3.14 Traffic and Transportation

This section provides an assessment of potential impacts related to traffic and transportation that could result from project implementation. Potential impacts addressed in this section are related to conflicts with applicable traffic plans, congestion management programs, and alternative traffic plans, air traffic patterns, transportation design hazards, and inadequate emergency access. Information used in this section is from the Traffic Impact Analysis (TIA) prepared by IBI Group for the proposed project (IBI 2018), which is included as Appendix G of this EIR.

3.14.1 Environmental Setting

Project Traffic Study Area

The City of Oceanside is located within the northern portion of San Diego County, where regional access is provided by Interstate 5 (I-5), State Route 76 (SR 76), and State Route 78 (SR 78). Local access is provided via Coast Highway and other connecting local roads. Refer to Appendix G of this EIR for a full description of all study roadways.

SR 76 – This is a four-lane state highway (San Luis Rey Mission Expressway), connecting to Coast Highway in the northern portion of the City, and running east through an interchange with I-5 and beyond.

SR 78 – This is a six-lane state freeway (Ronald Packard Parkway), connecting to I-5 (and continuing to Coast Highway as two-lane Vista Way) in the southern portion of the City.

Coast Highway – A secondary collector that runs north/south through Oceanside's downtown area and has two configurations within the City. The first is as a two-lane roadway with a continuous two-way left turn lane that spans from Harbor Drive to the intersection with SR 76. No parking is allowed on this segment except for a small stretch just south of Harbor Drive. South of the SR 76, Coast Highway is a four-lane undivided roadway. Parking is not allowed on Coast Highway between SR 76 and Surfrider Way, from Oceanside Boulevard to Morse Street, and south of Vista Way, but is allowed in some sections between Surfrider Way and Oceanside Boulevard, and between Morse Street and Vista Way. Between Oceanside Boulevard and Morse Street and south of Vista Way, there is a striped bike lane on each side of the roadway.

Surfrider Way – A collector street located south of the intersection of Coast Highway and SR 76. Parallel on-street parking is allowed on Surfrider Way, with the exception of the block closest to the beach.

Civic Center Drive – A collector street located south of Surfrider Way, running from Cleveland Street to beyond the eastern limit of the TIA study area. Parallel parking is allowed on all segments of the street within the TIA study area limits, with the exception of the south side of Civic Center Drive east of Coast Highway where diagonal on-street parking is provided.

Pier View Way – A local street located south of Civic Center Drive, running from Cleveland Street to Horne Street. Parking (diagonal or parallel) is allowed on all segments of the street.

Wisconsin Avenue – A collector street located south of Washington Avenue. This street begins at The Strand and crosses the majority of the TIA study area, ending at Weitzel Street. This street is a two-lane undivided roadway. Parallel on-street parking is permitted west of Coast Highway. Between Coast Highway and I-5, Oceanside Boulevard has a striped bicycle lane and parallel parking is not permitted.

Seagaze Street – A two-lane collector roadway located south of Mission Avenue. Parallel parking is allowed on most parts of the street, with diagonal parking allowed on a portion of the north side of the street between Cleveland Street and Coast Highway, and on the south side of the street between Coast Highway and Freeman Street.

Oceanside Boulevard – A collector street located south of Wisconsin Avenue. It begins at Pacific Street, crosses the TIA study area and continues east outside the TIA study area boundaries. Parallel on-street parking is permitted. Between Coast Highway and I-5, Oceanside Boulevard has a striped bicycle lane.

Morse Street – A two-lane undivided collector street located south of Oceanside Boulevard and south of the Sprinter rail corridor. This street begins at Broadway Street and crosses the study area, ending at Griffin Street. On-street parking is allowed.

Vista Way – A collector street located south of Morse Street. From Broadway Street to Coast Highway, parallel parking is permitted. East of Coast Highway, Vista Way is a two-lane roadway with a continuous two-way center left turn lane.

Existing Conditions of the Study Area Intersections

The study area established in the TIA included 47 intersections (see **Figure 3.14-1**). Existing peak-hour intersection count data and 48-hour roadway segment volumes were collected in the TIA study area in August 2013. These volumes represent the existing baseline for this traffic analysis, as traffic is typically the highest in this particular coastal area during the summer months and this period thus reflects a conservative representation of traffic conditions.

Figures 3.14-2a through **3.14-2d** illustrate the AM and PM peak-hour volumes for the 54 study intersections[1] analyzed in the Existing Conditions scenario. **Table 3.14-1** shows the existing LOS during the AM (7:00 a.m. to 9:00 a.m.) and PM (4:00 p.m. to 6:00 p.m.) peak hours for the 54 study area intersections. Level of service (LOS) is a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. LOS is described as a range between A and F, where LOS A represents a free-flowing system, and LOS F represents a highly congested, slow-moving system. The City has established a minimum acceptable LOS of LOS D for intersections during peak-hour operations (i.e., LOS E or LOS F are unacceptable service levels), which applies to intersections 1 through 47. For intersections 48 through 56, Caltrans has established their significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if

[1] Existing (2013) turning movement volumes are not available for Intersections 46 and 47. Those intersections are analyzed under Future Conditions (2035).

conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant. As shown in Table 3.14-1 below, all study intersections operate at LOS D or better in existing conditions, with the exception of the intersection at Vista Way and the I-5 southbound on-/off-ramps.

TABLE 3.14-1
EXISTING CONDITIONS AM AND PM PEAK-HOUR LEVELS OF SERVICE (LOS)

