way

Airport Road

- 39. SR 76 to Mission Avenue

3.1.2 Weekend

In addition to the traditional Weekday assessment traffic conditions, a supplementary analysis was conducted to determine if the Project would have an effect on the circulation system during the Weekend on a daily basis and during the afternoon peak period (12:00-2:00 PM). The following focused study area was selected for analysis during Weekend conditions in conjunction with City staff:

Intersections

- 5. SR 76 / Benet Road
- 9. SR 76 / Rancho Del Oro Drive
- 11. Mission Avenue / Mesa Drive / Amick Street
- 17. Mission Avenue / Ocean Pointe
- 23. Pala Road / Los Arbolitos Boulevard
- 24. Foussat Road / Foussat Road (North)
- 25. Foussat Road / Alex Road
- 28. Mesa Drive / El Camino Real
- 29. Mesa Drive / Foussat Road

Segments

Mission Avenue

- 20. Douglas Drive to Rancho Del Oro Drive

Foussat Road

- 21. Alex Road to SR 76
- 23. Mission Avenue Tonopah Street
- 24. Tonopah Street to Mesa Drive

El Camino Real

- 25. Los Arbolitos Boulevard to Mission Avenue
- 26. Mission Avenue to Vista Oceana
- 27. Vista Oceana to Mesa Drive

Mesa Drive

- 33. Foussat Road to El Camino Real

Los Arbolitos Boulevard

- 36. Pala Road to El Camino Real

Alex Road

- 37. Eddy Jones Way to Foussat Road

3.2 Analysis Scenarios

This study includes analysis of the following scenarios:

- Existing Conditions
- Existing Conditions + Project
- Existing Conditions + Near-Term Cumulative Projects
- Existing Conditions + Near-Term Cumulative Projects + Project

3.3 Analysis Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It 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. Level of Service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of Service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

3.3.1 Intersections

Intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in the *Highway Capacity Manual (HCM)*, with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

3.3.2 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Oceanside's *Circulation Element Roadway Classification LOS & Capacity* table (Table 12 in the

City of Oceanside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment*, August 2020. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The roadway classification table is attached in *Appendix B*.

3.4 Thresholds for the Determination of the Need for Roadway Improvements

The City of Oceanside uses the published SANTEC/ITE guidelines to establish thresholds and methodology for this LTS. *Table 3-1* below indicates when a project's effect on the roadway system is considered to justify the need for roadway improvements. That is, if a project's traffic effect causes the values in this table to be exceeded, roadway improvements should be considered as follows on a case-by-case basis:

- Improvements should be consistent with the General Plan
- Improvements for transit, bike and pedestrian facilities should be given priority in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG.
- Projects in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG, that are consistent with the General Plan at the time of project application, should not be denied due to the inability to provide roadway improvements (i.e., existing right of way is constrained, etc.)

TABLE 3-1
CITY OF OCEANSIDE
DETERMINATION OF THE NEED FOR ROADWAY IMPROVEMENTS

Level of Service with Project ^a	Allowable Change Due to Project Effect	
	Roadway Segments	Intersections
	V/C	Delay (sec.)
E & F	0.02	2.0

Source: SANTEC/ITE *Guidelines for Traffic Impact Studies in the San Diego Region*, May 2019.

Footnotes:

- a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or a similar LOS chart for each jurisdiction). The acceptable LOS for roadways and intersections is generally "D" ("C" for undeveloped or not densely developed locations per jurisdiction definitions).

General Notes:

1. V/C = Volume to Capacity Ratio
2. Delay = Average stopped delay per vehicle measured in seconds for intersections.

4.0 EXISTING CONDITIONS

4.1 Existing Street System

The following provides a brief description of the street system in the Project area. *Figures 4-1a* and *4-1b* illustrate the existing street segment and intersection conditions, respectively, in terms of traffic lanes and intersection controls.

State Route 76 (SR 76) is within Caltrans' jurisdiction and is classified in the City of Oceanside Circulation Element as a Four-Lane Expressway from Interstate 5 to Rancho Del Oro Drive. It is generally an east-west facility and is currently built as a four-lane divided expressway in the Project study area. The posted speed limit is 55 mph. SR 76 does not provide sidewalk, bike lanes, or curbside parking.

Interstate 5 (I 5) is within Caltrans' jurisdiction and is classified in the City of Oceanside Circulation Element as an 8-Lane Freeway. It is generally a north-south roadway built with four northbound lanes and four southbound lanes in the Project study area. The posted speed limit is 65 mph. Bike lanes are not provided on either sides of the roadway and on-street parking is prohibited.

Loretta Street is a Collector Road and currently built as a 2-Lane roadway between SR 76 and Wynn Street, within the study area. The posted speed limit is 25 mph. Bike lanes are not provided on either sides of the roadway. On-street parking and sidewalks are provided along certain parts of the street.

Canyon Drive is classified as a secondary collector between SR 76 and Mission Avenue in the City of Oceanside Circulation Element. It is currently built as a four-lane undivided roadway in the Project study area. The posted speed limit is 45 mph. Class II Bike lanes are striped along both sides of the street and on-street parking is not permitted within the study area.

Benet Road is classified and built as a 2-Lane Secondary Collector between Via Del Monte and Foussat Road in the City of Oceanside Circulation Element. The posted speed limit is 45 mph. Class II Bike lanes are provided on both sides of the roadway and on-street parking is prohibited.

Airport Road is a Collector Road and currently built as a 2-Lane roadway between Benet Road and Roymar Road. The posted speed limit is 30 mph. There are no designated bicycle lanes, but on-street parking is permitted along certain parts of the street.

Foussat Road is classified in the City of Oceanside Circulation Element and is currently built as a 2-Lane Collector from N. Foussat Road to Mesa Drive. Foussat Road expands to five thru lanes with additional turn lanes as it approaches SR 76. Bike lanes are not provided on either side of the street. On-street parking and sidewalks are provided along certain parts of the study area. The posted speed limit is 35 mph from N. Foussat Road to Mission Avenue and 30 mph from Mission Avenue to Mesa Drive.

Douglas Drive is classified in the City of Oceanside Circulation Element as a 4-Lane Major Arterial from State Route 76 to Mission Avenue. It is constructed as a four-lane undivided roadway in the

Project study area. The posted speed limit is 40 mph. Class II bicycle lanes and sidewalks are provided on both sides of the roadway and on-street parking is prohibited.

Rancho Del Oro Drive is built to its City of Oceanside Circulation Element classification as a Four-Lane Major Arterial between Mission Avenue and Mesa Drive. This four-lane divided roadway has Class II bicycle lanes on both sides and on-street parking is prohibited. The posted speed limit is 45 mph and sidewalks are provided along certain parts of the street.

Mission Avenue is classified in the City of Oceanside Circulation Element as a 4-Lane Major Arterial from I-5 to Rancho Del Oro Drive. Currently, Mission Avenue is a four-lane divided roadway with a raised center median from Canyon Drive to Rancho Del Oro Drive. Class II bicycle lanes and sidewalks are provided along both sides of the street. Within the study area, on-street parking is prohibited. The posted speed limit is 40 mph from Canyon Road to Airport Road and 45 mph from Airport Road to Rancho Del Oro Drive.

Mesa Drive is a collector between Mission Avenue and Foussat Road and a secondary collector between Foussat Road and N. Santa Fe Avenue in the City of Oceanside Circulation Element. It is a two-lane undivided roadway between Mission Avenue and just east of Foussat Road, and a two-lane roadway with a continuous two-way left-turn lane east of El Camino Real with raised medians just east and west of Rancho Del Oro Drive. Class II bicycle lanes are striped along both sides of the street between Foussat Road and N. Santa Fe Avenue. On-street parking is not permitted. The posted speed limit is 45 mph.

Royamar Road is classified and built as a two-lane collector from Airport Road to Mission Avenue in the City of Oceanside. Bike lanes are not provided within the study area. On-street parking and sidewalk are provided in both direction and the assumed speed limit is 25 mph.

Copperwood Way is a Two-Lane Collector Road from Mission Avenue to this roadway's cul de sac. It is a two-lane undivided roadway that provides access to retail/commercial centers. There are no designated bike lanes, but on-street parking and sidewalks are provided on both sides of the street. The assumed speed limit is 25 mph.

Frontier Drive is a Two-Lane Collector road and currently built as a two-lane undivided roadway from Hacienda Drive to Mission Avenue. Bike lanes are not provided, and the assumed speed limit is 25 mph. On-street parking and sidewalks are provided in both directions.

Ocean Pointe is a collector between Mission Avenue and Foussat Road in the City of Oceanside. It is a two-lane undivided roadway with no designated bike lanes, and the assumed speed limit of 25 mph. There are no sidewalks and parking is prohibited on both sides of the street.

Fireside Street is a collector and currently built as a two-lane undivided roadway from Mission Avenue to Los Arbolitos Boulevard. There are no designated bike lanes, but on-street parking and sidewalks are provided in both directions. The posted speed limit is 25 mph.

El Camino Real is classified on the City of Oceanside Circulation Element and currently built as a 4-Lane Major Arterial between Los Arbolitos Boulevard and Mesa Drive, within the study area. It is a 4-lane divided roadway with a raised center median. The posted speed limit is 40 mph from Los Arbolitos to Mission Avenue and 45 mph from Mission Avenue to Mesa Drive. On-street parking is not permitted, and Class II bicycle lanes are striped along both sides of the street within the study area.

Los Arbolitos Boulevard is a collector and currently built as a 2-Lane Undivided roadway with a two-way left-turn lane median between El Camino Real and Pala Road. Bike lanes are not provided within the study area and the posted speed limit is 30 mph. On-street parking and sidewalks are provided on both sides of the roadway.

Pala Road is classified and currently built as a 2-Lane Collector road in the City of Oceanside Circulation Element. From Los Arbolitos Boulevard to Douglas Drive, it is a two-lane roadway with a continuous two-way left turn lane. Class II bike lanes and sidewalks are provided in both directions within the study area. On-street parking is permitted along certain parts of the street and the posted speed limit is 35 mph.

Alex Road is a collector and currently built as a 2-Lane Undivided roadway from Eddy Jones Way to Foussat Road. There are no designated bikes lanes, sidewalks or parking in both travel directions. The assumed speed limit is 25 mph.

Via Del Rancho Road is classified as a collector road in the City of Oceanside Circulation Element. Currently, it is built as a 2-lane undivided roadway from Rancho Del Oro Drive to Mesa Drive. Class III bike lanes are striped along both sides of the street and on-street parking is not permitted within the study area. Sidewalks are provided in both direction and the posted speed limit is 25 mph.

N. Barnwell Street is a collector and currently built as a 2-Lane Undivided roadway from Mesa Drive and Mission Avenue. On-street parking and sidewalks are provided in both sides of the street. There are no designated bike lanes and the posted speed limit is 25 mph.

4.2 Existing Bicycle Network

Based on information in the City of Oceanside Circulation Element and field observations, there are Class II bike lanes provided along the major street segments within the study area described above, with the following exceptions:

- Foussat Road has a Class III Bike Route from Benet Road to Mesa Drive.
The San Luis Rey River Trail is a separated Class I Bike Path and is a generally east-west facility extending throughout a large portion of the study area.

4.3 Existing Transit Conditions

Transit service in the study area is provided by the North County Transit District (NCTD). The Project is located within three miles of the San Luis Rey Transit Center located south of North River Road between Vandegrift Boulevard and Waterview Way. The San Luis Rey Transit Center is

served by Routes 303, 309, and 313 within the study area. Based on information obtained from the NCTD, the following transit conditions are noted.

Route 303 travels from the Oceanside Transit Center to the Vista Transit Center and travels along Mission Avenue and Douglas Drive within the study area. This route provides 15-minute headways during weekday hours.

Route 309 travels from Oceanside (San Luis Rey Transit Center) to Encinitas primarily via El Camino Real. This route provides 30-minute headways during weekday hours.

Route 313 travels from the Oceanside Transit Center to the San Luis Rey Transit Center primarily via Mesa Drive and travels along El Camino Real and Rancho Del Oro within the study area. This route provides hourly service during weekdays.

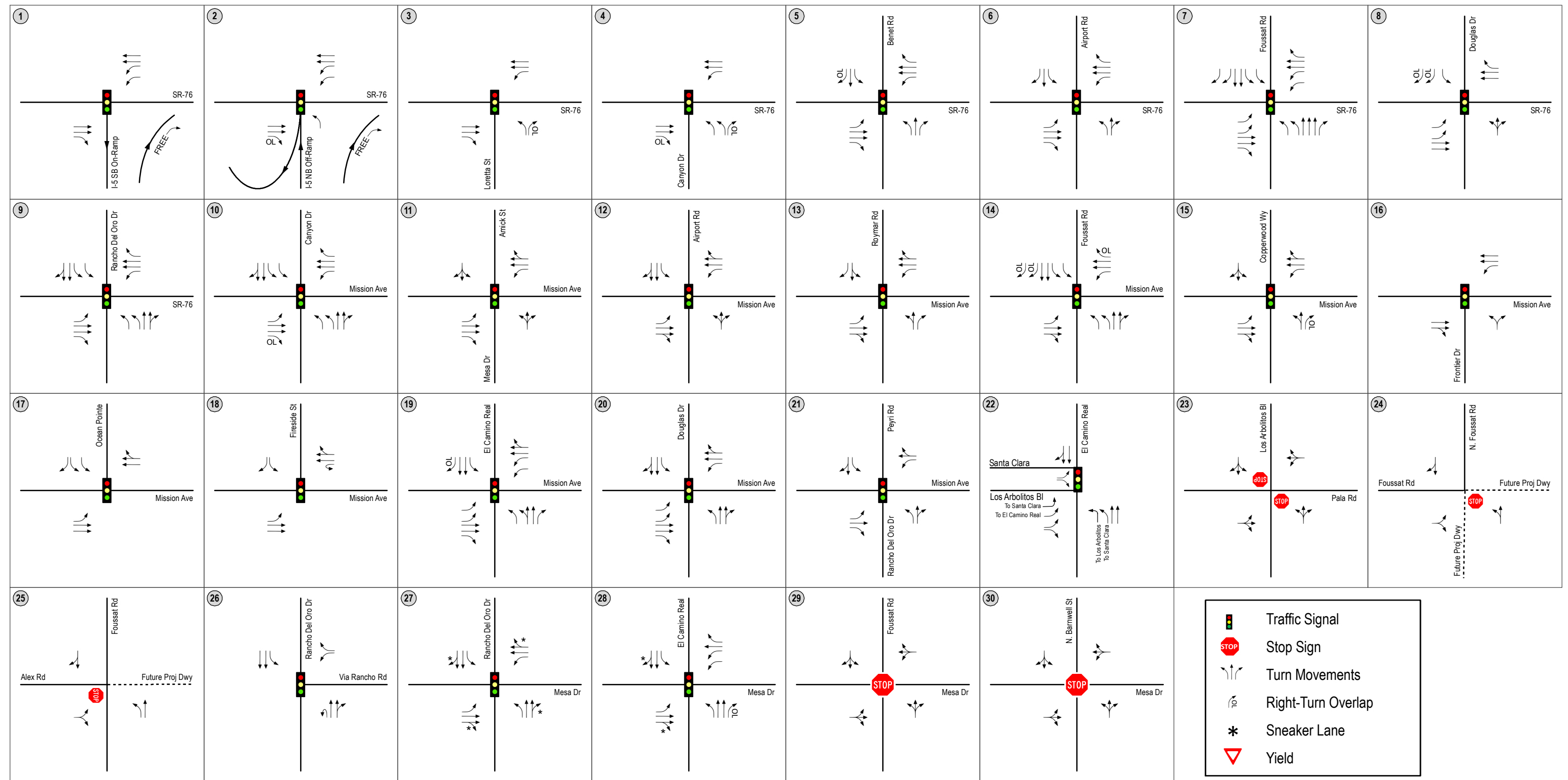
4.4 Existing Traffic Volumes

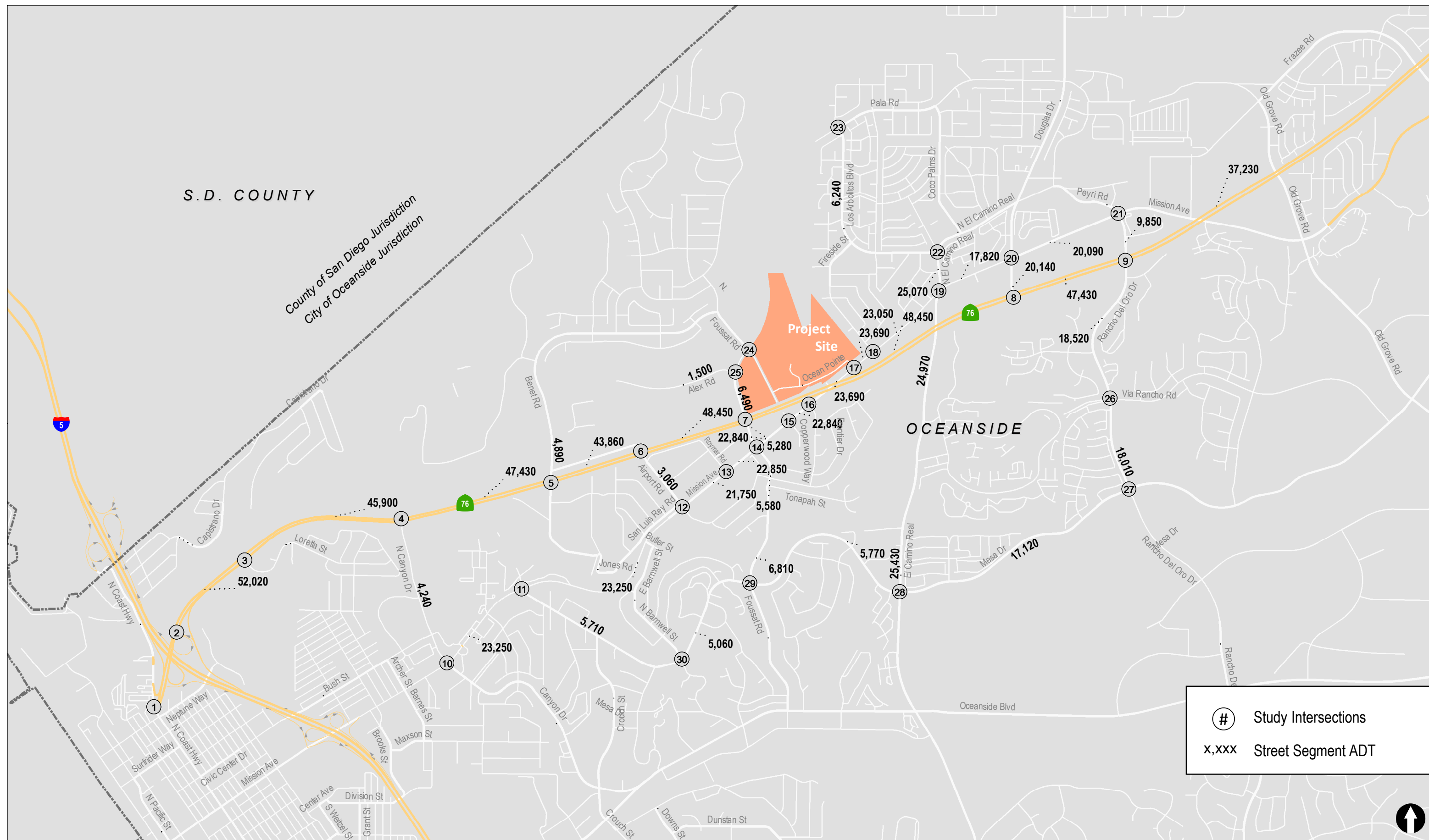
Weekday Existing 7:00-9:00 AM and 4:00-6:00 PM peak hour traffic volumes at key area intersections and 24-hour street segment counts were obtained from the *OnPoint Oceanside Transportation Impact Study* dated May 2019 prepared by Kimley Horn or manually collected in 2019 while area schools were in session. Weekend Existing 12:00-2:00 PM peak hour traffic volumes at key area intersections and 24-hour street segment counts were also manually collected in 2019. SR 76 volumes were taken from the most recent publicly available Caltrans traffic volume data (2017) and increased by 1% per year for two years (2% total) to model Year 2019 conditions.

Figures 4-2a and **4-2b** depict the Weekday Existing daily traffic volumes and AM / PM peak hour traffic volumes, respectively. **Figure 4-3** depicts the Weekend Existing daily traffic and peak hour traffic volumes.

Traffic signal timing sheets were obtained from the City of Oceanside and Caltrans and used in the intersection analyses.

Appendix A contains the peak hour intersection and daily segment count sheets, including the Caltrans data and the signal timing sheets.





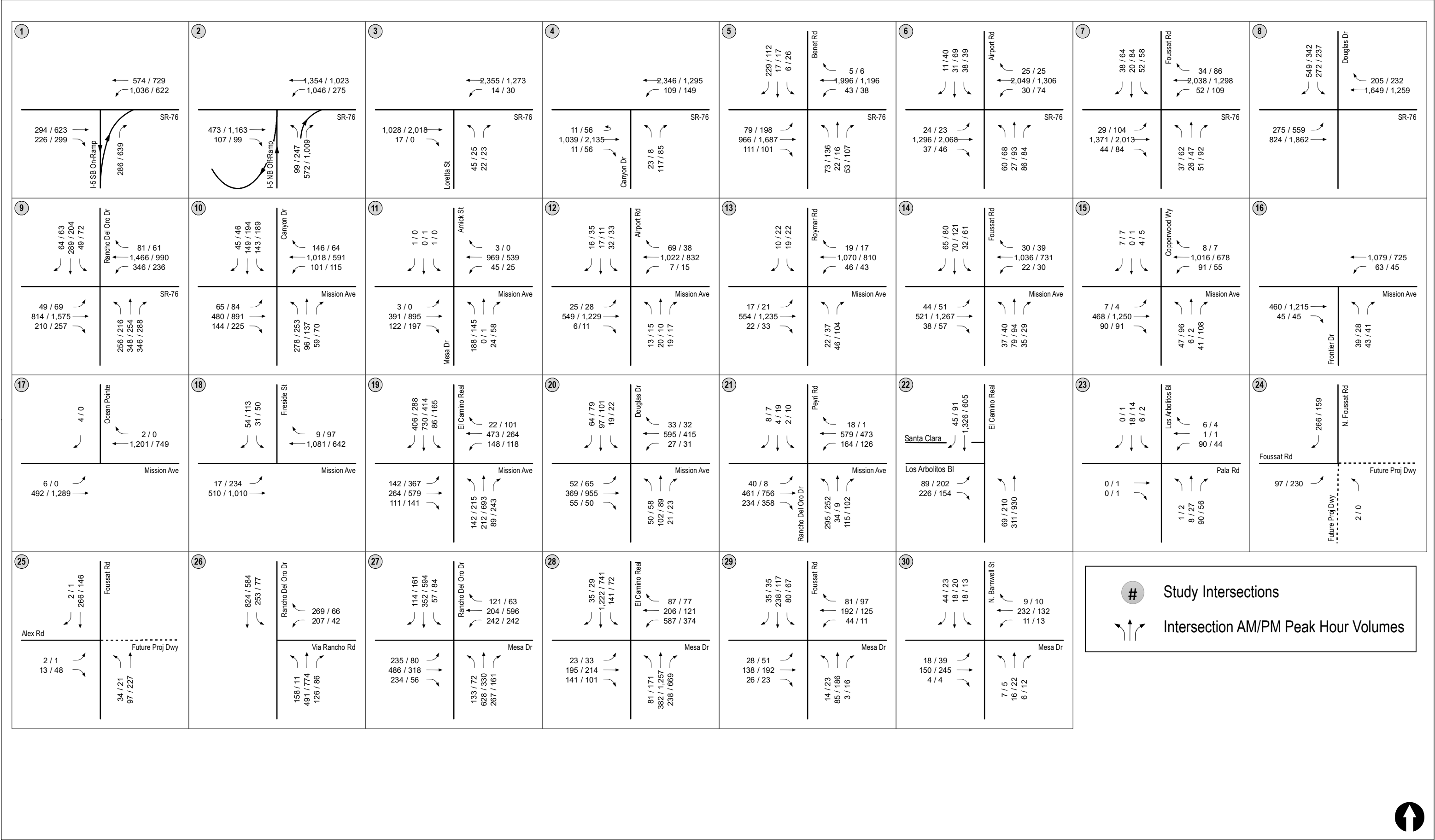
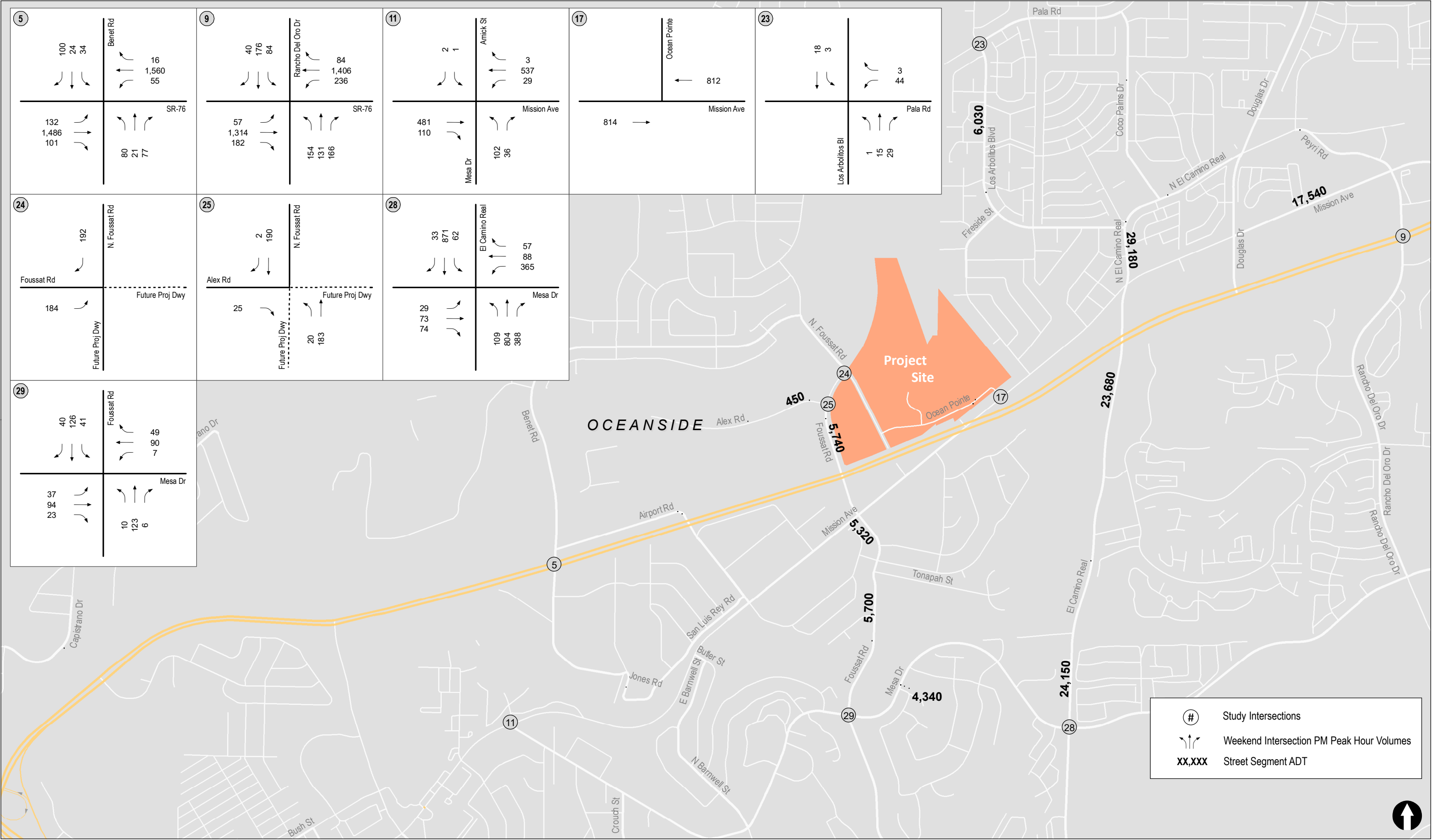


Figure 4-2b
Existing Weekday Traffic Volumes
(Page 2 of 2)
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5.0 ANALYSIS OF EXISTING CONDITIONS

The following section presents the analysis of Existing operations under Weekday and Weekend conditions.

5.1 Weekday

5.1.1 Peak Hour Intersection Operations

Table 5–1 summarizes the Weekday Existing intersections operations. As seen in *Table 5–1*, the study intersections are calculated to currently operate acceptably at LOS D or better, with the exception of the following:

- Intersection #4. SR 76 / Canyon Drive – LOS F during the PM peak hour
- Intersection #5. SR 76 / Benet Road – LOS E during the PM peak hour
- Intersection #6. SR 76 / Airport Road – LOS F during the AM peak hour
- Intersection #7. SR 76 / Foussat Road – LOS F during the AM and PM peak hours
- Intersection #8. SR 76 / Douglas Drive – LOS F during the AM peak hour
- Intersection #9. SR 76 / Rancho Del Oro Drive – LOS E during the AM and LOS F during the PM peak hours

Appendix C contains the Weekday Existing intersection analysis worksheets.

5.1.2 Daily Street Segment Operations

Table 5–2 summarizes the Weekday Existing roadway segment operations. As seen in *Table 5–2*, all study segments are calculated to currently operate acceptably at LOS C or better.

5.2 Weekend

5.2.1 Peak Hour Intersection Operations

Table 5–3 summarizes the Weekend Existing intersections operations. As seen in *Table 5–3*, all study intersections are calculated to currently operate acceptably at LOS D or better.

Appendix D contains the Weekend Existing intersection analysis worksheets.

5.2.2 Daily Street Segment Operations

Table 5–4 summarizes the Weekend Existing roadway segment operations. As seen in *Table 5–4*, all study segments are calculated to currently operate acceptably at LOS C or better

TABLE 5-1
WEEKDAY EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
1. I-5 Southbound Ramps / SR 76	Signal	AM PM	14.8 20.0	B B
2. I-5 Northbound Ramps / SR 76	Signal	AM PM	14.3 16.6	B B
3. SR 76 / Loretta Street	Signal	AM PM	22.8 8.5	C A
4. SR 76 / Canyon Drive	Signal	AM PM	13.4 92.0	B F
5. SR 76 / Benet Road	Signal	AM PM	37.3 76.9	D E
6. SR 76 / Airport Road	Signal	AM PM	102.2 46.0	F D
7. SR 76 / Foussat Road	Signal	AM PM	162.9 119.2	F F
8. SR 76 / Douglas Drive	Signal	AM PM	215.7 33.0	F C
9. SR 76 / Rancho Del Oro Drive	Signal	AM PM	74.0 87.8	E F
10. Mission Avenue / Canyon Drive	Signal	AM PM	33.8 32.0	C C
11. Mission Avenue / Mesa Drive / Amick Street	Signal	AM PM	9.4 9.2	A A
12. Mission Avenue / Airport Road	Signal	AM PM	8.5 10.4	A B
13. Mission Avenue / Roymar Road	Signal	AM PM	5.1 7.4	A A
14. Mission Avenue / Foussat Road	Signal	AM PM	10.0 34.2	A C
15. Mission Avenue / Copperwood Way	Signal	AM PM	6.6 26.7	A C
<i>(Continued on Next Page)</i>				

TABLE 5-1
WEEKDAY EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
(Continued from Previous Page)				
16. Mission Avenue / Frontier Drive	Signal	AM PM	5.2 4.4	A A
17. Mission Avenue / Ocean Pointe	Signal	AM PM	1.2 0.3	A A
18. Mission Avenue / Fireside Street	Signal	AM PM	6.3 14.3	A B
19. Mission Avenue / El Camino Real	Signal	AM PM	29.6 37.1	C D
20. Mission Avenue / Douglas Drive	Signal	AM PM	16.7 17.0	B B
21. Mission Avenue / Rancho Del Oro Drive	Signal	AM PM	36.3 35.4	D D
22. El Camino Real / Los Arbolitos Boulevard	Signal	AM PM	24.3 11.8	C B
23. Pala Road / Los Arbolitos Boulevard	MSSC ^c	AM PM	12.3 9.8	B A
24. Foussat Road / Foussat Road (North)	MSSC	AM PM	11.3 0.0	B A
25. Foussat Road / Alex Road	MSSC	AM PM	10.4 9.3	B A
26. Rancho Del Oro Drive / Via Rancho Road	Signal	AM PM	28.4 8.5	C A
27. Rancho Del Oro Drive / Mesa Drive	Signal	AM PM	35.7 26.2	D C
28. Mesa Drive / El Camino Real	Signal	AM PM	42.3 34.9	D C
29. Mesa Drive / Foussat Road	AWSC ^d	AM PM	14.3 12.2	B B
(Continued on Next Page)				

TABLE 5-1
WEEKDAY EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
(Continued from Previous Page)				
30. Mesa Drive / Barnwell Street	AWSC	AM	9.2	A
		PM	9.2	A

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MSSC = Minor Street Stop-Controlled intersection.
Minor street left-turn delay reported.
- d. AWCS = All Way Stop-Controlled intersection.
Average delay reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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 5-2
WEEKDAY EXISTING DAILY STREET SEGMENT OPERATIONS

Street Segment	Currently Built As	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
SR 76					
1. I-5 Ramps to Loretta Street	5-Ln Expressway	70,000	52,020	C	0.743
2. Loretta Street to Canyon Drive	4-Ln Expressway	60,000	45,900	C	0.765
3. Canyon Drive to Benet Road	4-Ln Expressway	60,000	47,430	C	0.791
4. Benet Road to Airport Road	4-Ln Expressway	60,000	43,860	C	0.731
5. Airport Road to Foussat Road	4-Ln Expressway	60,000	48,450	C	0.808
6. Foussat Road to Douglas Drive	4-Ln Expressway	60,000	48,450	C	0.808
7. Douglas Drive to Rancho Del Oro Drive	4-Ln Expressway	60,000	47,430	C	0.791
8. Rancho Del Oro Drive to Old Grove Road	4-Ln Expressway	60,000	37,230	C	0.621
Canyon Drive					
9. SR 76 to Mission Avenue	4-Ln Secondary Collector	25,000	4,240	A	0.170
Mission Avenue					
10. Canyon Drive to Mesa Drive	4-Ln Major Arterial	40,000	23,250	C	0.581
11. Mesa Drive to Airport Road	4-Ln Major Arterial	40,000	23,250	C	0.581
12. Airport Road to Roymar Road	4-Ln Major Arterial	40,000	21,750	C	0.544
13. Roymar Road to Foussat Road	4-Ln Major Arterial	40,000	22,850	C	0.571
14. Foussat Road to Copperwood Way	4-Ln Major Arterial	40,000	22,840	C	0.571
15. Copperwood Way to Frontier Drive	4-Ln Major Arterial	40,000	22,840	C	0.571
16. Frontier Drive to Ocean Pointe	4-Ln Major Arterial	40,000	23,690	C	0.592
17. Ocean Pointe to Fireside Street	4-Ln Major Arterial	40,000	23,690	C	0.592
18. Fireside Street to El Camino Real	4-Ln Major Arterial	40,000	23,050	C	0.576
19. El Camino Real to Douglas Drive	4-Ln Major Arterial	40,000	17,820	B	0.446
20. Douglas Drive to Rancho Del Oro Drive	4-Ln Major Arterial	40,000	20,090	B	0.502
Foussat Road					
21. Alex Road to SR 76	2-Ln Collector	10,000	6,490	C	0.649
22. SR 76 to Mission Avenue	4-Ln Secondary Collector	25,000	5,280	A	0.211
23. Mission Avenue to Tonopah Street	2-Ln Collector	10,000	5,580	C	0.558
24. Tonopah Street to Mesa Drive	2-Ln Collector	10,000	6,810	C	0.681
El Camino Real					
25. Los Arbolitos Blvd to Mission Avenue	4-Ln Major Arterial	40,000	25,070	C	0.627
26. Mission Avenue to Vista Oceana	4-Ln Major Arterial	40,000	24,970	C	0.624
27. Vista Oceana to Mesa Drive	4-Ln Major Arterial	40,000	25,430	C	0.636
<i>(Continued on Next Page)</i>					

TABLE 5-2
WEEKDAY EXISTING DAILY STREET SEGMENT OPERATIONS

Street Segment	Currently Built As	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
<i>(Continued from Previous Page)</i>					
Rancho Del Oro Drive					
28. Mission Avenue to SR 76	4-Ln Major Arterial	40,000	9,850	A	0.246
29. SR 76 to Via Rancho Road	4-Ln Major Arterial	40,000	18,520	B	0.463
30. Via Rancho Road to Mesa Drive	4-Ln Major Arterial	40,000	18,010	B	0.450
Mesa Drive					
31. Mission Avenue to Barnwell Street	2-Ln Collector	10,000	5,710	C	0.571
32. Barnwell Street to Foussat Road	2-Ln Collector	10,000	5,060	B	0.506
33. Foussat Road to El Camino Real	2-Ln Collector w/ TWLTL ^e	15,000	5,770	B	0.385
34. El Camino Real to Rancho Del Oro Drive	4-Ln Secondary Collector	30,000	17,120	C	0.571
Douglas Drive					
35. Mission Avenue to SR 76	4-Ln Major Arterial	40,000	20,140	B	0.504
Los Arbolitos Boulevard					
36. Pala Road to El Camino Real	2-Ln Collector w/ TWLTL	15,000	6,240	B	0.416
Alex Road					
37. Eddy Jones Way to Foussat Road	2-Ln Collector	10,000	1,500	A	0.150
Benet Road					
38. SR 76 to Eddy Jones Way	2-Ln Collector	10,000	4,890	B	0.489
Airport Road					
39. SR 76 to Mission Avenue	2-Ln Collector	10,000	3,060	A	0.306

Footnotes:

- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.
- e. TWLTL = Two-Way Left-Turn Lane

TABLE 5-3
WEEKEND EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
5.SR 76 / Benet Road	Signal	MID	30.8	C
9. SR 76 / Rancho Del Oro Drive	Signal	MID	42.5	D
11. Mission Avenue / Mesa Drive / Amick Street	Signal	MID	9.1	A
17. Mission Avenue / Ocean Pointe	Signal	MID	0.4	A
23. Pala Road / Los Arbolitos Boulevard	MSSC ^c	MID	9.9	A
24. Foussat Road / Foussat Road (North)	MSSC	MID	0.0	A
25. Foussat Road / Alex Road	MSSC	MID	9.6	A
28. Mesa Drive / El Camino Real	Signal	MID	24.0	C
29. Mesa Drive / Foussat Road	AWSC ^d	MID	9.5	A

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- d. AWCS = All Way Stop-Controlled intersection. Average delay reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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 5-4
WEEKEND EXISTING DAILY STREET SEGMENT OPERATIONS

Street Segment	Currently Built As	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
Mission Avenue 20. Douglas Drive to Rancho Del Oro Drive	4-Ln Major Arterial	40,000	17,540	B	0.439
Foussat Road 21. Alex Road to SR 76	2-Ln Collector	10,000	5,740	C	0.574
23. Mission Avenue to Tonopah Street	2-Ln Collector	10,000	5,320	B	0.532
24. Tonopah Street to Mesa Drive	2-Ln Collector	10,000	5,700	C	0.570
El Camino Real 25. Los Arbolitos Blvd to Mission Avenue	4-Ln Major Arterial	40,000	29,180	C	0.730
26. Mission Avenue to Vista Oceana	4-Ln Major Arterial	40,000	23,680	C	0.592
27. Vista Oceana to Mesa Drive	4-Ln Major Arterial	40,000	24,150	C	0.604
Mesa Drive 33. Foussat Road to El Camino Real	2-Ln Collector w/ TWLTL ^e	15,000	4,340	A	0.289
Los Arbolitos Boulevard 36. Pala Road to El Camino Real	2-Ln Collector w/ TWLTL	15,000	6,030	B	0.402
Alex Road 37. Eddy Jones Way to Foussat Road	2-Ln Collector	10,000	450	A	0.045

Footnotes:

- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.
- e. TWLTL = Two-Way Left-Turn Lane

6.0 NEAR-TERM CUMULATIVE PROJECTS CONDITIONS

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG consulted with City of Oceanside staff to identify relevant, pending cumulative projects in the study area that could be constructed and generating traffic in the Project vicinity. Eight cumulative projects are planned for the area that would add traffic to the study area street system. Traffic generated by these projects was added to the existing traffic volumes to develop the Existing + Near-Term Cumulative Projects conditions. Project traffic was added to the near-term traffic to arrive at the Existing + Near-Term Cumulative Projects + Project conditions. The following is a brief description of each of the cumulative projects. **Table 6-1** provides a summary of each of the cumulative projects.