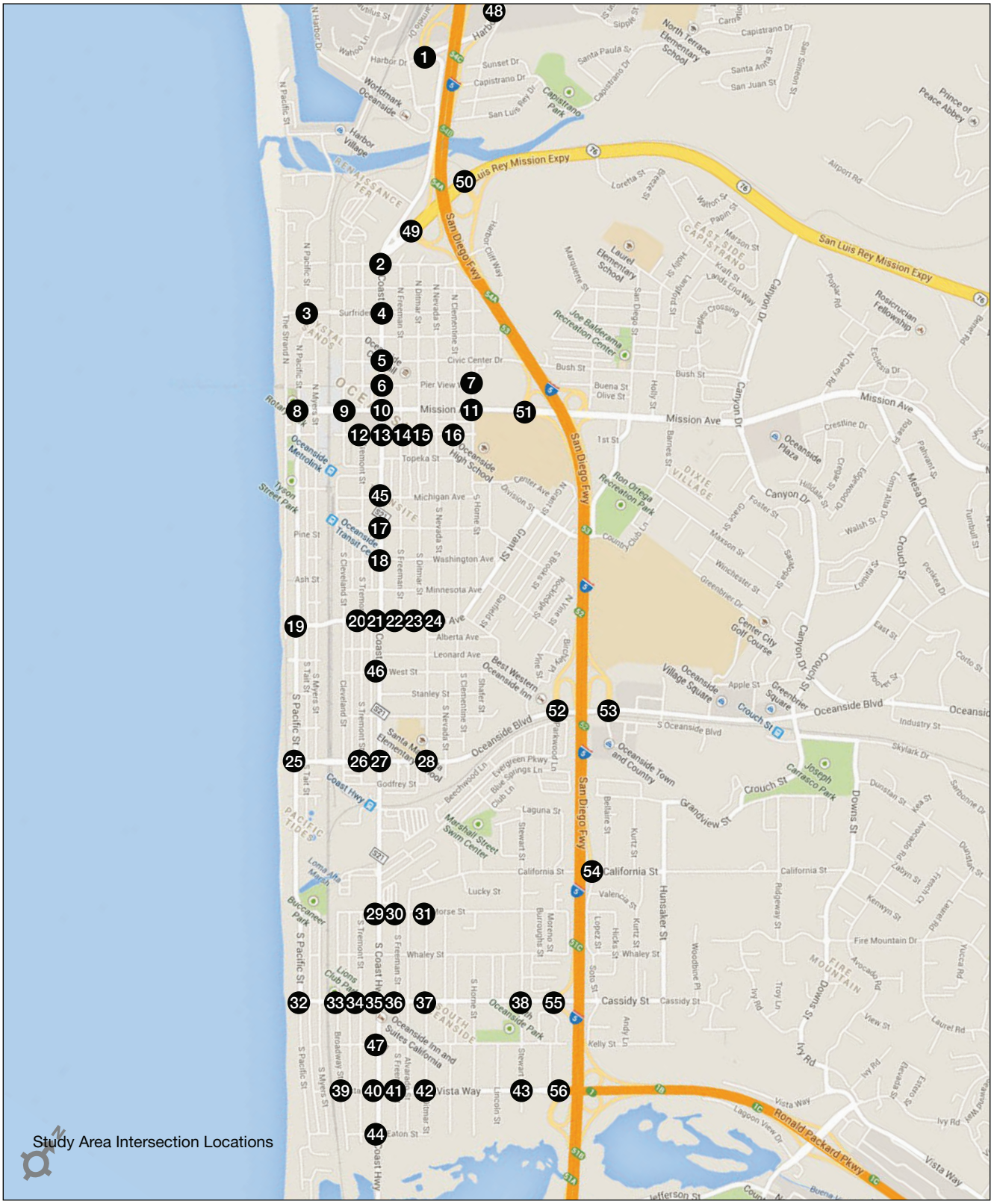
Intersection		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
City of Oceanside Intersections						
1	Coast Highway & I-5 Ramps / Harbor Drive	Signalized	28.0	C	51.3	D
2	Coast Highway & SR 76 Ramps	Signalized	13.7	B	37.1	D
3	Surfrider Way & Pacific Street	AWSC	8.5	A	11.2	B
4	Coast Highway & Surfrider Way	Signalized	10.4	B	14.4	B
5	Coast Highway & Civic Center Drive	Signalized	13.7	B	15.1	B
6	Coast Highway & Pier View Way	Signalized	16.8	B	16.6	B
7	Pier View Way & Horne Street	AWSC	8.7	A	11.9	B
8	Mission Avenue & Pacific Street	AWSC	7.9	A	10.1	B
9	Mission Avenue & Cleveland Street	AWSC	8.1	A	10.6	B
10	Coast Highway & Mission Avenue	Signalized	13.1	B	13.8	B
11	Mission Avenue & Horne Street	Signalized	7.4	A	18.9	B
12	Seagaze Street & Tremont Street	SSSC	3.3	A	11.5	B
13	Coast Highway & Seagaze Street	Signalized	14.7	B	23.9	C
14	Seagaze Street & Freeman Street	SSSC	10.3	A	15.6	C
15	Seagaze Street & Ditmar Street	AWSC	7.9	A	12.5	B
16	Seagaze Street & Clementine Street	SSSC	7.9	A	13.1	B
17	Coast Highway & Missouri Avenue	SSSC	12.0	B	23.9	C
18	Coast Highway & Washington Avenue	SSSC	11.3	B	22.0	C
19	Wisconsin Avenue & Pacific Street	AWSC	8.1	A	9.8	A
20	Wisconsin Avenue & Tremont Street	SSSC	10.6	B	14.0	B
21	Coast Highway & Wisconsin Avenue	Signalized	8.9	A	12.2	B
22	Wisconsin Avenue & Freeman Street	SSSC	9.1	A	9.7	A
23	Wisconsin Avenue & Ditmar Street (North)	SSSC	9.7	A	10.1	B
24	Wisconsin Avenue & Ditmar Street (South)	AWSC	7.5	A	7.9	A
25	Oceanside Boulevard & Pacific Street	AWSC	8.0	A	9.0	A
26	Oceanside Boulevard & Tremont Street	SSSC	10.9	B	14.7	B
27	Coast Highway & Oceanside Boulevard	Signalized	29.7	C	39.7	D
28	Oceanside Boulevard & Ditmar Street	Signalized	5.7	A	6.8	A
29	Coast Highway & Morse Street	Signalized	9.0	A	9.8	A
30	Morse Street & Freeman Street	SSSC	9.0	A	10.0	B
31	Morse Street & Ditmar Street	SSSC	8.8	A	9.2	A
32	Cassidy Street & Pacific Street	AWSC	7.7	A	9.3	A

Intersection		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
33	Cassidy Street & Broadway Street	SSSC	10.3	B	14.5	B
34	Cassidy Street & Tremont Street	SSSC	9.9	A	12.4	B
35	Coast Highway & Cassidy Street	Signalized	9.1	A	14.0	B
36	Cassidy Street & Freeman Street	SSSC	10.2	B	12.7	B
37	Cassidy Street & Ditmar Street	AWSC	8.1	A	9.5	A
38	Cassidy Street & Stewart Street	AWSC	9.3	A	13.2	B
39	Vista Way & Broadway Street	SSSC	7.4	A	7.6	A
40	Coast Highway & Vista Way	Signalized	22.7	C	37.0	D
41	Vista Way & Freeman Street	SSSC	12.2	B	15.3	C
42	Vista Way & Ditmar Street	SSSC	13.0	B	18.7	C
43	Vista Way & Stewart Street	SSSC	12.3	B	17.4	C
44	Coast Highway & Eaton Street	SSSC	12.8	B	14.3	B
45	Coast Highway & Michigan Avenue	Signalized	7.3	A	9.0	A
46[1]	Coast Highway & West Street	SSSC	--	--	--	--
47[2]	Coast Highway & Kelly Street	SSSC	--	--	--	--
Caltrans Intersections						
48[3]	Harbor/Vandegrift Blvd & I-5 NB On-Ramp/San Rafael Drive	Signalized	17.6	B	22.7	C
49	SR 76 & I-5 SB On-Ramp	Signalized	8.9	A	6.9	A
50	SR 76 & I-5 NB On-/Off-Ramp	Signalized	21	C	25.5	C
51	Mission & I-5 SB Off-Ramp	Signalized	23.0	C	35.0	C
52	Oceanside & I-5 SB On-/Off-Ramp	Signalized	46.6	D	43.3	D
53	Oceanside & I-5 NB On-/Off-Ramp	Signalized	34.2	C	39.2	D
54	California & I-5 NB On-Ramp	AWSC	8.9	A	8.7	A
55	Cassidy & I-5 SB On-/Off-Ramp	SSSC	11	B	11.2	B
56	Vista Way & I-5 SB On-/Off-Ramp	Signalized	50	D	174.2	F