6.1 Description of Near-Term Cumulative Projects

1. **Oceanpointe Development** is a multi-family development located in the City of Oceanside. The development includes a maximum of 158 dwelling units in three groups on a vacant lot of approximately 36 acres. The project is located mid-way between Stage Coach Road and San Ramon Drive, south of State Route 76. This project is calculated to generate 1,264 ADT per day with 20 inbound and 81 outbound trips during the AM peak hour and 88 inbound and 38 outbound trips during the PM peak hour. The traffic volumes for this cumulative project assigned to the street system based on the *Oceanpointe Multi-Family Development Traffic Impact Study*, prepared by LOS Engineering, Inc. and dated March 2005.
2. **El Corazon** proposes to redevelop a 465-acre property near the geographic center of Oceanside. The site is bound by Mesa Drive to the north, Rancho Del Oro Drive to the east, Oceanside Boulevard to the south, and El Camino Real to the west. The project is proposed to be developed in several phases.

For the cumulative condition, it was assumed Phases 1 thru 3 of the project would be completed. This includes 158,000 SF of retail uses, approximately 340 dwelling units, an aquatic center, and a 6,000-seat arena. These uses are calculated to generate a total of 15,498 ADT with 715 AM peak hour trips and 1,534 PM peak hour trips. Trips were assigned to the street system based on the *El Corazon Traffic Impact Study*, prepared by Linscott, Law & Greenspan, Engineers dated July 1, 2008.

3. **Oceanside + Melrose** proposes to construct 313 residential dwelling units on three adjacent sites, as well as 10,000 SF of restaurant and 10,000 SF of office space. The project site is located east and west of Melrose Drive, north of Oceanside Boulevard/Bobier Drive. The proposed project is calculated to generate 4,059 ADT with 125 inbound and 215 outbound trips during the AM peak hour and 230 inbound and 130 outbound trips during the PM peak hour. Trips were assigned to the street system based on the *Melrose+Oceanside Traffic Impact Study*, prepared by Linscott, Law & Greenspan, Engineers, dated July 26, 2017.
4. **North River Road Residential Subdivision (Kawano-Nagata)** proposes to construct 400 residential dwelling units on two parcels for a total of 25.6 acres at a density of 15.6 units per

acre. The project site is located on the south side of North River Road between Avenida Descanso and Calle Montecito. The project is calculated to generate 3,200 ADT with 51 inbound and 205 outbound trips during the AM peak hour and 224 inbound and 96 outbound trips during the PM peak hour. Trips were assigned to the street system based on the *North River Road Residential Subdivision Traffic Impact Study*, prepared by LOS Engineering, Inc. and dated October 10, 2016.

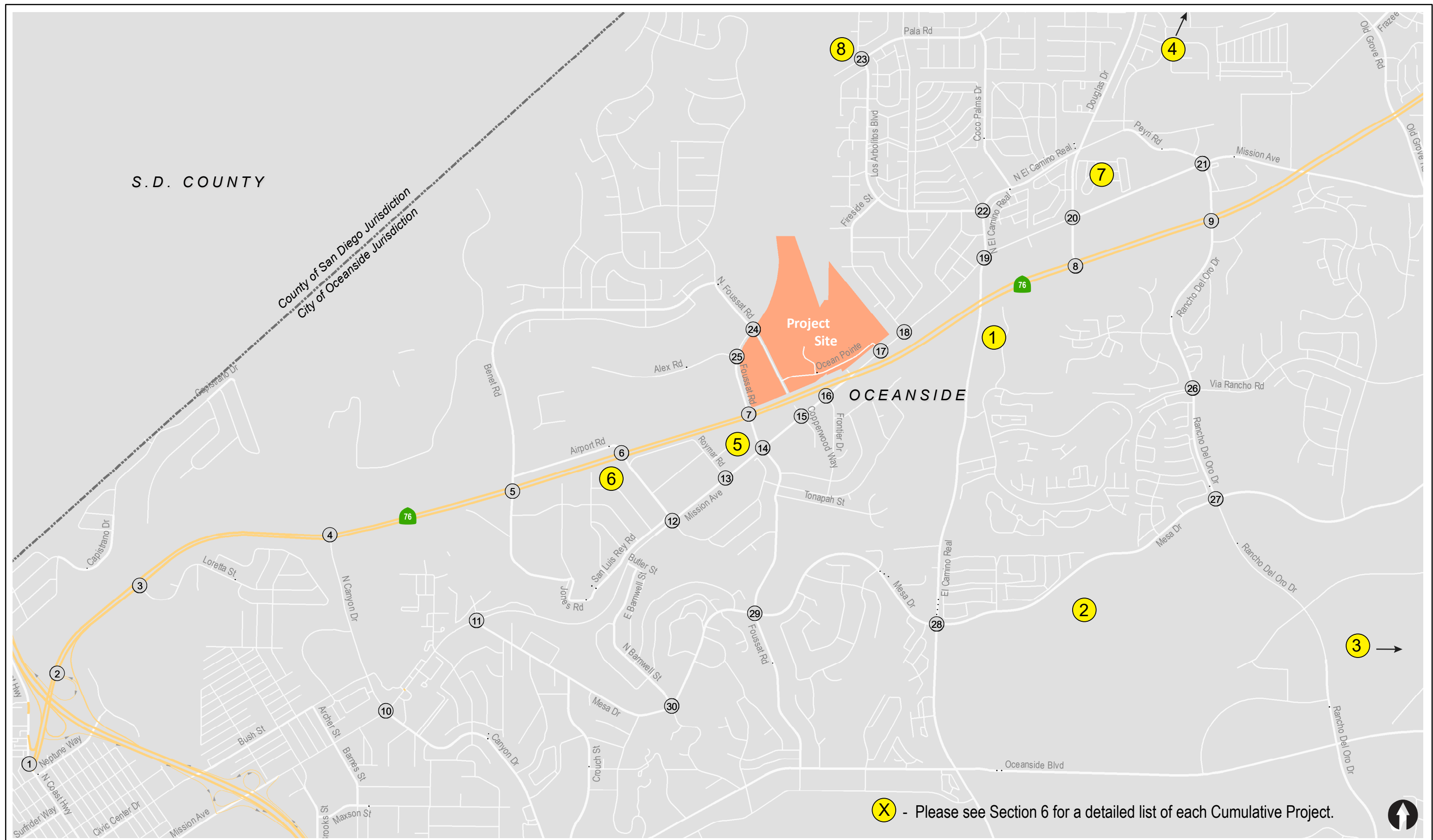
5. **Onpoint Oceanside** proposes to develop a 12-pump gas station, a 3,000 SF food mart, car wash, retail sites totaling 7,980 SF, fast-food restaurants totaling 2,500 SF, and a 2,320 SF high turnover restaurant. The project site is located south of SR 76, north of Mission Avenue, and west of Foussat Road. The project is calculated to generate 5,068 ADT with 213 AM peak hour trips and 273 PM peak hour trips. Trips were assigned to the street system based on the *Onpoint Oceanside Traffic Impact Study*, prepared by Kimley Horn and dated May 2019.
6. **Airport Hotel** proposes to develop an 86-room hotel. The project site is located on Airport Road at the southwest corner of SR 76 and Airport Road intersection in the City of Oceanside. The project is calculated to generate 688 ADT with 34 AM peak hour trips and 48 PM peak hour trips. Trips were assigned to the street system based on travel patterns observed from the existing traffic counts, and the proximity of the project to surrounding freeways, attractions, and commercial areas.
7. **Villas at Mission San Luis Rey** proposes to develop a 222-unit retirement community consisting of 92 supported independent living units, 105 assisted care units, and 25 memory care units. The project site is located on the north side of Mission Avenue between Douglas Drive and Rancho Del Oro Drive in the City of Oceanside. The project is calculated to generate 694 ADT with 32 AM peak hour trips and 49 PM peak hour trips. Trips were assigned to the street system based on a traffic study prepared by Darnell & Associates.
8. **Concordia Collection at Cypress Point** proposes the development of 54 single family homes. The project site is located at the terminus of Pala Road and Los Arbolitos Boulevard in the City of Oceanside. The project is calculated to generate 540 ADT with 42 AM peak hour trips and 53 PM peak hour trips. Trips were assigned to the street system based on a traffic study prepared by Linscott, Law & Greenspan, Engineers, dated December 11, 2020.

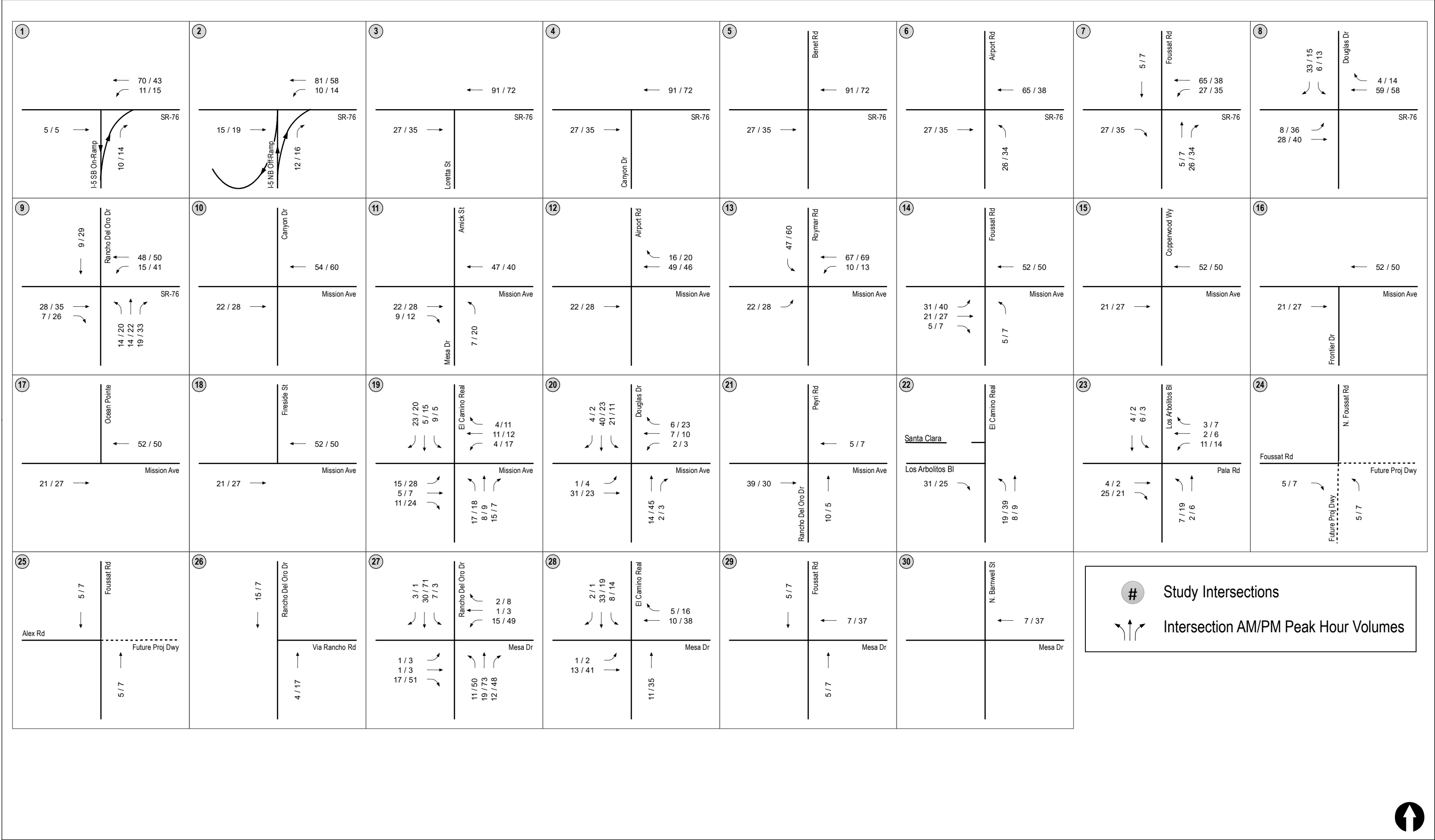
TABLE 6-1
CUMULATIVE PROJECTS

Project Name	Type of Development	Project Size	ADT	AM Peak Hour Trips	PM Peak Hour Trips
1. Oceanpointe Development	Multi-Family Residential	158 dwelling units	1,264	101	126
2. El Corazon Phases 1-3	Residential Retail Arena Aquatic Center	340 dwelling units 158,000 SF 6,000 seats 3,500 SF	15,498	715	1,534
3. Oceanside + Melrose	Residential Restaurant Commercial Office	313 dwelling units 10,000 SF 10,000 SF	4,059	340	360
4. North River Road Residential Subdivision (Kawano-Nagata)	Residential	400 dwelling units	3,200	256	320
5. Onpoint Oceanside	Gas Station & Car Wash Food Mart Retail Fast Food Restaurant High-Turn Over Restaurant	12 pumps 3,000 SF 7,980 SF 2,500 SF 2,320 SF	5,068	213	273
6. Airport Hotel	Hotel	86 rooms	688	34	48
7. Villas at Mission San Luis Rey	Retirement Community	222 units	694	32	49
8. Concordia Collection at Cypress Point	Residential	54 dwelling units	540	42	53

Figure 6-1 shows the locations of the cumulative projects. **Figures 6-2a** and **6-2b** depict the Cumulative Projects daily traffic volumes and AM / PM peak hour traffic volumes, respectively.

Appendix L includes additional information on the Cumulative Projects.





7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

The following is a discussion of the Project site's trip generation calculations, both for the previously approved Pavilion at Oceanside project and the currently proposed Ocean Kamp project, as well as the Project's traffic distribution and assignment through the street system.

7.1 Previously Approved Trip Generation

As previously discussed in *Section 2.2* of this study, an EIR addressing development of the Project site was certified by the City of Oceanside in 2008. The Pavilion at Oceanside project described in the EIR consisted of a 950,000-square foot (SF) shopping center with a variety of retail uses. **Table 7-1** shows the Pavilion at Oceanside traffic generation calculations. As shown, the previously approved project was calculated to generate 32,175 ADT, with 1,254 AM peak hour trips (862 inbound / 376 outbound) and 2,872 PM peak hour trips (1,485 inbound / 1,388 outbound).

7.2 Proposed Project Trip Generation

The Project proposes to construct a 300-room resort hotel, approximately 126,000 SF of retail / commercial uses, 700 residential dwelling units, and a wave lagoon.

7.2.1 Weekday

The Weekday trip generation for the proposed Project was calculated using the SANDAG (*Not so*) *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

The following trip rates were used to calculate the Project's trip generation:

Hotel: SANDAG's "Hotel (w/convention facilities / restaurant)" rate was used. The independent variable is occupied rooms. In order to provide a conservative analysis, it was assumed that all 300 of the proposed hotel rooms would be occupied. The trip rate is 10 trips per occupied room.

Multi-Family Residential: SANDAG's "Condominium (or any multi-family 6-20 DU / acre)" rate was used. The independent variable is dwelling units. The trip rate is 8 trips per dwelling unit.

Retail / Commercial Center: SANDAG's "Community Shopping Center" rate was used. The independent variable is square feet. The trip rate is 80 trips per 1,000 square feet. Pass-by credits for this land use were applied as follows:

- **Commercial Use Pass-By & Primary Trips**

Development of new land uses will create trips on a street system that are new, or "primary" trips. However, several types of retail/commercial developments experience local and regional trips at the driveways that are already on the street system, whether that development exists or not. These trips are known as "pass-by" trips.

- *Pass-by* trips are trips that are already on the street system passing along the Project frontage (SR 76 and Mission Avenue), and only appear as new trips in and out of the Project driveways. SANDAG indicates a 30% pass-by rate for the PM peak hour and 22% for daily trips. An AM peak hour pass-by rate is not provided.

Based on consultation with City staff, a pass-by rate of 30% was used for the PM peak hour, and 0% for the daily and AM peak hour trips. It should be noted that pass-by trips were only assumed for the Project's commercial uses.

- *Primary Trips:* The remaining retail / commercial related trips (70% PM peak, 100% daily and AM peak) are those that are new to the street system, also called “primary” trips. These trips occur due to the development of the Project and the Project itself becomes one end of a primary trip, either the origin or the destination.

Wave Lagoon: No published rates for “wave lagoons” were found. Therefore, for the purposes of this traffic study, a rate was estimated based on expected use. The Wave Lagoon will have a maximum capacity of 12 people per hour, and will operate ten-hours per day for a total of 120 visitors per day. Spectators and employees of the Wave Lagoon were also accounted for. Ultimately, a rate of 360 trips per Weekday was calculated. Additional information regarding calculation of the Wave Lagoon's trip generation is provided in **Appendix E**.

It should be noted that the Project's trip generation does not account for any mixed-use credits. Per the SANDAG guide, up to a 10% mixed-use reduction can be applied to projects “where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).” Given the potential synergy between the Project's proposed land uses, application of a mixed-use credit is likely applicable. However, to provide a conservative assessment of the Project's effect on the circulation system, no mixed-use credits were applied.

Table 7–2 shows the Weekday Project traffic generation. As shown, the Project is calculated to generate 19,040 ADT with 1,057 AM peak hour trips (453 inbound / 604 outbound) and 1,834 total PM peak hour trips (1,053 inbound / 781 outbound) at the Project driveways. It's worth noting that the proposed Project is calculated to generate 13,135 fewer ADT (approximately 41% less) than the site's previously approved Pavilion project (32,175 ADT).

7.2.2 Weekend

Since SANDAG does not provide weekend trip rates, the Project's Weekend trip generation was calculated based on the *Institute of Transportation Engineers, Trip Generation Manual, 10th Edition*, September 2017.

The following trip rates were used to calculate the Project's trip generation:

Hotel: ITE's “Hotel (310)” rate was used. The independent variable is rooms. The Saturday trip rate is 8.19 trips per room.

Multi-Family Residential: ITE's “Multifamily Housing (Low-Rise) (220)” rate was used. The independent variable is dwelling units. The Saturday trip rate is 8.14 trips per dwelling unit.

Retail / Commercial Center: ITE's “Shopping Center (820)” rate was used. The independent variable is square feet. The Saturday trip rate is 46.12 trips per 1,000 square feet. Pass-by credits for

this land use were not applied under Weekend conditions. It should be noted that the ITE Saturday rate is nearly half the SANDAG weekday rate for commercial land uses.

Wave Lagoon: No published rates for “wave lagoons” were found. Therefore, for the purposes of this traffic study, a rate was estimated based on expected use. The Wave Lagoon will have a maximum capacity of 12 people per hour, and will operate ten-hours per day for a total of 120 visitors per day. Spectators and employees of the Wave Lagoon were also accounted for. Ultimately, a rate of 460 trips per Weekend day was calculated. Additional information regarding calculation of the Wave Lagoon’s trip generation is provided in *Appendix E*.