Notes:
[1] Not part of the original 2013 counts. In order to provide a more consistent and complete analysis, intersection 46 was added to the study in 2016. Therefore, existing turning movement counts are not available for the study intersection.
[2] Not part of the original 2013 counts. In order to provide a more consistent and complete analysis, intersection 47 was added to the study in 2016. Therefore, existing turning movement counts are not available for the study intersection.
[3] For intersections 48-56, existing intersection turning movements counts for these Caltrans interchanges were taken manually on March 13, 2018 during the morning peak period (7:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 6:00 PM). The detailed traffic count data for the study area intersections and interchanges can be found in Appendix C of the TIA (2018).

A. Delay is expressed as an average seconds of delay per vehicle
B. LOS – Level of Service
C. AWSC – All-way stop control intersection
D. SSSC – Side-street stop control intersection
E. OWSC – One-way stop control intersection
F. The minimum acceptable LOS is “D” for intersections 1-47
G. The minimum acceptable LOS is “C and D”; a change from C or D to a lower LOS will cause an impact for intersections 48-56; However, if pre-project LOS is a LOS D, and does not degrade to a lower LOS with the project, Caltrans does not consider the project’s contribution to be significant.
H. Existing turning movement volumes not available for Intersections 46 and47

Source: IBI 2018.

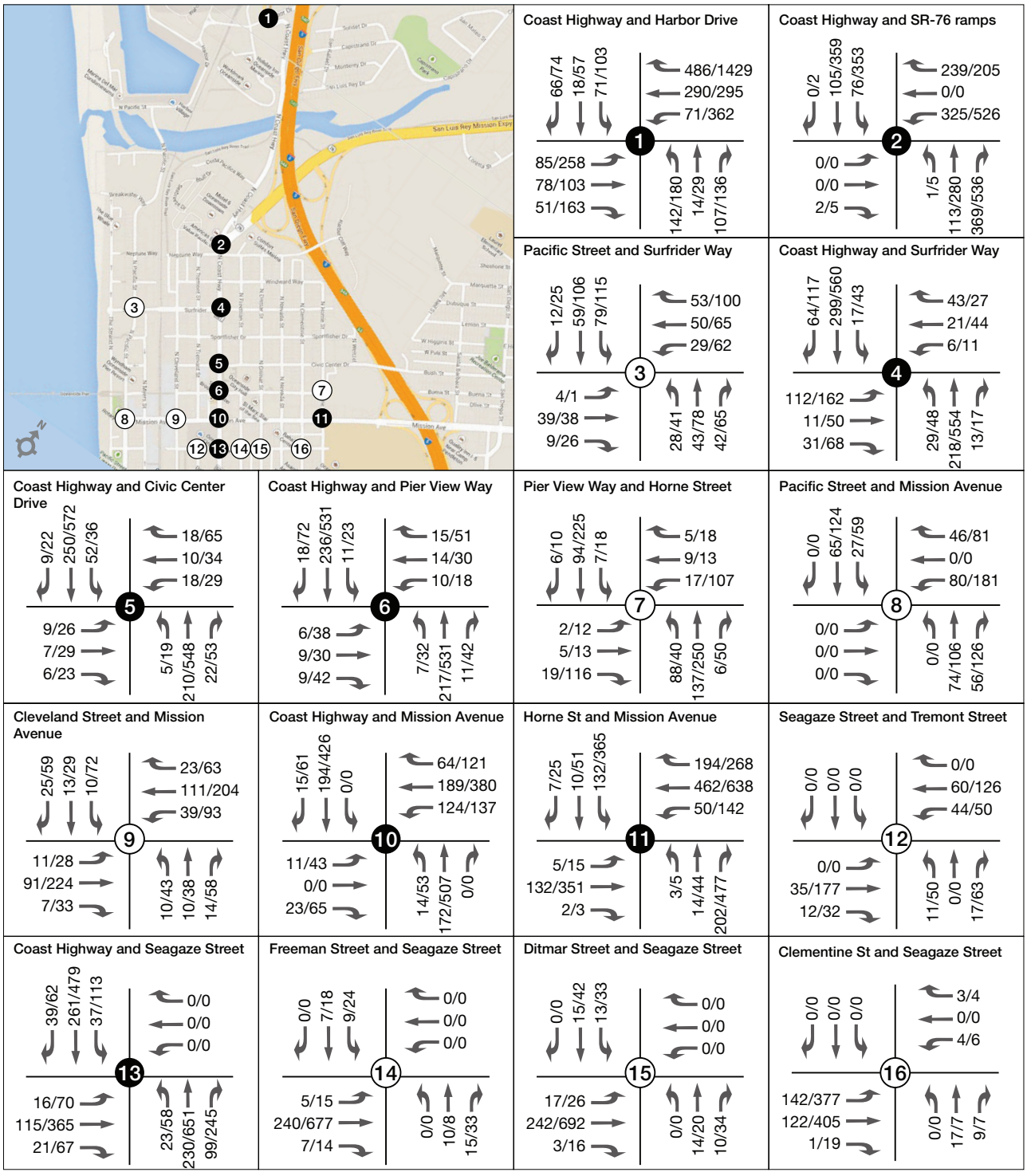


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-1

Study Area Intersections

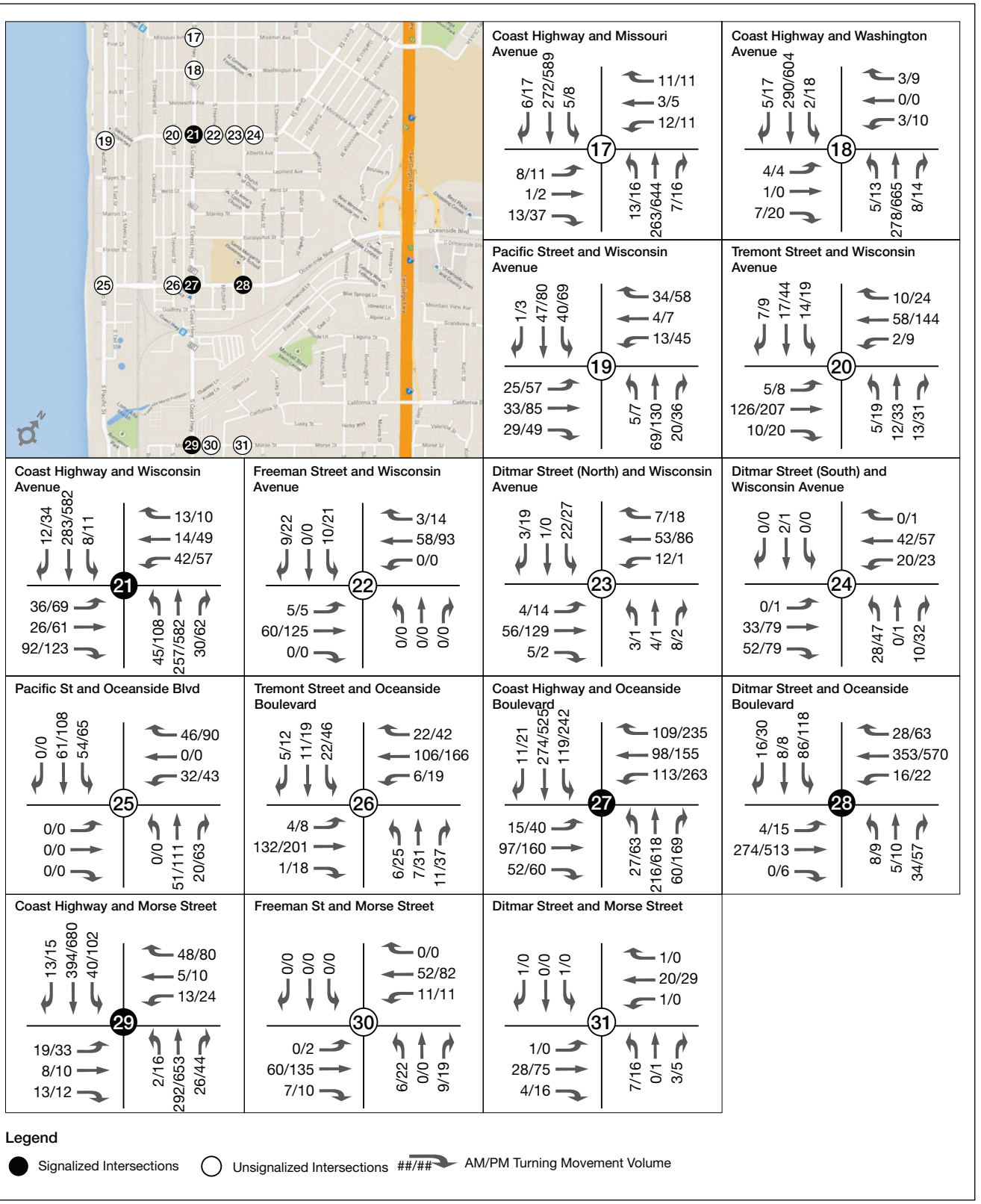


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-2a

Existing Conditions Peak Hour Volumes – AM & PM

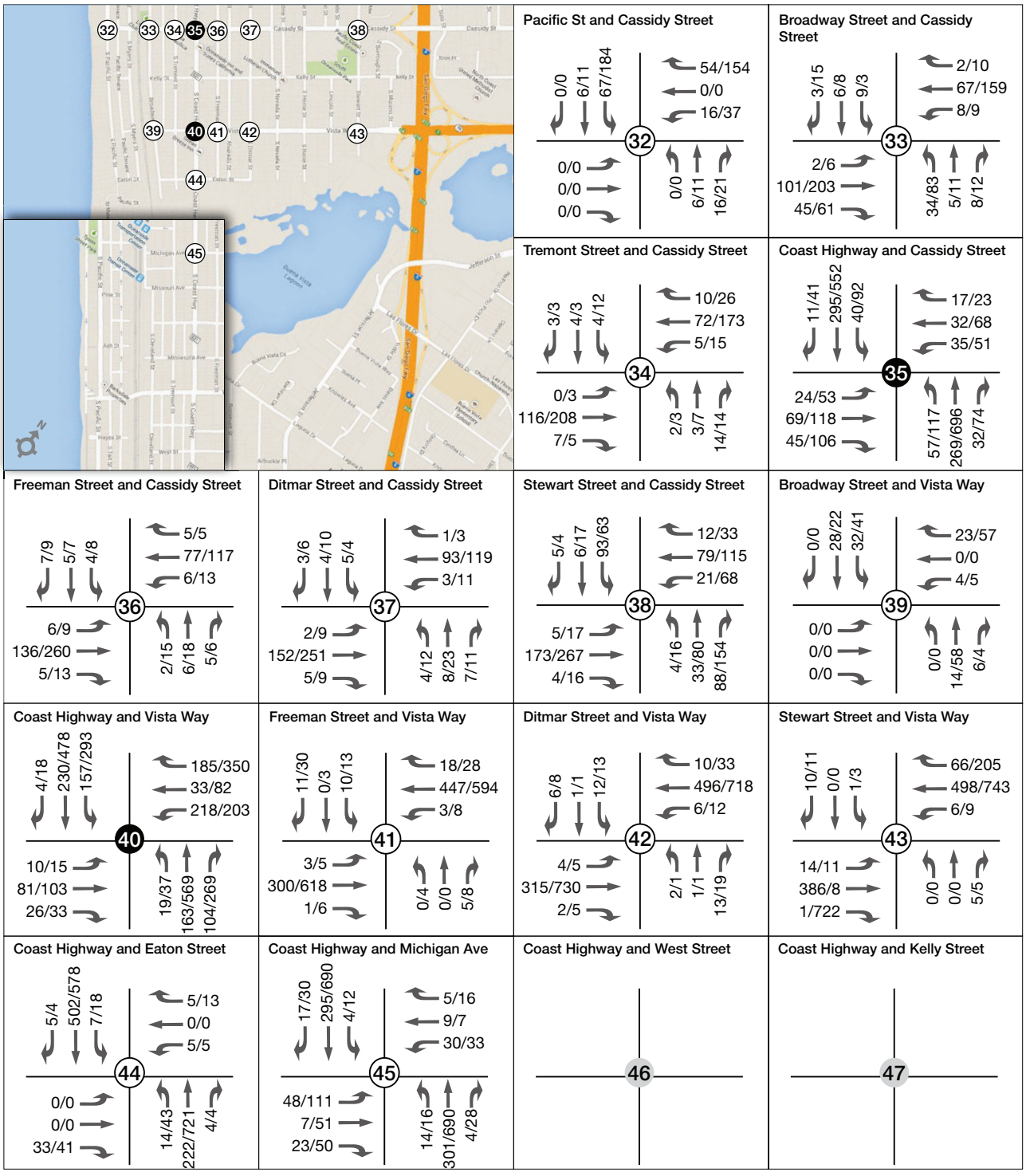


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-2b

Existing Conditions Peak Hour Volumes – AM & PM

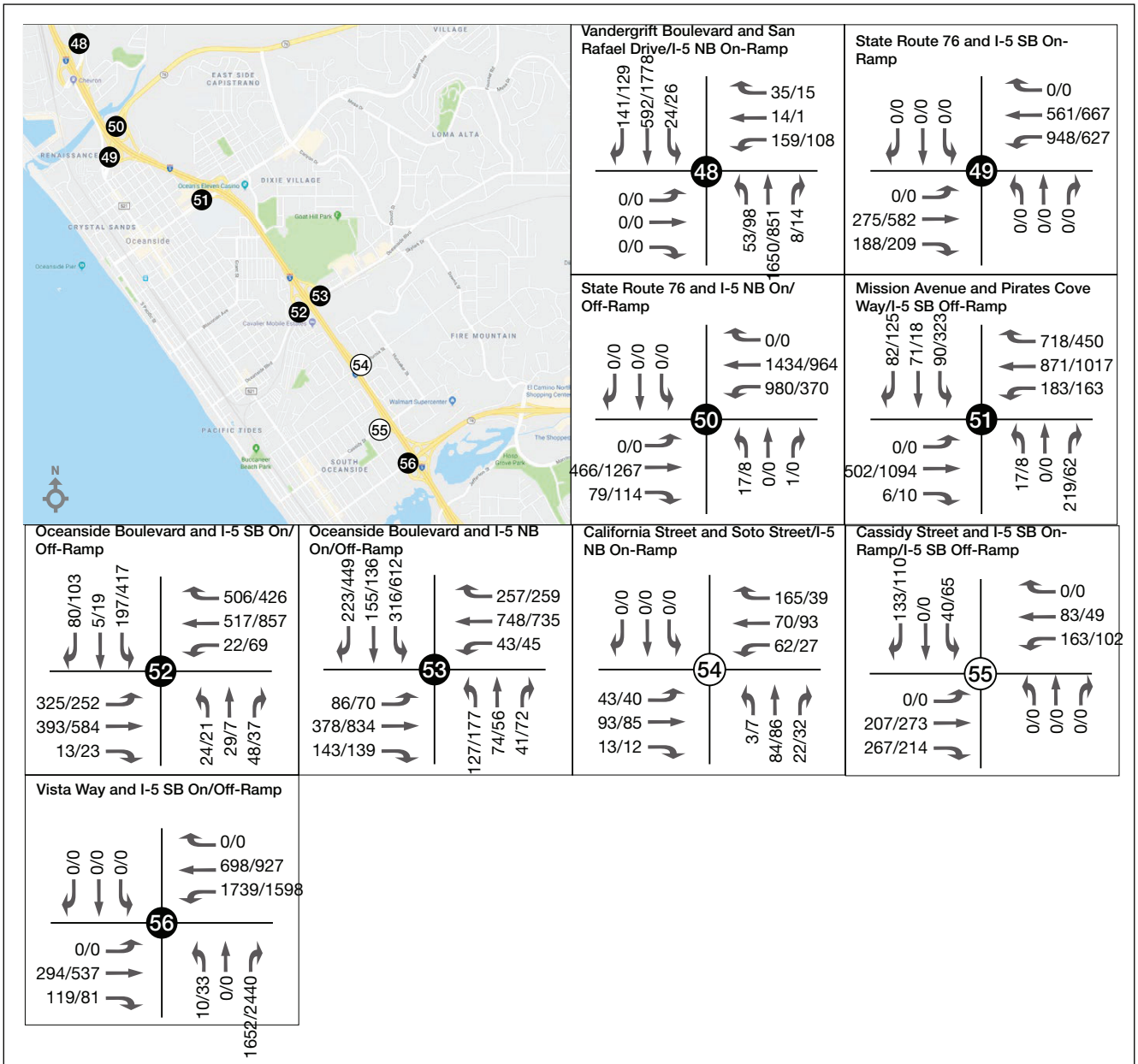


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-2c

Existing Conditions Peak Hour Volumes – AM & PM



City of Oceanside Coast Highway Corridor Study. 130217

SOURCE: IBI Group, 2018

Figure 3.14-2d

Existing Conditions Peak Hour Volumes – AM & PM

Existing Alternative Transportation

Transit Service

The North County Transit District (NCTD) provides transit services to the North County of San Diego, including the City of Oceanside. There are two main transit centers located within the project area, which include the Oceanside Transit Center and the Coast Highway Sprinter station. The Oceanside Transit Center provides connections with the Coaster, Amtrak, Metrolink, and Sprinter train lines as well as NCTD bus routes 101, 302, 303, 313, 318, 392, 395, Riverside Transit Agency Route 202, and Greyhound buses (NCTD 2016). The Coast Highway Sprinter station also provides connections to NCTD bus routes 101, 302, and 318 (NCTD 2016). The NCTD bus routes listed above provide bus access throughout the project area.

Bicycle and Pedestrian Access