Similar to the Project’s Weekday trip generation calculations, the Project’s Weekend trip generation does not take any mixed-use credits to account for the potential synergy between the Project’s proposed land uses in order to provide a conservative analysis.

Table 7–3 shows the Weekend Project traffic generation. As shown, the Project is calculated to generate 14,426 ADT with 1,319 peak hour trips (684 inbound / 635 outbound).

TABLE 7-1
PREVIOUSLY APPROVED PROJECT SITE TRIP GENERATION

Land Use	Daily Trip Ends (ADTs)	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Oceanside Pavilion	32,175	862	376	1,254	1,485	1,388	2,872

General Notes:

1. Source: *Oceanside Pavilion Traffic Impact Analysis Report*, March 2008, prepared by RBF Consulting
2. ADT = Average daily traffic

**TABLE 7-2
WEEKDAY PROJECT TRIP GENERATION**

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate ^a	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Hotel (w/ convention facilities / restaurant)	300 Rooms	10 / Room	3,000	6%	60:40	108	72	180	8%	60:40	144	96	240
Multi-Family Residential	700 Units	8 / DU	5,600	8%	20:80	90	358	448	10%	70:30	392	168	560
Retail / Commercial Center	126 KSF	80 / KSF	10,080	4%	60:40	242	161	403	10%	50:50	504	504	1,008
<i>Pass-by Credit (30% PM peak)</i>	-	-	-	-	-	-	-	-	-	-	-151	-151	-302
Surf Lagoon / Resort Pass Guests ^b	1 Site	-	360	-	-	13	13	26	-	-	13	13	26
Proposed Project Weekday Total			19,040			453	604	1,057			902	630	1,532
Proposed Project Weekday Total (Driveway Trips) ^c			19,040			453	604	1,057			1,053	781	1,834

Footnotes:

- a. Rates based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002 except where noted.
- b. 120 Surf Lagoon guests and 50 Report Pass guests expected daily. See *Appendix E* for Trip Generation Calculations.
- c. Driveway trip calculations do not include pass-by credits.

General Notes:

1. ADT = Average daily traffic

**TABLE 7-3
WEEKEND PROJECT TRIP GENERATION**

Land Use	Size	Daily Trip Ends (ADTs)		Peak Hour				
		Rate ^a	Volume	% of ADT	In:Out Split	Volume		
						In	Out	Total
Hotel (w/ convention facilities / restaurant)	300 Rooms	8.19 / Room	2,457	0.72	56:44	121	95	216
Multi-Family Residential	700 Units	8.14 / DU	5,698	0.70	50:50	245	245	490
Retail / Commercial Center	126 KSF	46.12 / KSF	5,811	4.50	52:48	295	272	567
Surf Lagoon / Resort Pass Guests ^b	1 Site	-	460	-	-	23	23	46
Proposed Project Weekend Total			14,426			684	635	1,319

Footnotes:

- a. Rates based on the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, September 2017 except where noted.
- b. 120 Surf Lagoon guests and 100 Resort Pass guests expected daily. See *Appendix E* for Trip Generation Calculations.

General Notes:

1. ADT = Average daily traffic

7.3 Trip Distribution/Assignment

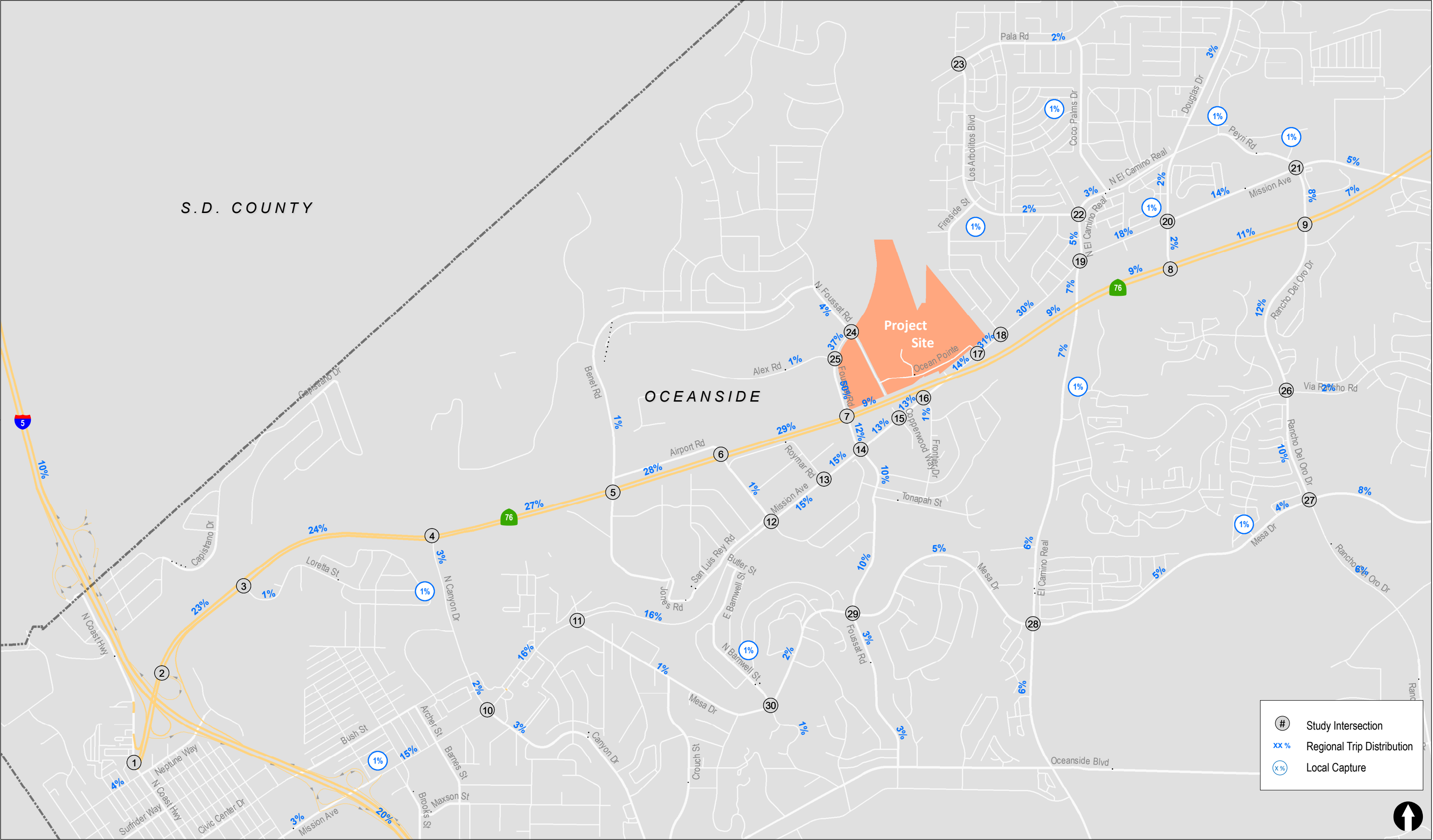
The distribution of Project traffic was determined based on information in the previously approved TIA for the Pavilion at Oceanside project as well as the locations of the proposed access points, traffic patterns observed from the existing traffic counts, and the proximity of the project to surrounding freeways, attractions, and residential and commercial areas. The trip distribution was developed in consultation with City staff.

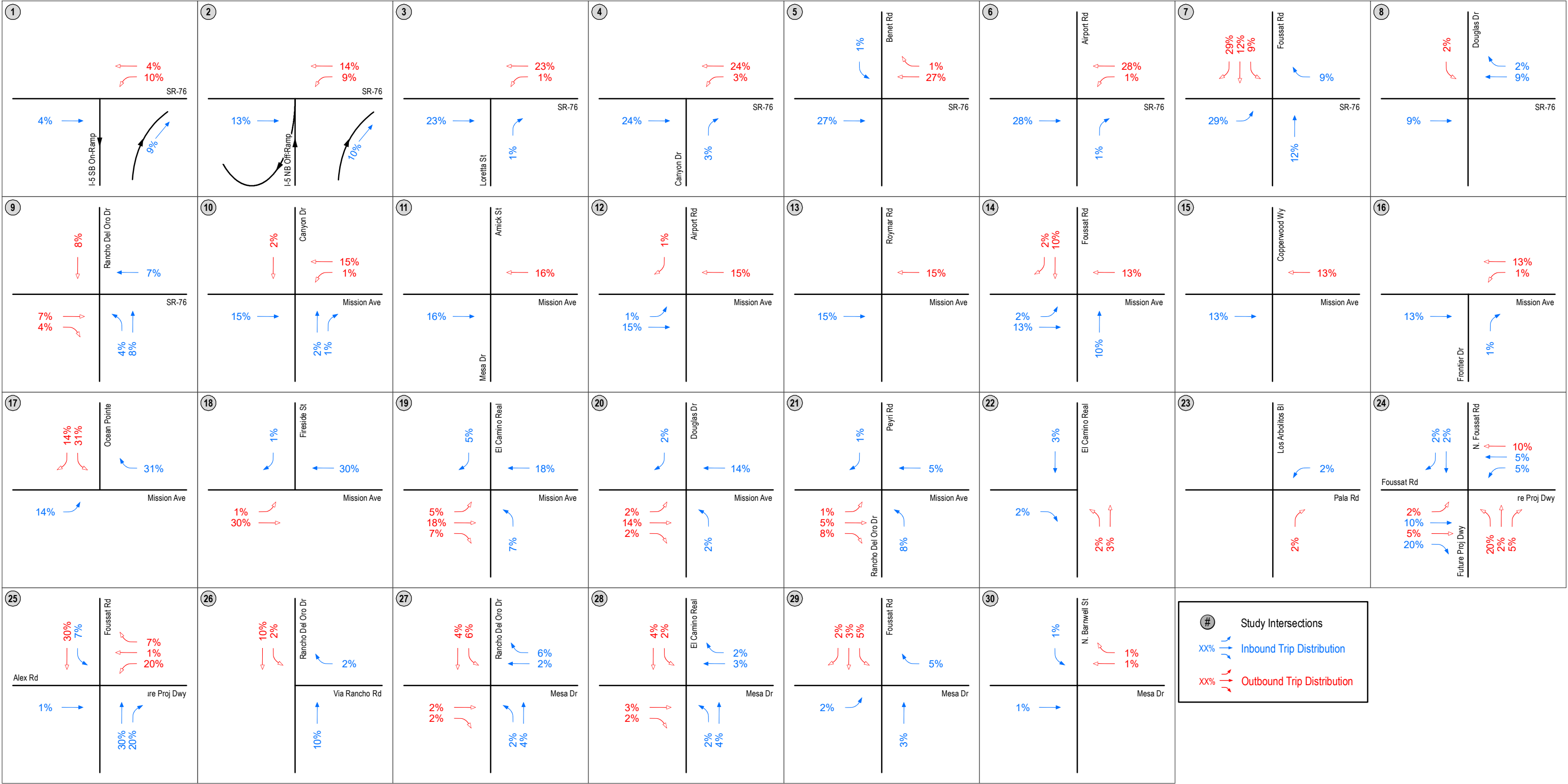
Figures 7-1a and **7-1b** show the distribution of Project trips to the study street segments and intersections, respectively.

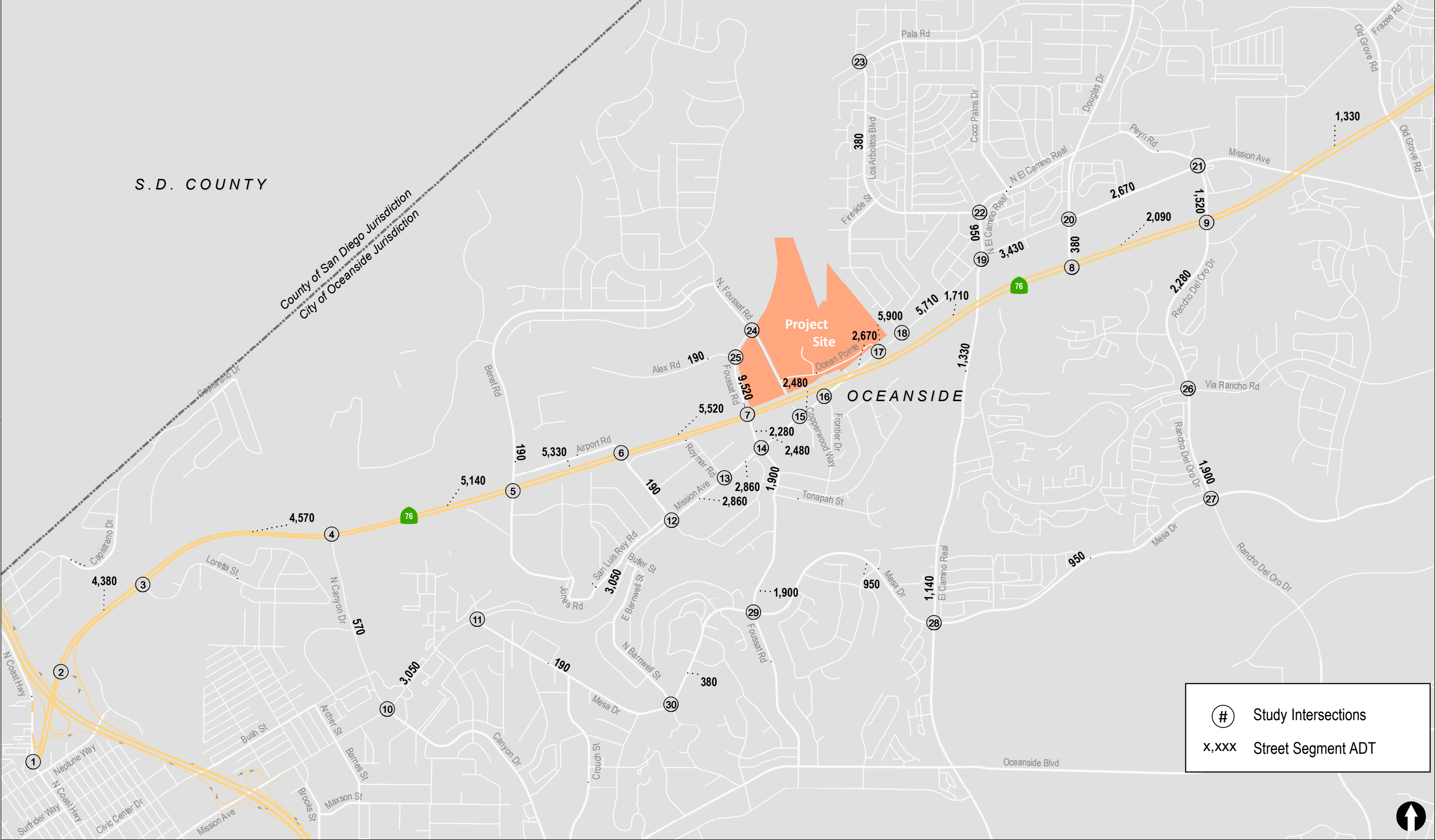
Once the traffic distribution was established, the Project-generated traffic was assigned to the adjacent street system. It should be noted that the Project's Weekday and Weekend distribution was assumed to be the same.

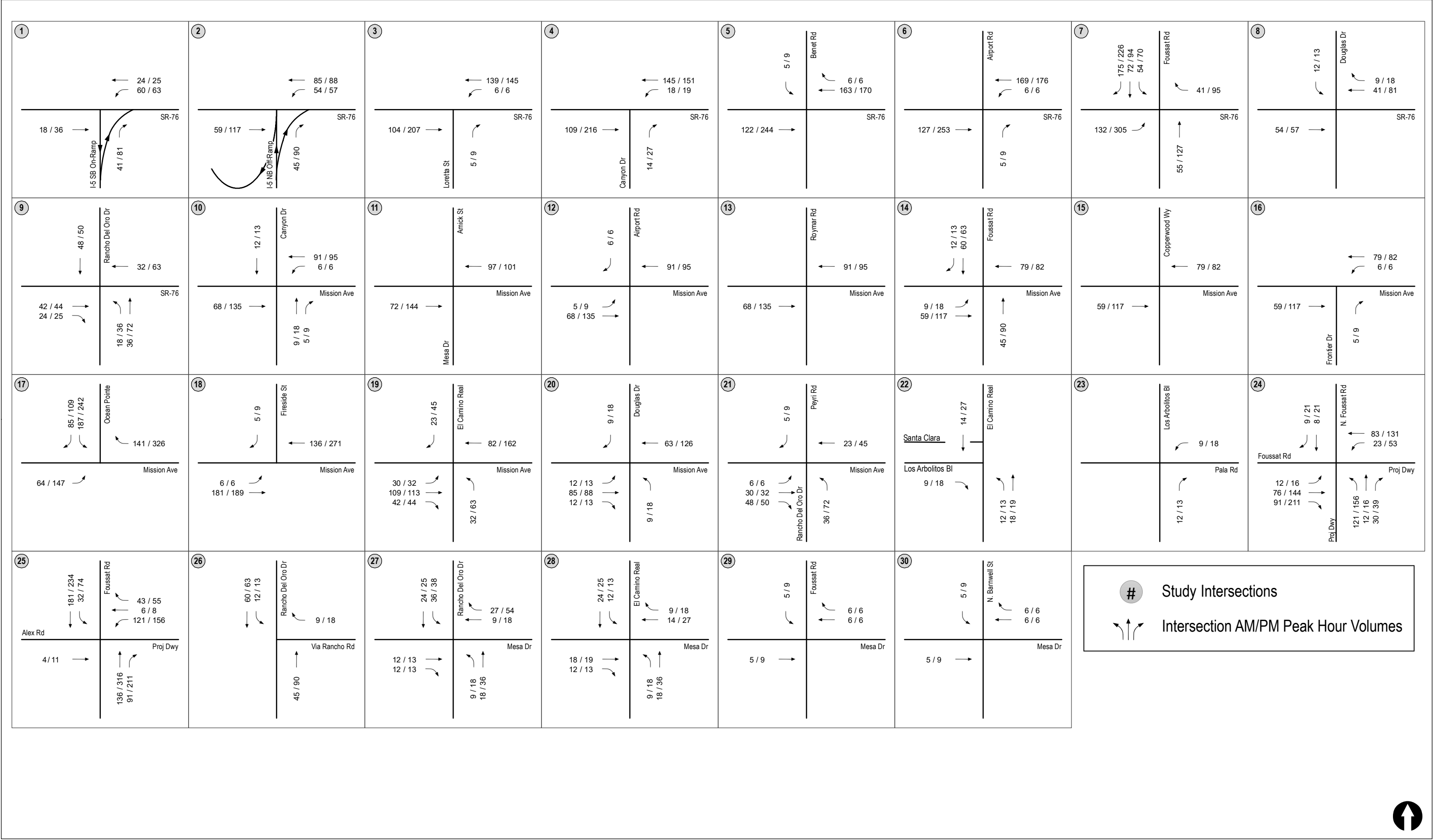
Figures 7-2a and **7-2b** depict the Weekday Project daily traffic volumes and AM / PM peak hour traffic volumes, respectively.