According to the City's Circulation Element, the only bicycle facilities within the project area are Class II bicycle lanes on Coast Highway between Oceanside Boulevard and Morse Street, and a Class III bicycle route from approximately Morse Street to Cassidy Street along Broadway Street, which connects to the Class I bicycle path adjacent to the project area (City of Oceanside 2012). Additionally, there are sidewalks along Coast Highway for pedestrian travel. There are now sharrow[2] (Class III) markings on Civic Center Drive and Mission Avenue east of Coast Highway. There is also a striped Class II bike lane on Seagaze east of Coast Highway in the project area.

3.14.2 Regulatory Framework

Federal

Highway Capacity Manual

The Highway Capacity Manual (HCM), prepared by the federal Transportation Research Board, is the result of a collaborative multi-agency effort between the Transportation Research Board, Federal Highway Administration, and American Association of State Highway and Transportation Officials. The HCM contains concepts, guidelines, and procedures for computing the capacity and level of service of various transportation facilities, including freeways, signalized and unsignalized intersections, and rural highways, and the effects of transit, pedestrians, and bicycles on the performance of these systems.

Moving Ahead for Progress in the 21st Century Act

On July 6, 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) was signed into law. MAP-21 revised the policy and programmatic framework for investments meant to guide the nation's surface transportation system's growth and development. MAP-21 establishes a streamlined and performance-based surface transportation program, which builds upon many of the highway, transit, bike, and pedestrian programs and policies established by the Intermodal Surface Transportation Efficiency Act of 1991.