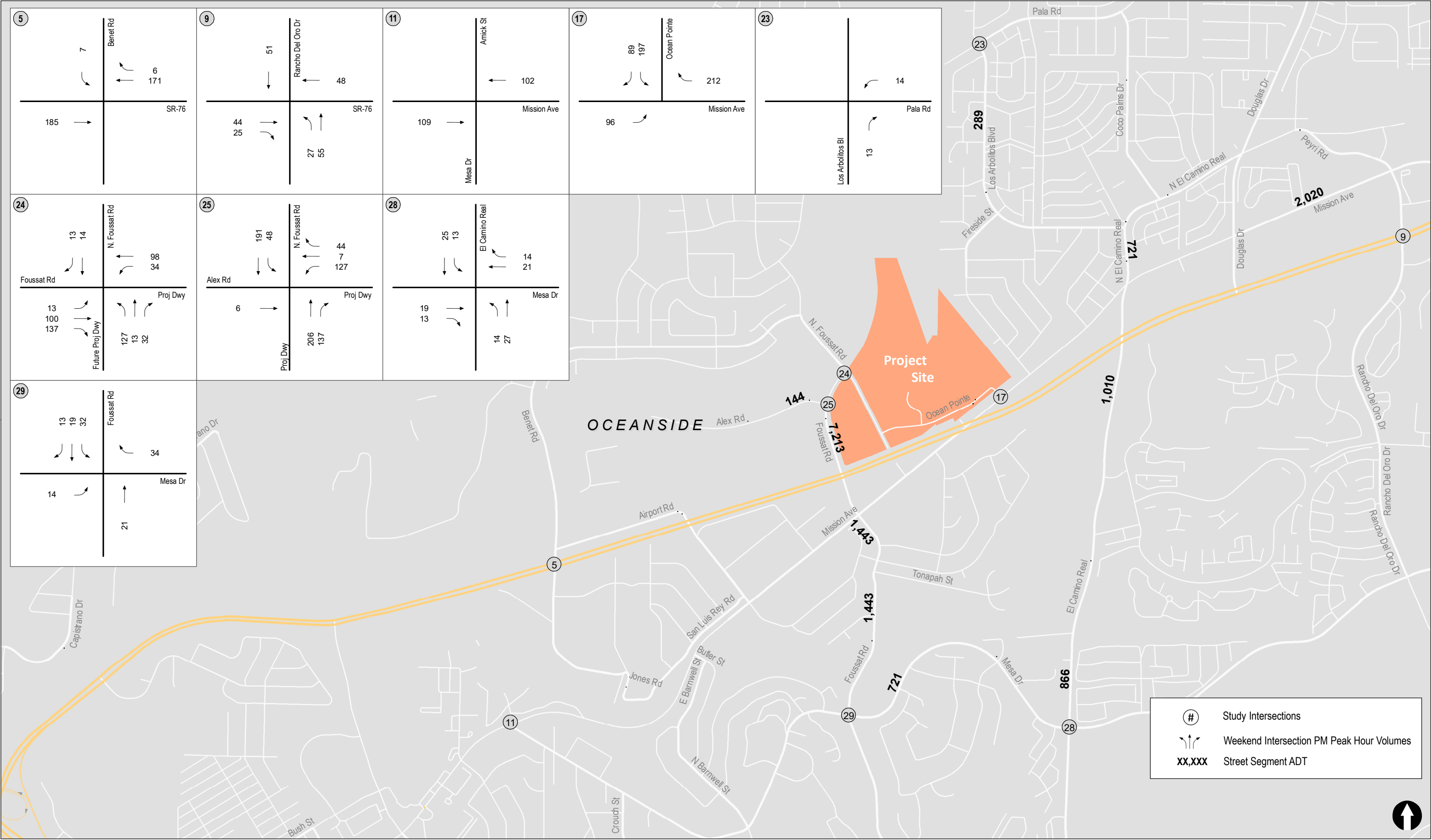
Figure 7-3 depicts the Weekend Project daily traffic and peak hour traffic volumes.











8.0 ANALYSIS OF WEEKDAY EXISTING + PROJECT SCENARIOS

The following section presents the analysis of Weekday Existing study area locations with the addition of Project traffic. **Figures 8-1a** and **8-1b** depict the Weekday Existing + Project daily traffic volumes and AM / PM peak hour traffic volumes, respectively.

8.1 Existing + Project

8.1.1 Peak Hour Intersection Operations

Table 8-1 summarizes the Weekday Existing intersection operations. As seen in **Table 8-1**, with the addition of Project traffic, the study intersections are calculated to continue to operate acceptably at LOS D or better, with the exception of the following:

- Intersection #4. SR 76 / Canyon Drive – LOS F during the PM peak hour
- Intersection #5. SR 76 / Benet Road – LOS E during the AM and LOS F during the PM peak hours
- Intersection #6. SR 76 / Airport Road – LOS F during the AM and LOS E during the PM peak hours
- Intersection #7. SR 76 / Foussat Road – LOS F during the AM and PM peak hours
- Intersection #8. SR 76 / Douglas Drive – LOS F during the AM peak hour
- Intersection #9. SR 76 / Rancho Del Oro Drive – LOS E during the AM and LOS F during the PM peak hours
- Intersection #24. Foussat Road / Foussat Road (North) – LOS F during the AM and PM peak hours
- Intersection #25. Foussat Road / Alex Road – LOS F during the AM and PM peak hours

Based on the City of Oceanside's traffic thresholds and methodology summarized in *Section 4*, substantial LOS related effects are calculated at the intersections listed above since the Project-related increase in delay exceeds the LOS standard threshold maximum.

Appendix F contains the Weekday Existing + Project intersection analysis worksheets.

8.1.2 Daily Street Segment Operations

Table 8-2 summarizes the Weekday Existing roadway segment operations. As seen in **Table 8-2**, with the addition of Project traffic, the study segments are calculated to continue to operate acceptably at LOS D or better, with the exception of the following:

- Segment #21. Foussat Road: N. Alex Road to SR 76 – LOS F

Based on the City of Oceanside's traffic thresholds and methodology summarized in *Section 4*, a substantial LOS related effect is calculated at the street segment listed above since operations along this segment are calculated to degrade from an acceptable LOS C to LOS F with the addition of Project trips.

TABLE 8-1
WEEKDAY EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Delay Δ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
1. I-5 Southbound Ramps / SR 76	Signal	AM PM	14.8 20.0	B B	15.4 26.8	B C	0.6 6.8	No
2. I-5 Northbound Ramps / SR 76	Signal	AM PM	14.3 16.6	B B	15.6 19.1	B B	1.3 2.5	No
3. SR 76 / Loretta Street	Signal	AM PM	22.8 8.5	C A	23.3 10.1	C B	0.5 1.6	No
4. SR 76 / Canyon Drive	Signal	AM PM	13.4 92.0	B F	15.7 122.7	B F	2.3 30.7	Yes
5. SR 76 / Benet Road	Signal	AM PM	37.3 76.9	D E	56.1 103.9	E F	18.8 27.0	Yes
6. SR 76 / Airport Road	Signal	AM PM	102.2 46.0	F D	129.5 66.4	F E	27.3 20.4	Yes
7. SR 76 / Foussat Road	Signal	AM PM	162.9 119.2	F F	162.9 141.7	F F	0.0 22.5	Yes
8. SR 76 / Douglas Drive	Signal	AM PM	215.7 33.0	F C	224.1 33.0	F C	8.4 0.0	Yes
9. SR 76 / Rancho Del Oro Drive	Signal	AM PM	74.0 87.8	E F	79.2 94.7	E F	5.2 6.9	Yes
10. Mission Avenue / Canyon Drive	Signal	AM PM	33.8 32.0	C C	41.8 33.5	D D	8.0 1.5	No
11. Mission Avenue / Mesa Drive / Amick Street	Signal	AM PM	9.4 9.2	A A	9.4 9.2	B A	0.0 0.0	No
12. Mission Avenue / Airport Road	Signal	AM PM	8.5 10.4	A B	8.9 11.1	B B	0.4 0.7	No
13. Mission Avenue / Roymar Road	Signal	AM PM	5.1 7.4	A A	5.1 7.4	B B	0.0 0.0	No
14. Mission Avenue / Foussat Road	Signal	AM PM	10.0 34.2	A C	11.6 37.0	C C	1.6 2.8	No
15. Mission Ave / Copperwood Way	Signal	AM PM	6.6 26.8	A C	6.6 27.5	A C	0.0 0.7	No
16. Mission Avenue / Frontier Drive	Signal	AM PM	5.2 4.4	A A	5.2 4.4	A A	0.0 0.0	No

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TABLE 8-1
WEEKDAY EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Delay Δ ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
Continued from Previous Page								
17. Mission Avenue / Ocean Pointe	Signal	AM PM	1.2 0.3	A A	8.8 10.6	B D	7.6 10.3	No
18. Mission Avenue / Fireside Street	Signal	AM PM	6.3 14.3	A B	6.3 14.3	B B	0.0 0.0	No
19. Mission Avenue / El Camino Real	Signal	AM PM	29.6 37.1	C D	32.3 47.5	C D	2.7 10.4	No
20. Mission Avenue / Douglas Drive	Signal	AM PM	16.7 17.0	B B	17.1 17.8	B B	0.4 0.8	No
21. Mission Ave / Rancho Del Oro Dr	Signal	AM PM	36.3 35.4	D D	42.3 47.2	D D	6.0 11.8	No
22. El Camino Real / Los Arbolitos Boulevard	Signal	AM PM	24.3 11.8	C B	24.3 12.3	C B	0.0 0.5	No
23. Pala Road / Los Arbolitos Boulevard	MSSC	AM PM	12.3 9.8	B A	12.8 10.1	B B	0.5 0.3	No
24. Foussat Rd / Foussat Road (North)	MSSC	AM PM	11.3 0.0	B A	62.5 130.9	F F	51.2 130.9	Yes
25. Foussat Road / Alex Road	MSSC	AM PM	10.4 9.3	B A	58.2 72.5	F F	47.8 63.2	Yes
26. Rancho Del Oro Drive / Via Rancho Road	Signal	AM PM	28.4 8.5	C A	33.4 9.1	C A	5.0 0.6	No
27. Rancho Del Oro Drive / Mesa Drive	Signal	AM PM	35.7 26.2	D C	39.4 29.4	D C	3.7 3.2	No
28. Mesa Drive / El Camino Real	Signal	AM PM	42.3 34.9	D C	45.5 41.1	D D	3.2 6.2	No
29. Mesa Drive / Foussat Road	AWSC	AM PM	14.3 12.2	B B	14.8 12.6	B B	0.5 0.4	No
30. Mesa Drive / Barnwell Street	AWSC	AM PM	9.2 9.2	A A	9.3 9.4	A A	0.1 0.2	No

Footnotes:

- Average delay expressed in seconds per vehicle.
- Level of Service.
- Δ denotes the increase in delay due to Project.
- MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- AWSC = All Way Stop-Controlled intersection. Average delay reported.

General Notes:

- Bold** typeface and **shading** indicate a substantial effect.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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 8-2
WEEKDAY EXISTING + PROJECT STREET SEGMENT OPERATIONS

Street Segment	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Δ ^e	Improvement Required?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
SR 76									
1. I-5 Ramps to Loretta Street	70,000	52,020	C	0.743	56,400	D	0.806	0.063	No
2. Loretta Street to Canyon Drive	60,000	45,900	C	0.765	50,470	D	0.841	0.076	No
3. Canyon Drive to Benet Road	60,000	47,430	C	0.791	52,570	D	0.876	0.086	No
4. Benet Road to Airport Road	60,000	43,860	C	0.731	49,190	C	0.820	0.089	No
5. Airport Road to Foussat Road	60,000	48,450	C	0.808	53,970	D	0.900	0.092	No
6. Foussat Road to Douglas Drive	60,000	48,450	C	0.808	50,160	D	0.836	0.029	No
7. Douglas Drive to Rancho de Oro Drive	60,000	47,430	C	0.791	49,520	C	0.825	0.035	No
8. Rancho Del Oro Drive to Old Grove Road	60,000	37,230	C	0.621	38,560	C	0.643	0.022	No
Canyon Drive									
9. SR 76 to Mission Avenue	25,000	4,240	A	0.170	4,810	A	0.192	0.023	No
Mission Avenue									
10. Canyon Drive to Mesa Drive	40,000	23,250	C	0.581	26,300	C	0.658	0.076	No
11. Mesa Drive to Airport Road	40,000	23,250	C	0.581	26,300	C	0.658	0.076	No
12. Airport Road to Roymar Road	40,000	21,750	C	0.544	24,610	C	0.615	0.072	No
13. Roymar Road to Foussat Road	40,000	22,850	C	0.571	25,710	C	0.643	0.072	No
14. Foussat Road to Copperwood Way	40,000	22,840	C	0.571	25,320	C	0.633	0.062	No
15. Coppewood Way to Frontier Drive	40,000	22,840	C	0.571	25,320	C	0.633	0.062	No
16. Frontier Drive to Ocean Pointe	40,000	23,690	C	0.592	26,360	C	0.659	0.067	No
17. Ocean Pointe to Fireside Street	40,000	23,690	C	0.592	29,590	C	0.740	0.148	No
18. Fireside Street to El Camino Real	40,000	23,050	C	0.576	28,760	C	0.719	0.143	No
19. El Camino Real to Douglas Drive	40,000	17,820	B	0.446	21,250	C	0.531	0.086	No
20. Douglas Drive to Rancho Del Oro Drive	40,000	20,090	B	0.502	22,760	C	0.569	0.067	No
Foussat Road									
21. Alex Road to SR 76	10,000	6,490	C	0.649	16,010	F	1.601	0.952	Yes
22. SR 76 to Mission Avenue	25,000	5,280	A	0.211	7,560	A	0.302	0.091	No
23. Mission Avenue to Tonopah Street	10,000	5,580	C	0.558	7,480	C	0.748	0.190	No
24. Tonopah Street to Mesa Drive	10,000	6,810	C	0.681	8,710	D	0.871	0.190	No
<i>(Continued on Next Page)</i>									

TABLE 8-2
WEEKDAY EXISTING + PROJECT STREET SEGMENT OPERATIONS

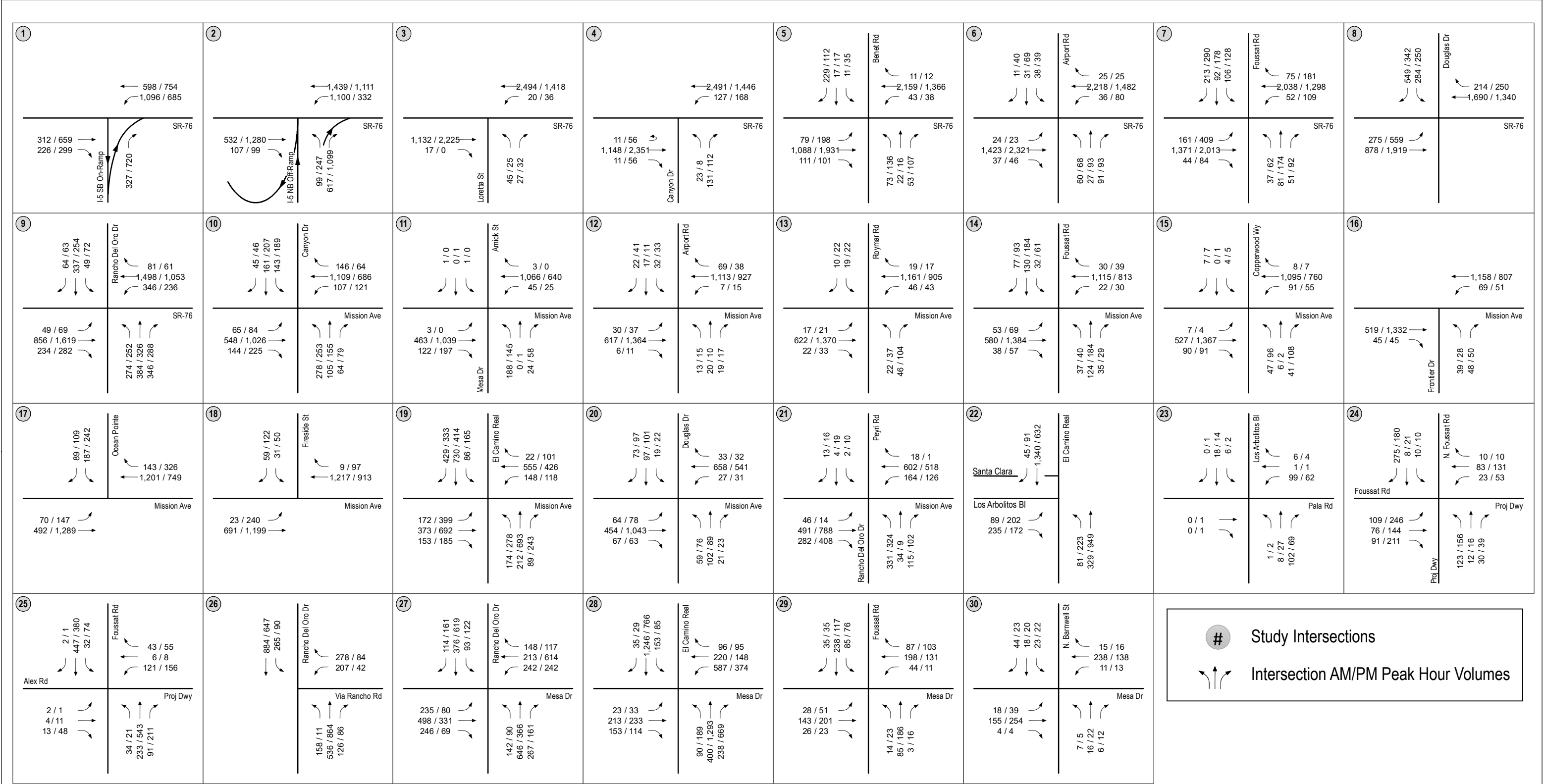
Street Segment	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Δ ^e	Improvement Required?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
<i>(Continued from Previous Page)</i>									
El Camino Real									
25. Los Arbolitos Boulevard to Mission Avenue	40,000	25,070	C	0.627	26,020	C	0.651	0.024	No
26. Mission Avenue to Vista Oceana	40,000	24,970	C	0.624	26,300	C	0.658	0.033	No
27. Vista Oceana to Mesa Drive	40,000	25,430	C	0.636	26,570	C	0.664	0.029	No
Rancho Del Oro Drive									
28. Mission Avenue to SR 76	40,000	9,850	A	0.246	11,370	A	0.284	0.038	No
29. SR 76 to Via Rancho Road	40,000	18,520	B	0.463	20,800	B	0.520	0.057	No
30. Via Rancho Road to Mesa Drive	40,000	18,010	B	0.450	19,910	B	0.498	0.048	No
Mesa Drive									
31. Mission Avenue to Barnwell Street	10,000	5,710	C	0.571	5,900	C	0.590	0.019	No
32. Barnwell Street to Foussat Road	10,000	5,060	B	0.506	5,440	B	0.544	0.038	No
33. Foussat Road to El Camino Real	15,000	5,770	B	0.385	6,720	B	0.448	0.063	No
34. El Camino Real to Rancho Del Oro Drive	30,000	17,120	C	0.571	18,070	C	0.602	0.032	No
Douglas Drive									
35. Mission Avenue to SR 76	40,000	20,140	B	0.504	20,520	B	0.513	0.010	No
Los Arbolitos Boulevard									
36. Pala Road to El Camino Real	15,000	6,240	B	0.416	6,620	B	0.441	0.025	No
Alex Road									
37. Eddy Jones Way to Foussat Road	10,000	1,500	A	0.150	1,690	A	0.169	0.019	No
Benet Road									
38. SR 76 to Eddy Jones Way	10,000	4,890	B	0.489	5,080	B	0.508	0.019	No
Airport Road									
39. SR 76 to Mission Avenue	10,000	3,060	A	0.306	3,250	A	0.325	0.019	No

Footnotes:

- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity ratio.
- e. Δ denotes a Project-induced increase in the Volume to Capacity ratio.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect.



9.0 ANALYSIS OF WEEKDAY NEAR-TERM SCENARIOS

The following section presents the Weekday near-term cumulative analysis of existing study area locations without and with Project traffic.

Figures 9-1a and **9-1b** depict the Weekday Existing + Cumulative Projects daily traffic volumes and AM / PM peak hour traffic volumes, respectively. **Figures 9-2a** and **9-2b** depict the Weekday Existing + Cumulative Projects + Project daily traffic volumes and AM / PM peak hour traffic volumes, respectively.