[2] A bicycle sharrow is defined as a sign showing a bicycle under two wide arrows that which is painted on a road to show that people riding bicycles and those driving cars must share the roadway.

State

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, building, operating, and maintaining California's state road system. Caltrans sets standards, policies, and strategic plans that aim to do the following: (1) provide the safest transportation system in the nation for users and workers, (2) maximize transportation system performance and accessibility, (3) efficiently deliver quality transportation projects and services, (4) preserve and enhance California's resources and assets, and (5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of state highways for other than normal transportation purposes.

Statewide Transportation Improvement Program

The California Statewide Transportation Improvement Plan (STIP), approved by the California Transportation Commission in May 2016, is a multiyear, intermodal program of transportation projects that is consistent with the statewide transportation planning processes, metropolitan plans, and Title 23 of the Code of Federal Regulations (CFR). The STIP is prepared by Caltrans in cooperation with the Metropolitan Planning Organizations (MPOs) and the Regional Transportation Planning Agencies. In San Diego County, the MPO and Regional Transportation Planning Agency is the San Diego Association of Governments (SANDAG). The STIP contains all capital and non-capital transportation projects or identified phases of transportation projects for funding under the federal Transit Act and CFR Title 23, including federally funded projects.

Regional

San Diego Associated Governments San Diego Forward: The Regional Plan

SANDAG's San Diego Forward: The Regional Plan (Regional Plan) acts as a blueprint for maintaining and improving the region's transportation systems. The plan focuses on building a transportation system that encompasses sustainability, land use patterns, and social equity. The Regional Plan also outlines plans for maintaining, improving, and developing regional modes of transit, including rail systems, bus rapid transit, and roadways.

San Diego County Congestion Management Program

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP), which is part of SANDAG's Regional Plan. SANDAG is the subregional planning agency for San Diego County and is responsible for the preparation and adoption of the county's CMP. The purpose of the CMP is to monitor the performance of the region's transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. In October 2009, the San Diego region elected to be exempt from the state CMP, and since that decision SANDAG has been abiding by 23 CFR 450.320 (Congestion Management Process in Transportation Management Areas) to ensure the region's compliance with the federal congestion management process.

Local

City of Oceanside General Plan Circulation Element

As required by state law, the City of Oceanside has included and adopted a Circulation Element as part of its General Plan. In tandem with the other elements of the General Plan, the Circulation Element creates and addresses goals and policies related to the City's circulation system. The Master Transportation Roadway Plan, a subsection of the Circulation Element, focuses on maintaining and improving the roadways that comprise the city's transportation network by providing service standards, objectives, and policies. The Master Transportation Roadway Plan is the Circulation Element's main policy tool for designating future road improvements, extensions, and special intersection design treatments. The goals and policies from the Circulation Element related to the proposed project include the following:

Chapter 2: Long Range Policy Direction

Goal 1: A multimodal transportation system, which allows for the efficient and safe movement of all people and goods and which meets current demands and future needs of the population and projected land uses with minimal impact to the environment.

> **Policy 2.5:** The City will strive to incorporate Complete Streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.

Chapter 6: Bicycle Facilities

Goal 1: Provide a safe, interconnected network of bicycle facilities within Oceanside for recreational and commuter users.

Goal 2: Make bicycling a viable mode choice in an effort to reduce congestion, improve air quality, and provide residents and visitors with public health and recreational benefits.

> **Policy 6.3:** The City shall integrate bicycle and pedestrian planning and safety considerations more fully into the planning and design of the roadway network, transit facilities, public buildings, and parks.
>
> **Policy 6.4:** The City shall provide and maintain a safe, direct, and comprehensive bicycle network connecting neighborhoods, employment locations, public facilities, transit stations, parks and other key destinations.
>
> **Policy 6.5:** The City shall plan Class II bicycle lanes into all prime arterial, major arterials, and secondary collectors where safe and appropriate as determined by City staff.

City of Oceanside 2008 Bicycle Master Plan Update

The Bicycle Master Plan's purpose is to maximize the efficiencies offered by multimodal connections between mass transit and bikeways, and to promote a viable alternative to automobile travel within the city. It also aims to establish facility types to be implemented and identify points

where the city's bikeway system could be integrated with the existing San Diego County regional bikeway system.

City of Oceanside 2009 Pedestrian Master Plan Update

The Pedestrian Master Plan's goals and objectives are to enhance pedestrian mobility by providing pedestrian planning that enhances design standards, installing and maintaining pedestrian facilities, and ensuring overall safe pedestrian circulation throughout the city.

3.14.3 Impacts and Mitigation Measures

Significance Criteria

Consistent with Appendix G of the CEQA Guidelines, the project would result in a significant impact on transportation and traffic if it would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
2. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
3. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access or impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
5. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Methodology

To analyze the proposed project's impact on the city's circulation system, the TIA considered both the Complete Streets improvements, which include reducing Coast Highway from four to two lanes, as well as the land use projections associated with the development and redevelopment that may occur under the Incentive District. The Existing Conditions and the Future Conditions without Project scenarios use the existing roadway configuration of Coast Highway, while the Existing Conditions + Project and Future Conditions + Project scenarios use the modified roadway configuration of Coast Highway with implementation of the Complete Streets improvements, as described in Chapter 2, Project Description.

In addition to the different roadway configurations between the traffic scenarios, each traffic scenario also accounts for different land use conditions. Both the Existing Conditions without Project and Existing Conditions + Project scenarios were modeled using a land use assumption representative of existing land uses within the City in 2013. The Existing Conditions without Project sets the existing baseline for the traffic analysis, while the Existing Conditions + Project scenario allows for the analysis of traffic conditions with implementation of the Complete Streets improvements. The Future Conditions without Project scenario represents the future baseline (based on the SANDAG forecast model land use assumptions for the City's General Plan buildout conditions) in order to compare the Future Conditions + Project scenario, which accounts for the Complete Streets improvements and development and/or redevelopment which may occur under the Incentive District.

Intersection Level of Service Analysis Methodologies

The 2010 HCM methodology (TRB 2010) was used to assess the operation of intersections (signalized, unsignalized, roundabouts, and Caltrans facilities). The 2010 HCM methodology presents LOS in terms of control delay in seconds per vehicle, which is defined as the average delay experienced at the traffic intersection. The 2010 HCM methodology defines LOS as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. LOS is described as a range between A and F, where LOS A represents a free-flowing system and LOS F represents a highly congested, slow-moving system. **Table 3.14-2** lists the six qualitative categories of LOS and corresponding ranges of average delay for signalized and unsignalized (side-street stop-controlled and all-way stop-controlled) intersections, analyzed using the 2010 HCM methodology. **Table 3.14-3** shows LOS and associated ranges of delay for roundabouts, which were evaluated using the 2010 HCM methodology.

Traffic operations at study area intersections were evaluated for the AM and PM peak hours for each of the study scenarios. The peak hours are defined by the hour with the highest traffic volumes over the peak two-hour period, typically between 7:00 and 9:00 AM in the morning and between 4:00 and 6:00 PM in the evening. The minimum acceptable LOS established by the Circulation Element of the City of Oceanside General Plan is LOS D for intersections during peak-hour operations, which applies to intersections 1 through 47. For intersections 48 through 56, Caltrans has established significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant.

TABLE 3.14-2
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE
(SIGNALIZED AND UNSIGNALIZED)

Unsignalized Intersections			Signalized Intersections	
Description	**Average Total Vehicle Delay (Seconds)**	**Level of Service Grade**	**Average Control Vehicle Delay (Seconds)**	**Description**
No delay for stop-controlled approaches.	0.0 - 10.0	A	0.0 - 10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	10.1 - 15.0	B	10.1- 20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	15.1 - 25.0	C	20.1- 35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	25.1- 35.0	D	35.1- 55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	35.1- 50.0	E	55.1 - 80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	50.1 or more	F	80.1 or more	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

SOURCE: Transportation Research Board 2000

TABLE 3.14-3
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE
(ROUNDABOUTS)

Level of Service	Description	Control Delay (sec)
A	Little or no delay	0.0 – 10.0
B	Short traffic delays	10.1 – 15.0
C	Average traffic delays	15.1 – 25.0
D	Long traffic delays	25.1 – 35.0
E	Very long traffic delays	35.1 – 50.0
F	Extreme traffic delays with intersection capacity exceeded	50.1 or more

SOURCE: Transportation Research Board 2010.

Future Conditions Traffic Forecasting

Based on existing land uses and SANDAG forecast model runs, existing and future traffic volumes were estimated for the TIA study area. Turning movement volumes at the study area intersections and projected average daily traffic (ADT) volumes along each approach were used in the modeling of the Future (2035) Conditions with and without Project scenarios. The turning movement volumes were based on patterns of existing turning movements and were derived using an iterative method that balanced the inflows and outflows for each intersection approach. Trip rates were based on the Institute of Transportation Engineers *Trip Generation Manual* (9th Edition) and applied to existing and future land uses. A comparison of the different land use scenarios provides an estimate of trips anticipated to be generated between existing and future scenarios, as shown in the appendix of the TIA (see Appendix G of this EIR).

Impact Analysis

Issue 1: Would the proposed project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Proposed Project Network

The circulation network proposed under the project includes the implementation of the Complete Streets improvements, which would occur in a phased implementation process throughout the corridor. The Complete Streets improvements would reduce the number of lanes in the Coast Highway corridor from four lanes to two lanes and would include continuous Class II striped bicycle lanes from Harbor Drive to the southern City limit, additional mid-block crosswalks to facilitate safe and convenient pedestrian crossings of the corridor, and intersection roundabouts in place of traffic signals where physically feasible and where the intersection traffic volumes support implementation. A detailed description of the Complete Streets improvements by segment is provided in Chapter 2, Project Description, and is shown in Figures 2-5 through 2-9.

The proposed intersection roundabouts would be constructed at the following 12 intersections:

2. Coast Highway & SR 76
4. Coast Highway & Surfrider Way
5. Coast Highway & Civic Center Dr.
6. Coast Highway & Pier View Way
18. Coast Highway & Washington Ave.
21. Coast Highway & Wisconsin Ave.
27. Coast Highway & Oceanside Blvd.
29. Coast Highway & Morse Street
35. Coast Highway & Cassidy Street
45. Coast Highway & Michigan Ave.
46. Coast Highway & West Street
47. Coast Highway & Kelly Street

Existing Conditions + Project Scenario

The Existing Conditions + Project scenario was modeled with implementation of the Complete Streets improvements and with a land use condition representative of existing land uses within the city in 2013. **Figures 3.14-3a** through **3.14-3d** illustrate the AM and PM peak-hour volumes for the 54 study intersections analyzed in the Existing Conditions + Project scenario.[3] **Table 3.14-4** summarizes the LOS and delay for both the Existing Conditions and Existing Conditions + Project scenarios for those study area intersections.

TABLE 3.14-4
EXISTING CONDITIONS + PROJECT AM AND PM PEAK-HOUR LEVELS OF SERVICE (LOS)

		Existing Conditions without Project				Existing Conditions + Project				
Intersection		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	Impact
City of Oceanside Intersections										
1	Coast Highway & I-5 Ramps / Harbor Drive	Signalized	AM	28.0	C	Signalized	AM	31.1	C	No
			PM	51.3	D		PM	51.3	D	No
2	Coast Highway & SR 76 Ramps	Signalized	AM	13.7	B	RBT	AM	3.1	A	No
			PM	37.1	D		PM	8.6	A	No
3	Surfrider Way & Pacific Street	AWSC	AM	8.5	A	AWSC	AM	8.5	A	No
			PM	11.2	B		PM	10.5	B	No
4	Coast Highway & Surfrider Way	Signalized	AM	10.4	B	Signalized	AM	6.6	A	No
			PM	14.4	B		PM	17.0	C	No
5	Coast Highway & Civic Center Drive	Signalized	AM	13.7	B	RBT	AM	6.1	A	No
			PM	15.1	B		PM	13.3	B	No

[3] Existing (2013) turning movement volumes are not available for Intersections 46 and 47. Those intersections are analyzed under Future Conditions (2035).