9.1 Existing + Near-Term Cumulative Projects

9.1.1 Peak Hour Intersection Operations

Table 9-1 summarizes the peak hour intersection operations for the Weekday Existing + Near-Term Cumulative Projects condition. As seen in **Table 9-1**, with the addition of cumulative projects traffic, the following intersections are calculated to operate at LOS E or F:

- Intersection #4. SR 76 / Canyon Road – LOS F during the PM peak hour
- Intersection #5. SR 76 / Benet Road – LOS F during the PM peak hour
- Intersection #6. SR 76 / Airport Road – LOS F during the AM peak hour
- Intersection #7. SR76 / Foussat Road – LOS F during the AM and PM peak hours
- Intersection #8. SR 76 / Douglas Drive – LOS F during the AM peak hour
- Intersection #9. SR76 / Rancho Del Oro Drive – LOS F during the AM and PM peak hours

Appendix G contains the peak hour intersection analysis worksheets for the Weekday Existing + Near-Term Cumulative Projects condition.

9.1.2 Daily Street Segment Operations

Table 9-2 summarizes the segment operations in the study area for the Weekday Existing + Near-Term Cumulative Projects condition. As seen in **Table 9-2**, with the addition of cumulative projects traffic, all study segments are calculated to operate at LOS D or better.

9.2 Existing + Near-Term Cumulative Projects + Project

9.2.1 Peak Hour Intersection Operations

Table 9-1 summarizes the peak hour intersection operations for Weekday Existing + Near-Term Cumulative Projects + Project conditions. As seen in **Table 9-1**, with the addition of cumulative projects and Project traffic, the following intersections are calculated to operate at LOS E or F:

- Intersection #4. SR 76 / Canyon Drive – LOS F during the PM peak hour
- Intersection #5. SR 76 / Benet Road – LOS E during the AM and LOS F during the peak hours
- Intersection #6. SR 76 / Airport Road – LOS F during the AM and LOS E during the PM peak hours

- Intersection #7. SR76 / Foussat Road – LOS F during the AM and PM peak hours
- Intersection #8. SR 76 / Douglas Drive – LOS F during the AM peak hour
- Intersection #9. SR76 / Rancho Del Oro Drive – LOS F during the AM and PM peak hours
- Intersection #21. Mission Avenue / Rancho Del Oro Drive – LOS E during the AM peak hour
- Intersection #24. Foussat Road / Foussat Road (North) – LOS F during the AM and PM peak hours
- Intersection #25. Foussat Road / Alex Road – LOS F during the AM and PM peak hours

Based on the City of Oceanside’s traffic thresholds and methodology summarized in *Section 4*, substantial LOS related effects are calculated at the intersections listed above since the Project-related increase in delay exceeds the LOS standard threshold maximum.

Appendix H contains the peak hour intersection analysis worksheets for the Weekday Existing + Near-Term Cumulative Projects + Project condition.

9.2.2 *Daily Street Segment Operations*

Table 9–2 summarizes the key segment operations in the study area for the Weekday Existing + Near-Term Cumulative Projects + Project conditions. As seen in *Table 9–2*, with the addition of cumulative projects and Project traffic, the following street segments are calculated to operate at LOS E or F:

- Segment #5. SR 76: Airport Road to Foussat Road – LOS E
- Segment #21. Foussat Road: Alex Road to SR 76 – LOS F

Based on the City of Oceanside’s traffic thresholds and methodology summarized in *Section 4*, substantial LOS related effects are calculated at the street segments listed above since operations along these segments are calculated to degrade from an acceptable LOS D or better to LOS E/F with the addition of Project trips.

TABLE 9-1
WEEKDAY NEAR-TERM CUMULATIVE INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Delay Δ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
1. I-5 Southbound Ramps / SR 76	Signal	AM PM	15.9 20.8	B C	15.9 28.2	B C	0.0 7.4	No
2. I-5 Northbound Ramps / SR 76	Signal	AM PM	14.5 17.0	B B	15.9 19.7	B B	1.4 2.7	No
3. SR 76 / Loretta Street	Signal	AM PM	23.1 8.6	C A	23.9 10.3	C B	0.8 1.7	No
4. SR 76 / Canyon Drive	Signal	AM PM	13.8 95.8	B F	16.8 126.5	B F	3.0 30.7	Yes
5. SR 76 / Benet Road	Signal	AM PM	46.9 88.5	D F	67.9 116.7	E F	21.0 28.2	Yes
6. SR 76 / Airport Road	Signal	AM PM	113.0 51.3	F D	140.7 78.2	F E	27.7 26.9	Yes
7. SR 76 / Foussat Road	Signal	AM PM	174.1 118.4	F F	177.1 140.2	F F	3.0 21.8	Yes
8. SR 76 / Douglas Drive	Signal	AM PM	231.6 31.3	F C	239.9 31.4	F C	8.3 0.1	Yes
9. SR 76 / Rancho Del Oro Drive	Signal	AM PM	83.8 92.8	F F	89.1 100.1	F F	5.3 7.3	Yes
10. Mission Avenue / Canyon Drive	Signal	AM PM	41.2 32.9	D C	43.2 33.5	D C	2.0 0.6	No
11. Mission Avenue / Mesa Drive Amick Street	Signal	AM PM	9.4 9.2	A A	9.5 9.3	A A	0.1 0.1	No
12. Mission Avenue / Airport Road	Signal	AM PM	8.5 10.3	A B	8.8 11.0	A B	0.3 0.7	No
13. Mission Avenue / Roymar Road	Signal	AM PM	10.3 18.6	B B	10.4 18.7	A B	0.1 0.1	No
14. Mission Avenue / Foussat Road	Signal	AM PM	10.4 35.0	B C	11.8 38.2	B D	1.4 3.2	No
15. Mission Ave / Copperwood Way	Signal	AM PM	6.4 26.6	A C	6.5 27.3	A C	0.1 0.7	No
16. Mission Avenue / Frontier Drive	Signal	AM PM	5.0 4.3	A A	5.1 4.3	A A	0.1 0.0	No

Continued on Next Page

TABLE 9-1
WEEKDAY NEAR-TERM CUMULATIVE INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Delay Δ ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
Continued from Previous Page								
17. Mission Avenue / Ocean Pointe	Signal	AM PM	1.2 0.3	A A	8.6 10.4	A B	7.4 10.1	No
18. Mission Avenue / Fireside Street	Signal	AM PM	6.3 14.1	A B	6.3 14.2	A B	0.0 0.1	No
19. Mission Avenue / El Camino Real	Signal	AM PM	30.4 39.2	C D	33.6 52.0	C D	3.2 12.8	No
20. Mission Avenue / Douglas Drive	Signal	AM PM	17.1 17.5	B B	17.5 18.3	B B	0.4 0.8	No
21. Mission Ave / Rancho Del Oro Dr	Signal	AM PM	37.9 37.7	D D	64.1 50.6	E D	26.2 12.9	Yes
22. El Camino Real / Los Arbolitos Boulevard	Signal	AM PM	22.7 13.8	C B	22.8 13.5	C B	0.1 0.5	No
23. Pala Road / Los Arbolitos Boulevard	MSSC	AM PM	13.9 10.4	B B	14.5 10.8	B B	0.6 0.4	No
24. Foussat Rd / Foussat Road (North)	MSSC	AM PM	11.4 11.4	B B	68.9 143.9	F F	57.5 132.5	Yes
25. Foussat Road / Alex Road	MSSC	AM PM	10.5 9.4	B A	61.5 76.0	F F	51.0 66.6	Yes
26. Rancho Del Oro Drive / Via Rancho Road	Signal	AM PM	28.5 8.5	C A	33.6 9.1	C A	5.1 0.6	No
27. Rancho Del Oro Drive / Mesa Drive	Signal	AM PM	38.4 31.9	D C	42.8 37.6	D D	4.4 5.7	No
28. Mesa Drive / El Camino Real	Signal	AM PM	43.6 38.2	D D	47.0 45.1	D D	3.4 6.9	No
29. Mesa Drive / Foussat Road	AWSC	AM PM	14.7 12.9	B B	15.3 13.7	C B	0.6 0.8	No
30. Mesa Drive / Barnwell Street	AWSC	AM PM	9.3 9.4	A A	9.4 9.6	A A	0.1 0.2	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes the increase in delay due to Project.
- d. MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- e. AWSC = All Way Stop-Controlled intersection. Average delay reported.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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
WEEKDAY NEAR-TERM CUMULATIVE STREET SEGMENT OPERATIONS

Street Segment	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Δ ^e	Improvement Required?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
SR 76									
1. I-5 Ramps to Loretta Street	70,000	54,280	C	0.775	58,660	D	0.838	0.063	No
2. Loretta Street to Canyon Drive	60,000	48,160	C	0.803	52,730	D	0.879	0.076	No
3. Canyon Drive to Benet Road	60,000	49,690	C	0.828	54,830	D	0.914	0.086	No
4. Benet Road to Airport Road	60,000	46,120	C	0.769	51,450	D	0.858	0.089	No
5. Airport Road to Foussat Road	60,000	50,710	D	0.845	56,230	E	0.937	0.092	Yes
6. Foussat Road to Douglas Drive	60,000	50,710	D	0.845	52,420	D	0.874	0.029	No
7. Douglas Drive to Rancho de Oro Drive	60,000	49,210	C	0.820	51,300	D	0.855	0.035	No
8. Rancho Del Oro Drive to Old Grove Road	60,000	39,090	C	0.652	40,420	C	0.674	0.022	No
Canyon Drive									
9. SR 76 to Mission Avenue	25,000	4,240	A	0.170	4,810	A	0.192	0.022	No
Mission Avenue									
10. Canyon Drive to Mesa Drive	40,000	24,350	C	0.609	27,400	C	0.685	0.076	No
11. Mesa Drive to Airport Road	40,000	24,350	C	0.609	27,400	C	0.685	0.076	No
12. Airport Road to Roymar Road	40,000	22,850	C	0.571	25,710	C	0.643	0.072	No
13. Roymar Road to Foussat Road	40,000	25,470	C	0.637	28,330	C	0.708	0.071	No
14. Foussat Road to Copperwood Way	40,000	23,940	C	0.599	26,420	C	0.661	0.062	No
15. Coppewood Way to Frontier Drive	40,000	23,940	C	0.599	26,420	C	0.661	0.062	No
16. Frontier Drive to Ocean Pointe	40,000	24,790	C	0.620	27,460	C	0.687	0.067	No
17. Ocean Pointe to Fireside Street	40,000	24,790	C	0.620	30,690	D	0.767	0.147	No
18. Fireside Street to El Camino Real	40,000	24,150	C	0.604	29,860	C	0.747	0.143	No
19. El Camino Real to Douglas Drive	40,000	18,160	B	0.454	21,590	C	0.540	0.086	No
20. Douglas Drive to Rancho Del Oro Drive	40,000	20,830	B	0.521	23,500	C	0.588	0.067	No
Foussat Road									
21. Alex Road to SR 76	10,000	6,740	C	0.674	16,260	F	1.626	0.952	Yes
22. SR 76 to Mission Avenue	25,000	7,430	A	0.297	9,710	B	0.388	0.091	No
23. Mission Avenue to Tonopah Street	10,000	5,830	C	0.583	7,730	D	0.773	0.190	No
24. Tonopah Street to Mesa Drive	10,000	7,060	C	0.706	8,960	D	0.896	0.190	No

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TABLE 9-2
WEEKDAY NEAR-TERM CUMULATIVE STREET SEGMENT OPERATIONS

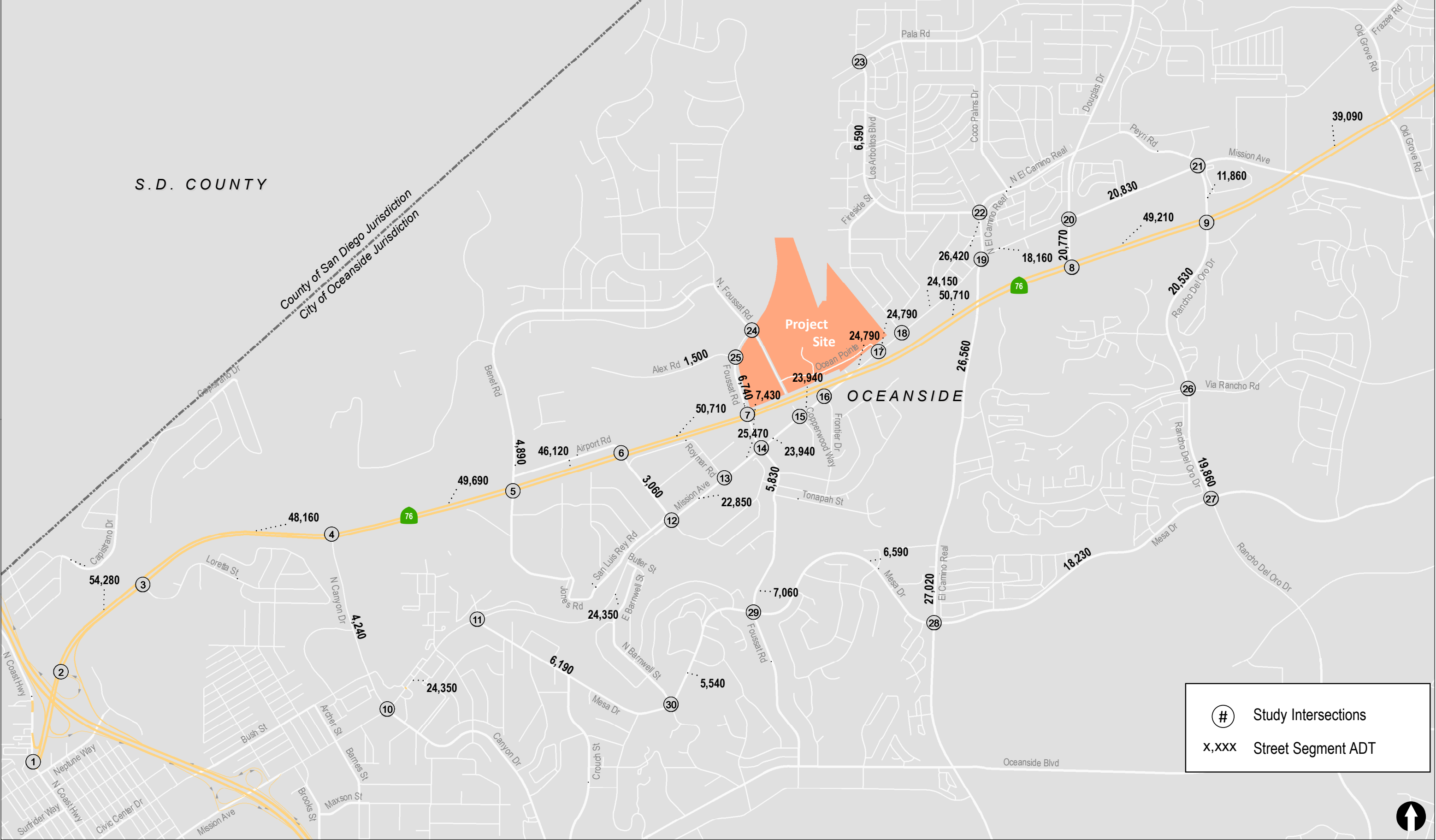
Street Segment	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Δ ^e	Improvement Required?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
Continued from Previous Page									
El Camino Real									
25. Los Arbolitos Boulevard to Mission Avenue	40,000	26,420	C	0.661	27,370	C	0.684	0.023	No
26. Mission Avenue to Vista Oceana	40,000	26,560	C	0.664	27,890	C	0.697	0.033	No
27. Vista Oceana to Mesa Drive	40,000	27,020	C	0.676	28,160	C	0.704	0.028	No
Rancho Del Oro Drive									
28. Mission Avenue to SR 76	40,000	11,860	A	0.297	13,380	A	0.335	0.038	No
29. SR 76 to Via Rancho Road	40,000	20,530	B	0.513	22,810	C	0.570	0.057	No
30. Via Rancho Road to Mesa Drive	40,000	19,860	B	0.497	21,760	C	0.544	0.047	No
Mesa Drive									
31. Mission Avenue to Barnwell Street	10,000	6,190	C	0.619	6,380	C	0.638	0.019	No
32. Barnwell Street to Foussat Road	10,000	5,540	C	0.554	5,920	C	0.592	0.038	No
33. Foussat Road to El Camino Real	15,000	6,590	B	0.439	7,540	C	0.503	0.064	No
34. El Camino Real to Rancho Del Oro Drive	30,000	18,230	C	0.608	19,180	C	0.639	0.031	No
Douglas Drive									
35. Mission Avenue to SR 76	40,000	20,770	B	0.519	21,150	C	0.529	0.010	No
Los Arbolitos Boulevard									
36. Pala Road to El Camino Real	15,000	6,590	B	0.439	6,970	B	0.465	0.026	No
Alex Road									
37. Eddy Jones Way to Foussat Road	10,000	1,500	A	0.150	1,690	A	0.169	0.019	No
Benet Road									
38. SR 76 to Eddy Jones Way	10,000	4,890	B	0.489	5,080	B	0.508	0.019	No
Airport Road									
39. SR 76 to Mission Avenue	10,000	3,060	A	0.306	3,250	A	0.325	0.019	No

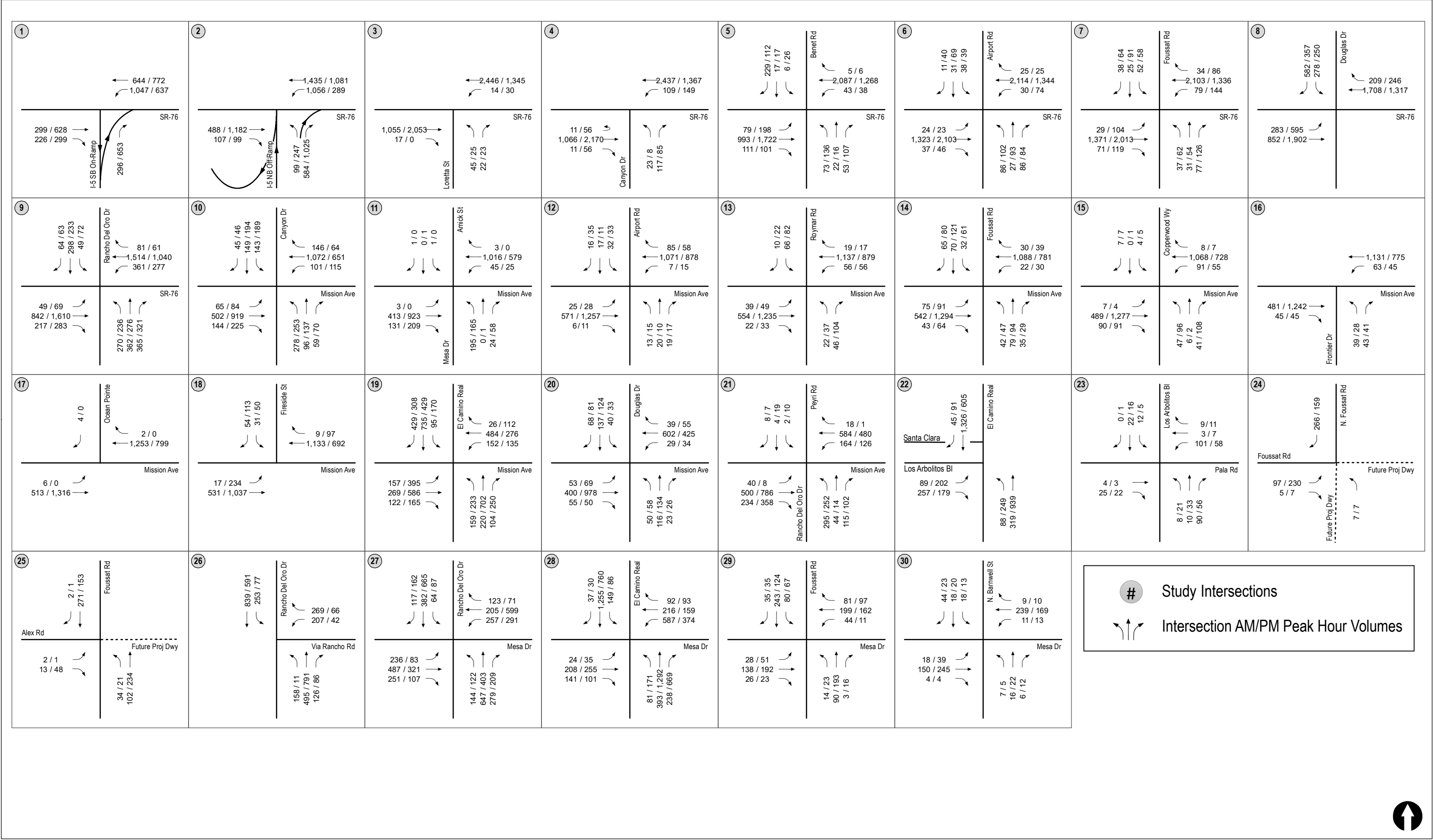
Footnotes:

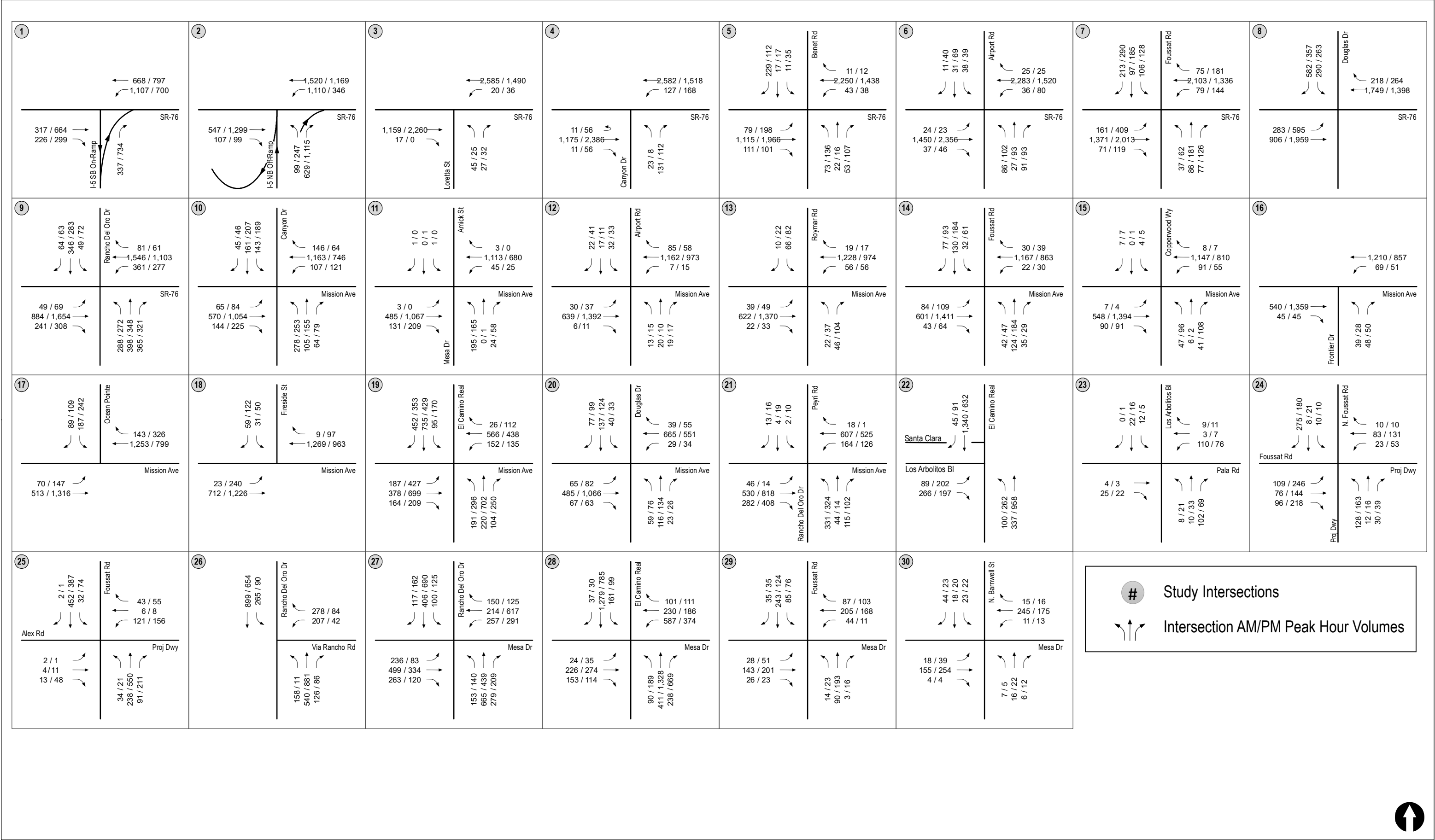
- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity ratio.
- e. Δ denotes a Project-induced increase in the Volume to Capacity ratio.

General Notes:

Bold typeface and **shading** indicate a substantial effect.







10.0 ANALYSIS OF WEEKEND CONDITIONS

The following supplementary analysis was conducted in order to determine if the Project would have a substantial effect to the circulation system during the Weekend.

10.1 Weekend Existing + Project

Figure 10–1 depicts the Weekend Existing + Project daily traffic and peak hour traffic volumes.

10.1.1 Peak Hour Intersection Operations

Table 10–1 summarizes the Weekend Existing intersection operations. As seen in *Table 10–1*, with the addition of Project traffic, the study intersections are calculated to continue to operate acceptably at LOS D, with the exception of the following:

- Intersection #24. Foussat Road / Foussat Road (North) – LOS F during the Weekend peak hour
- Intersection #25. Foussat Road / Alex Road – LOS F during the Weekend peak hour

Based on the City of Oceanside’s traffic thresholds and methodology summarized in *Section 4*, substantial LOS related effects are calculated at the intersections listed above since the Project-related increase in delay exceeds the LOS standard threshold maximum. It should be noted that substantial effects were also identified at these intersections under Weekday conditions. No additional intersections were calculated to be substantially affected under Weekend conditions as compared to Weekday conditions.

Appendix D contains the Weekend Existing + Project intersection analysis worksheets.

10.1.2 Daily Street Segment Operations

Table 10–2 summarizes the Weekend Existing roadway segment operations. As seen in *Table 10–2*, with the addition of Project traffic, the study segments are calculated to continue to operate acceptably at LOS D or better with the exception of the following:

- Segment #21. Foussat Road: N. Alex Road to SR 76 – LOS F

Based on the City of Oceanside’s traffic thresholds and methodology summarized in *Section 4*, a substantial LOS related effect is calculated at the street segment listed above since operations along this segment are calculated to degrade from an acceptable LOS C to LOS F with the addition of Project trips. It should be noted that a substantial effect was also identified at this street segment under Weekday conditions. No additional street segments were calculated to be substantially affected under Weekend conditions as compared to Weekday conditions.

10.2 Weekend Existing + Near-Term Cumulative Projects

Figure 10–2 depicts the Weekend Existing + Cumulative Projects daily traffic and peak hour traffic volumes.

10.2.1 Peak Hour Intersection Operations

Table 10–3 summarizes the peak hour intersection operations for the Weekend Existing + Near-Term Cumulative Projects condition. As seen in *Table 10–3*, with the addition of cumulative projects traffic, all study intersections are calculated to continue to operate acceptably at LOS D or better :

Appendix D contains the peak hour intersection analysis worksheets for the Weekend Existing + Near-Term Cumulative Projects condition.

10.2.2 Daily Street Segment Operations

Table 10–4 summarizes the segment operations for the Weekend Existing + Near-Term Cumulative Projects condition. As seen in *Table 10–4* with the addition of cumulative projects traffic, all study area segments are calculated to continue to operate acceptably at LOS D or better.

10.3 Weekend Existing + Near-Term Cumulative Projects + Project

Figure 10–3 depicts the Weekend Existing + Cumulative Projects + Project daily traffic and peak hour traffic volumes.

10.3.1 Peak Hour Intersection Operations

Table 10–3 summarizes the peak hour intersection operations for Weekend Existing + Near-Term Cumulative Projects + Project conditions. As seen in *Table 10–3*, with the addition of cumulative projects and Project traffic, the following intersections are calculated to operate at LOS F:

- Intersection #24. Foussat Road / Foussat Road (North) – LOS F during the Weekend peak hour
- Intersection #25. Foussat Road / Alex Road – LOS F during the Weekend peak hour

Based on the City of Oceanside’s traffic thresholds and methodology summarized in *Section 4*, substantial LOS related effects are calculated at the intersections listed above since the Project-related increase in delay exceeds the LOS standard threshold maximum. It should be noted that substantial effects were also identified at these intersections under Weekday conditions. No additional intersections were calculated to be substantially affected under Weekend conditions as compared to Weekday conditions.

Appendix D contains the peak hour intersection analysis worksheets for the Weekend Existing + Near-Term Cumulative Projects + Project condition.

10.3.2 Daily Street Segment Operations

Table 10–4 summarizes the segment operations for the Weekend Existing + Near-Term Cumulative Projects + Project condition. As seen in *Table 10–4*, with the addition of cumulative projects and Project traffic, the study segments are calculated to continue to operate acceptably at LOS D or better with the exception of the following:

- Segment #21. Foussat Road: N. Alex Road to SR 76 – LOS F

Based on the City of Oceanside's traffic thresholds and methodology summarized in *Section 4*, a substantial LOS related effect is calculated at the street segment listed above since operations along this segment are calculated to degrade from an acceptable LOS C to LOS F with the addition of Project trips. It should be noted that a substantial effect was also identified at this street segment under Weekday conditions. No additional street segments were calculated to be substantially affected under Weekend conditions as compared to Weekday conditions.

TABLE 10-1
WEEKEND EXISTING + PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project		Delay Δ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
5. SR 76 / Benet Road	Signal	Mid	30.4	C	32.9	C	2.5	No
9. SR 76 / Rancho Del Oro Drive	Signal	Mid	42.5	D	44.8	D	2.3	No
11. Mission Avenue / Mesa Drive Amick Street	Signal	Mid	9.1	A	9.2	A	0.1	No
17. Mission Avenue / Ocean Pointe	Signal	Mid	0.4	A	13.6	C	13.2	No
23. Pala Road / Los Arbolitos Boulevard	MSSC ^d	Mid	9.9	A	10.2	B	0.3	No
24. Foussat Rd / Foussat Road (North)	MSSC	Mid	0.0	A	146.9	F	146.9	Yes
25. Foussat Road / Alex Road	MSSC	Mid	9.6	A	104.5	F	94.9	Yes
28. Mesa Drive / El Camino Real	Signal	Mid	24.0	C	25.1	C	1.1	No
29. Mesa Drive / Foussat Road	AWSC ^e	Mid	9.5	A	10.7	B	1.2	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes the increase in delay due to Project.
- d. MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- e. AWSC = All Way Stop-Controlled intersection. Average delay reported.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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
WEEKEND EXISTING + PROJECT STREET SEGMENT OPERATIONS

Street Segment	Existing Capacity (LOS E) ^a	Existing			Existing + Project			Δ ^e	Improvement Required?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
Mission Avenue 20. Douglas Drive to Rancho Del Oro Drive	40,000	17,540	B	0.439	19,560	B	0.489	0.051	No
Foussat Road 21. Alex Road to SR 76	10,000	5,740	C	0.574	12,953	F	1.295	0.721	Yes
23. Mission Avenue to Tonopah Street	10,000	5,320	B	0.532	6,763	C	0.676	0.144	No
24. Tonopah Street to Mesa Drive	10,000	5,700	C	0.570	7,143	C	0.714	0.144	No
El Camino Real 25. Los Arbolitos Boulevard to Mission Avenue	40,000	29,180	C	0.730	29,901	C	0.748	0.018	No
26. Mission Avenue to Vista Oceana	40,000	23,680	C	0.592	24,690	C	0.617	0.025	No
27. Vista Oceana to Mesa Drive	40,000	24,150	C	0.604	25,016	C	0.625	0.022	No
Mesa Drive 33. Foussat Road to El Camino Real	15,000	4,340	A	0.289	5,061	B	0.337	0.048	No
Los Arbolitos Boulevard 36. Pala Road to El Camino Real	15,000	6,030	B	0.402	6,319	B	0.421	0.019	No
Alex Road 37. Eddy Jones Way to Foussat Road	10,000	450	A	0.045	594	A	0.059	0.014	No

Footnotes:

- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity ratio.
- e. Δ denotes a Project-induced increase in the Volume to Capacity ratio.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect. .

TABLE 10-3
WEEKEND NEAR-TERM CUMULATIVE INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative Project		Delay Δ^c	Improvement Required?
			Delay ^a	LOS ^b	Delay	LOS		
5. SR 76 / Benet Road	Signal	Mid	31.1	C	34.0	C	2.9	No
9. SR 76 / Rancho Del Oro Drive	Signal	Mid	47.2	D	49.6	D	2.4	No
11. Mission Avenue / Mesa Drive	Signal	Mid	9.3	A	9.4	A	0.1	No
17. Mission Avenue / Ocean Pointe	Signal	Mid	0.4	A	13.5	B	13.1	No
23. Pala Road / Los Arbolitos Boulevard	MSSC ^d	Mid	10.5	B	10.8	B	0.3	No
24. Foussat Rd / Foussat Road (North)	MSSC	Mid	11.3	B	53.9	F	42.6	Yes
25. Foussat Road / Alex Road	MSSC	Mid	9.6	A	114.2	F	104.6	Yes
28. Mesa Drive / El Camino Real	Signal	Mid	24.7	C	26.1	C	1.4	No
29. Mesa Drive / Foussat Road	AWSC ^e	Mid	9.9	A	11.2	B	1.3	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes the increase in delay due to Project.
- d. MSSC = Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- e. AWSC = All Way Stop-Controlled intersection. Average delay reported.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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 10-4
WEEKEND NEAR-TERM CUMULATIVE STREET SEGMENT OPERATIONS

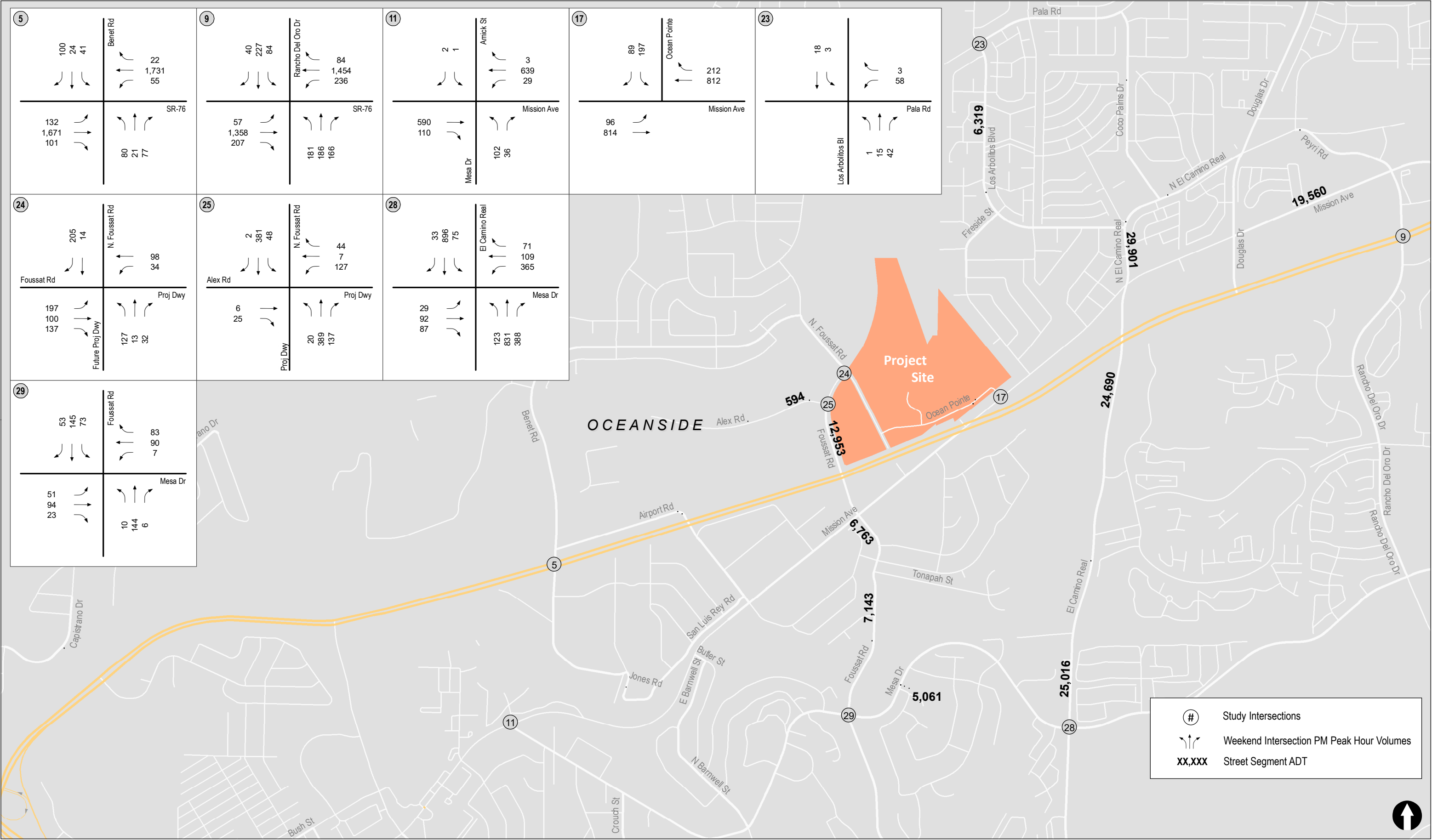
Street Segment	Existing Capacity (LOS E) ^a	Existing + Cumulative			Existing + Cumulative + Project			Δ ^e	Sig?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C		
Mission Avenue 20. Douglas Drive to Rancho Del Oro Drive	40,000	18,280	B	0.457	20,300	B	0.508	0.050	No
Foussat Road 21. Alex Road to SR 76	10,000	5,990	C	0.599	13,203	F	1.320	0.721	Yes
23. Mission Avenue to Tonopah Street	10,000	5,570	C	0.557	7,013	C	0.701	0.144	No
24. Tonopah Street to Mesa Drive	10,000	5,950	C	0.595	7,393	C	0.739	0.144	No
El Camino Real 25. Los Arbolitos Boulevard to Mission Avenue	40,000	30,530	D	0.763	31,251	D	0.781	0.018	No
26. Mission Avenue to Vista Oceana	40,000	25,270	C	0.632	26,280	C	0.657	0.025	No
27. Vista Oceana to Mesa Drive	40,000	25,740	C	0.644	26,606	C	0.665	0.021	No
Mesa Drive 33. Foussat Road to El Camino Real	15,000	5,160	b	0.344	5,881	B	0.392	0.048	No
Los Arbolitos Boulevard 36. Pala Road to El Camino Real	15,000	6,380	B	0.425	6,669	B	0.445	0.020	No
Alex Road 37. Eddy Jones Way to Foussat Road	10,000	450	A	0.045	594	A	0.059	0.014	No

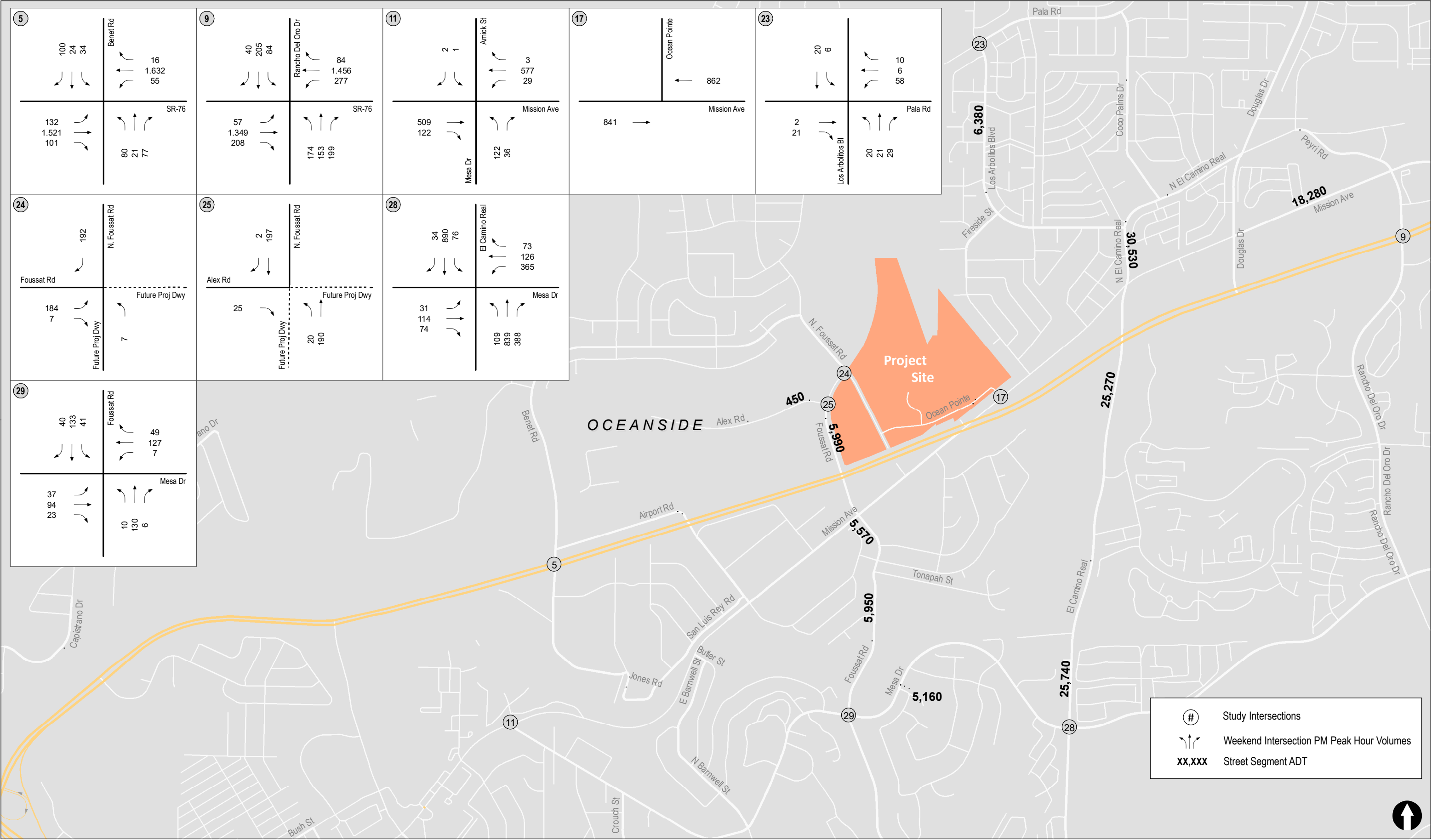
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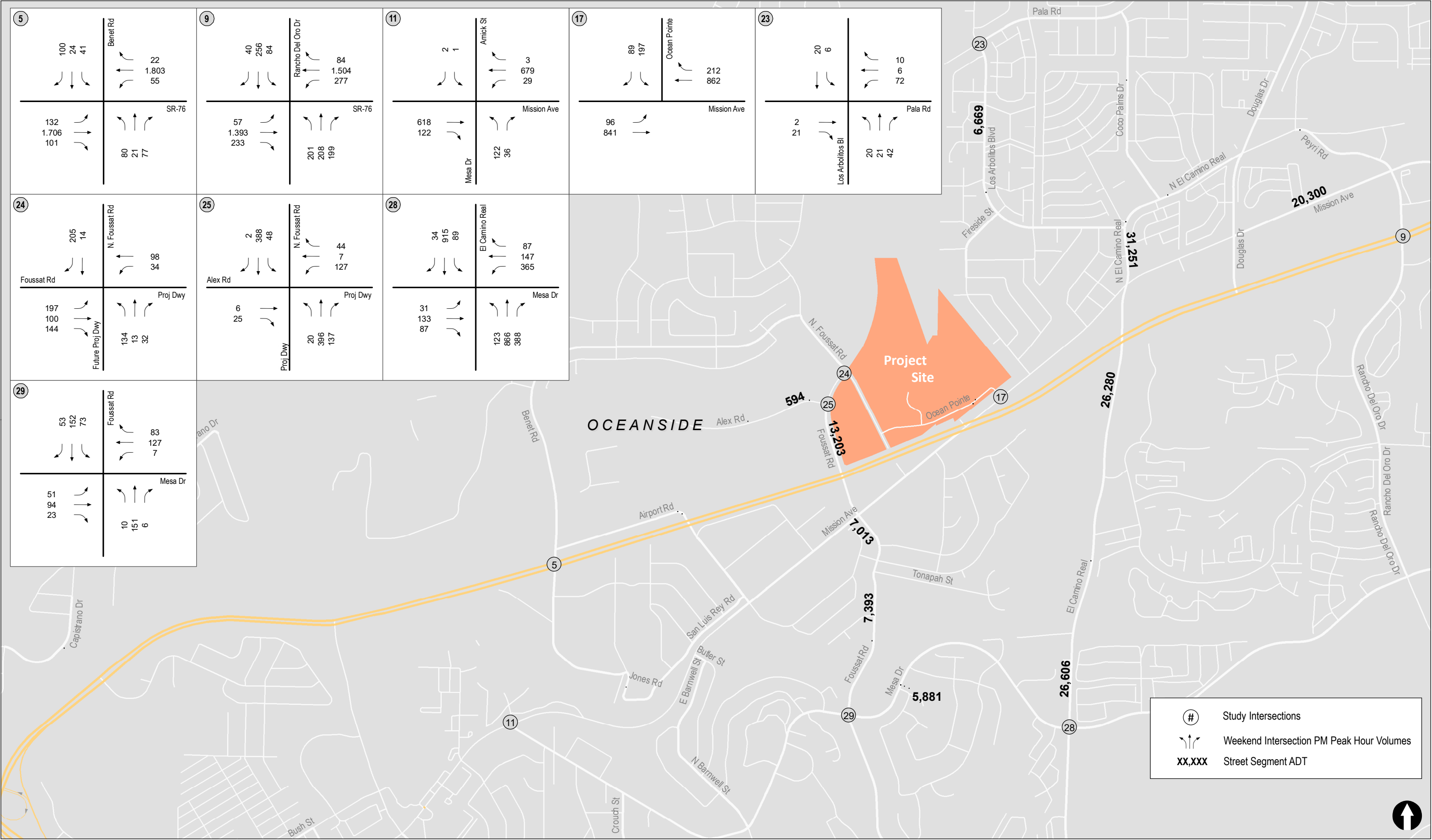
- a. Capacities based on City of Oceanside *Circulation Element Roadway Classification LOS & Capacity* table, August 2020.
- b. Average Daily Traffic.
- c. Level of Service.
- d. Volume to Capacity ratio.
- e. Δ denotes a Project-induced increase in the Volume to Capacity ratio.

General Notes:

1. **Bold** typeface and **shading** indicate a substantial effect.







11.0 YEAR 2035 DISCUSSION

Analysis of Long Term (Year 2035) conditions was not conducted for the Project. As previously discussed in *Section 2.2* of this study, an EIR addressing development of the Project site was certified by the City of Oceanside in 2008. The Pavilion at Oceanside project described in the EIR consisted of a 950,000-square foot (SF) shopping center with a variety of retail uses. The previously approved project was calculated to generate 32,175 ADT, with 1,254 AM peak hour trips and 2,872 PM peak hour trips.

The currently proposed Ocean Kamp Project is calculated to generate 13,135 fewer ADT (approximately 41% less) than the site's previously approved Pavilion project. Therefore, an analysis of Long-Term conditions for a project site that has already been approved for more trips than are currently proposed is not warranted.

In addition, the SANDAG Series 12 Year 2035 model assumes a total of 19,013 ADT in the two Traffic Analysis Zones (TAZ) that comprise the Project site. This is only 27 fewer ADT than what is currently proposed by the Project. Therefore, it can be concluded that the SANDAG Series 12 Year 2035 model accounts for buildout of the Ocean Kamp Project. **Appendix I** includes additional information on the Project's TAZs.

12.0 ACCESS ASSESSMENT AND ON-SITE CIRCULATION

Access to the site is proposed primarily via Foussat Road at SR 76 and via Ocean Pointe at Mission Avenue. As noted in *Sections 8 and 9* of this study, the signalized intersection of Mission Avenue / Ocean Pointe is calculated to operate acceptably at LOS D or better with the addition of Project traffic. The signalized intersection of SR 76 / Foussat Road is calculated to operate at LOS F under Near-Term Cumulative conditions, both without and with Project trips.

The “internal”, stop-controlled intersections of Foussat Road / Foussat Road (North) and Foussat Road / Alex Road are calculated to operate at a failing of LOS with the addition of Project traffic. The widening of Foussat Road to four lanes north of SR 76 and the signalization of the two intersections is recommended to improve operations to acceptable levels of service.

A comprehensive network of trails throughout the Project area proposed to connect residential neighborhoods with easy access to the local shops, dining, recreational, and fitness facilities at the projects commercial center, while also providing additional recreational opportunity with access to the regional San Luis Rey River Trail. Paseos are proposed to create a finer pedestrian network between homes, neighborhoods and parks.

The Project proposes a number of parks linked by a series of trails to create an open space network of play areas. The intent is to offer recreational opportunities for all ages while creating places for people. Approximately 20 acres of the 92-acre project site will be dedicated open space, offering opportunities for walking, hiking, running and biking.

In addition, it is recommended that the Project coordinate with the City of Oceanside to provide a pedestrian crosswalk across Benet Road at Airport Road. This measure will help address the lack of pedestrian facilities on the eastern side of Benet Road between Airport Road and the San Luis River Trail, and will improve pedestrian and bicycle connectivity to the San Luis River Trail.

13.0 SUBSTANTIAL EFFECTS AND RECOMMENDED IMPROVEMENTS

Per the City of Oceanside's traffic thresholds for the determination of the need for roadway improvements and the analysis methodology presented in this report, the addition of Project traffic is calculated to contribute to operational deficiencies at the following locations:

Intersections

- Intersection #4. SR 76 / Canyon Drive
- Intersection #5. SR 76 / Benet Road
- Intersection #6. SR 76 / Airport Road
- Intersection #7. SR76 / Foussat Road
- Intersection #8. SR 76 / Douglas Drive
- Intersection #9. SR76 / Rancho Del Oro Drive
- Intersection #21. Mission Avenue / Rancho Del Oro Drive
- Intersection #24. Foussat Road / Foussat Road (North)
- Intersection #25. Foussat Road / Alex Road

Segments

- Segment #5. SR 76: Airport Road to Foussat Road
- Segment #21. Foussat Road: Alex Road to SR 76

The improvements presented in **Table 13-1** are recommended to reduce the Project's effect on the locations listed above to less than substantial. **Table 13-2** and **Table 13-3** summarize the post-improvement intersection and street segment operations, respectively.

Post-improvement analysis is provided for the Near-Term Cumulative scenario since this analysis scenario has the highest traffic volumes and therefore represents worst case operations.

Appendix J contains the post improvement intersection analysis worksheets.

TABLE 13-1
RECOMMENDED IMPROVEMENTS

Intersections
<p><u>Intersection #4: SR 76 / Canyon Drive</u></p> <p>Contribute a fair share towards the provision of an additional (third) eastbound thru lane between Canyon Drive and Foussat Road. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<p><u>Intersection #5: SR 76 / Benet Road</u></p> <p>Contribute a fair share towards the provision of an additional (third) eastbound thru lane between Canyon Drive and Foussat Road. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<p><u>Intersection #6: SR 76 / Airport Road</u></p> <p>Contribute a fair share towards the provision of an additional (third) eastbound thru lane between Canyon Drive and Foussat Road and an additional (third) westbound thru lane between Foussat Road and Airport Road. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<p><u>Intersection #7: SR 76 / Foussat Road</u></p> <p>Contribute a fair share towards the provision of an additional (third) eastbound thru lane between Canyon Drive and Foussat Road and an additional (third) westbound thru lane between Foussat Road and Airport Road. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<p><u>Intersection #8: SR 76 / Douglas Drive</u></p> <p>Contribute a fair share towards the provision of an additional (third) westbound thru lane between Rancho Del Oro and Douglas Drive. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<p><i>Continued on the next page</i></p>

TABLE 13-1
RECOMMENDED IMPROVEMENTS

<i>Continued from the previous page</i>	
<p><u><i>Intersection #9: SR 76 / Rancho Del Oro Drive</i></u> Contribute a fair share towards the provision of an additional (third) westbound thru lane between Rancho Del Oro and Douglas Drive. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>	
<p><u><i>Intersection #21: Mission Avenue / Rancho Del Oro Drive</i></u> Reconfigure the intersection to provide a second northbound left-turn lane and the provision of a second receiving lane on westbound Mission Avenue. This recommendation is conditional provided there is adequate right-of-way to reconfigure the intersection as such. If adequate right-of-way is not available, it is recommended to restripe the northbound approach to provide a dedicated thru lane and a dedicated right-turn lane and provide adaptive signal control. The Project will be responsible for 100% of the cost of this improvement.</p>	
<p><u><i>Intersection #24: Foussat Road / Foussat Road (North)</i></u> Provide a single-lane roundabout at the intersection.</p> <p>If adequate right-of-way is not available to accommodate the proposed roundabout, it is recommended the Project signalize the intersection and provide the following lane configurations:</p> <ul style="list-style-type: none"> ▪ Southbound approach (N. Foussat Road) – one dedicated left-turn lane and one shared thru / right-turn lane. ▪ Westbound approach (Foussat Road) – one dedicated left-turn lane, one thru lane, and one shared thru / right-turn lane. ▪ Northbound approach (Project Driveway) – one dedicated left-turn lane, and one shared thru / right-turn lane. ▪ Eastbound approach (Foussat Road): one dedicated left-turn lane, two thru lanes, and one dedicated right-turn lane. <p>The Project will be responsible for 100% of the cost of either of these improvements.</p>	
<p><u><i>Intersection #25: Foussat Road / Alex Road</i></u> Provide a single-lane roundabout at the intersection.</p> <p>If adequate right-of-way is not available to accommodate the proposed roundabout, it is recommended the Project signalize the intersection and provide the following lane configurations:</p> <ul style="list-style-type: none"> ▪ Southbound approach (Foussat Road) – one dedicated left-turn lane, one thru lane, and one shared thru / right-turn lane. ▪ Westbound approach (Project Driveway) – one dedicated left-turn lane, and one shared / thru right-turn lane. ▪ Northbound approach (Foussat Road) – one dedicated left-turn lane, two thru lanes, and one dedicated right-turn lane. ▪ Eastbound approach (Alex Road): one dedicated left-turn lane, and one shared thru / right-turn lane. <p>The Project will be responsible for 100% of the cost of either of these improvements.</p>	
<i>Continued on the next page</i>	

TABLE 13-1
RECOMMENDED IMPROVEMENTS

<i>Continued from the previous page</i>	
Segments	
<u><i>Segment #5: SR 76: Airport Road to Foussat Road</i></u>	<p>Contribute a fair share towards the provision of an additional (third) eastbound thru lane and an additional (third) westbound thru lane between Airport Road and Foussat Road. The fair share payment shall be paid to the City's Thoroughfare and Signal Account. The funds will be used at the City's discretion for projects that will improve traffic safety and mobility in the City of Oceanside. The fair share contribution shall be paid in full prior to issuance of any permit for any phase or any component of the Project. Payment of the fair share shall satisfy the Project's offsite improvements obligations.</p> <p>Conceptual drawings of the proposed improvement, fair share calculations, and cost estimates are included in <i>Appendix K</i>.</p>
<u><i>Segment #21. Foussat Road: Alex Road to SR 76</i></u>	<p>Widen Foussat Road to four lanes between SR 76 and approaching the proposed single-lane roundabout at Alex Road. The second northbound lane on Foussat Road will need to drop before the single-lane roundabout. The second southbound lane on Foussat Road can begin approximately 100 feet south of the roundabout.</p>

TABLE 13-2
POST IMPROVEMENT INTERSECTION ANALYSIS

Intersection	Control Type	Peak Hour	Existing + Cumulative		Existing + Cumulative + Project		Existing + Cumulative + Project with Improvements	
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS
4. SR 76 / Canyon Drive	Signal	PM	95.5	F	126.5	F	33.4	C
5. SR 76 / Benet Road	Signal	AM	46.9	D	67.9	E	41.2	D
		PM	88.5	F	116.7	F	40.3	D
6. SR 76 / Airport Road	Signal	AM	113.0	F	140.7	F	45.6	D
		PM	51.3	D	78.2	E	32.6	C
7. SR 76 / Foussat Road	Signal	AM	174.1	F	159.3	F	66.4	E
		PM	118.4	F	140.2	F	81.9	F
8. SR 76 / Douglas Drive	Signal	AM	231.6	F	239.9	F	118.2	F
9. SR 76 / Rancho Del Oro Drive	Signal	AM	83.8	F	89.1	F	55.7	E
		PM	92.8	F	100.1	F	77.2	E
21. Mission Avenue / Rancho Del Oro Drive	Signal	AM	37.9	D	64.1	E	32.8	C
		PM	37.7	D	50.6	D	29.0	C
24. Foussat Road / Foussat Road (North)	MSSC / Roundabout ^c	AM	11.4	B	68.9	F	5.4	A
		PM	11.4	B	143.9	F	7.9	A
25. Foussat Road / Alex Road	MSSC / Roundabout ^c	AM	10.5	B	61.5	F	6.8	A
		PM	9.4	A	76.0	F	10.6	B

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MMSC = Minor Street Stop Controlled intersection. Minor street left-turn delay reported. A single-lane roundabout at the intersection is assumed under post-improvement conditions. If adequate right-of-way is not available to accommodate the proposed roundabout, signalization of the intersection is recommended. Signalization of the intersection will result in LOS C or better operations under post-improvement conditions.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
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 13-3
POST IMPROVEMENT STREET SEGMENT ANALYSIS

Street Segment	LOS E Capacity ^a	Existing + Cumulative			Existing + Cumulative + Project			Existing + Cumulative + Project with Improvements		
		ADT ^b	LOS ^c	V/C ^d	ADT	ADT	V/C	ADT	LOS	V/C
SR 76 5. Airport Road to Foussat Road	60,000 / 80,000 ^d	50,710	D	0.845	56,230	E	0.937	56,230	C	0.703
Foussat Road 21. Alex Road to SR 76	10,000 / 25,000 ^e	6,740	C	0.674	16,260	F	1.626	16,260	C	0.650

Footnotes:

- a. Capacities based on City of Oceanside Circulation Element Roadway Classification LOS & Capacity table, August 2020.
- b. Level of Service.
- c. Volume to Capacity ratio.
- d. Improvement recommendations include the widening of SR 76 between Airport Road and Foussat Road to 6-Lane Expressway standards with a LOS E capacity of 80,000 ADT.
- e. Improvement recommendations include the widening of Foussat Road between SR 76 and Alex Road to 4-Lane Secondary Collector standards with a LOS E capacity of 25,000 ADT.

End of Report