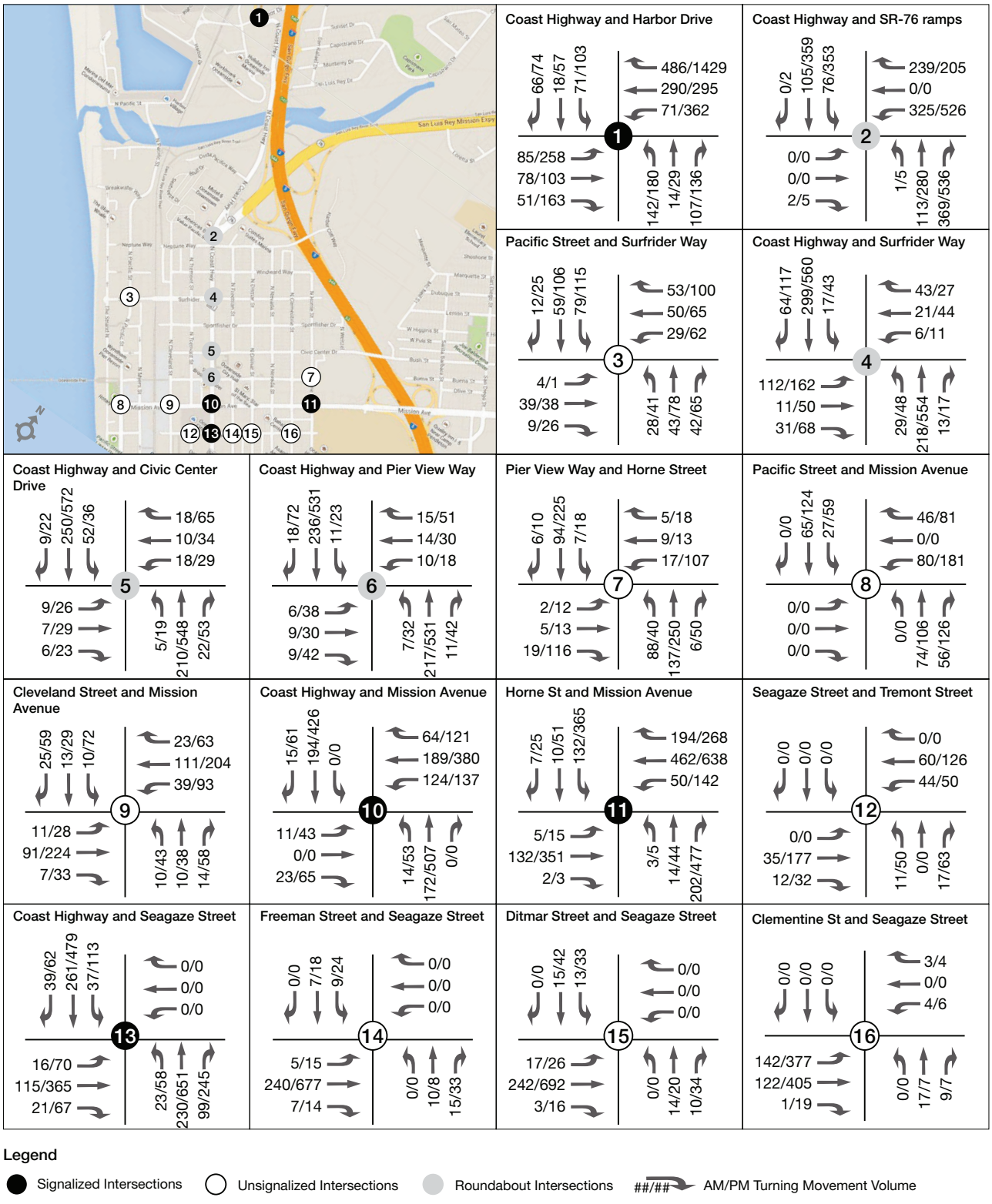
Intersection		Existing Conditions without Project				Existing Conditions + Project				
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	Impact
6	Coast Highway & Pier View Way	Signalized	AM	16.8	B	RBT	AM	5.6	A	No
			PM	16.6	B		PM	12.9	B	No
7	Pier View Way & Horne Street	AWSC	AM	8.7	A	AWSC	AM	8.7	A	No
			PM	11.9	B		PM	11.9	B	No
8	Mission Avenue & Pacific Street	AWSC	AM	7.9	A	AWSC	AM	7.9	A	No
			PM	10.1	B		PM	10.0	A	No
9	Mission Avenue & Cleveland Street	Signalized	AM	8.1	A	Signalized	AM	8.1	A	No
			PM	10.6	B		PM	10.6	B	No
10	Coast Highway & Mission Avenue	Signalized	AM	13.1	B	Signalized	AM	8.0	A	No
			PM	13.8	B		PM	12.2	B	No
11	Mission Avenue & Horne Street	Signalized	AM	7.4	A	Signalized	AM	6.7	A	No
			PM	18.9	B		PM	17.1	B	No
12	Seagaze Street & Tremont Street	SSSC	AM	3.3	A	SSSC	AM	9.1	A	No
			PM	11.5	B		PM	11.5	B	No
13	Coast Highway & Seagaze Street	Signalized	AM	14.7	B	Signalized	AM	16.1	B	No
			PM	23.9	C		PM	27.3	C	No
14	Seagaze Street & Freeman Street	SSSC	AM	10.3	A	SSSC	AM	10.3	B	No
			PM	15.6	C		PM	15.6	C	No
15	Seagaze Street & Ditmar Street	AWSC	AM	7.9	A	AWSC	AM	7.6	A	No
			PM	12.5	B		PM	12.0	B	No
16	Seagaze Street & Clementine Street	SSSC	AM	7.9	A	SSSC	AM	7.9	A	No
			PM	13.1	B		PM	8.3	A	No
17	Coast Highway & Missouri Avenue	SSSC	AM	12.0	B	SSSC	AM	10.0	A	No
			PM	23.9	C		PM	13.5	B	No
18	Coast Highway & Washington Avenue	SSSC	AM	11.3	B	RBT	AM	6.4	A	No
			PM	22.0	C		PM	13.2	B	No
19	Wisconsin Avenue & Pacific Street	AWSC	AM	8.1	A	AWSC	AM	7.8	A	No
			PM	9.8	A		PM	9.5	A	No
20	Wisconsin Avenue & Tremont Street	SSSC	AM	10.6	B	SSSC	AM	10.6	B	No
			PM	14.0	B		PM	14.0	B	No
21	Coast Highway & Wisconsin Avenue	Signalized	AM	8.9	A	RBT	AM	7.0	A	No
			PM	12.2	B		PM	22.0	C	No
22	Wisconsin Avenue & Freeman Street	SSSC	AM	9.1	A	SSSC	AM	9.1	A	No
			PM	9.7	A		PM	9.7	A	No
23	Wisconsin Avenue & Ditmar Street (North)	SSSC	AM	9.7	A	SSSC	AM	9.7	A	No
			PM	10.1	B		PM	10.1	B	No
24	Wisconsin Avenue & Ditmar Street (South)	AWSC	AM	7.5	A	AWSC	AM	7.3	A	No
			PM	7.9	A		PM	7.9	A	No
25	Oceanside Boulevard & Pacific Street	AWSC	AM	8.0	A	AWSC	AM	7.7	A	No
			PM	9.0	A		PM	8.7	A	No
26	Oceanside Boulevard & Tremont Street	SSSC	AM	10.9	B	SSSC	AM	10.9	B	No
			PM	14.7	B		PM	14.6	B	No

Intersection		Existing Conditions without Project				Existing Conditions + Project				
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	Impact
27	Coast Highway & Oceanside Boulevard	Signalized	AM	29.7	C	Signalized	AM	9.9	A	No
			PM	39.7	D		**PM**	**52.1**	**F**	**Yes**
28	Oceanside Boulevard & Ditmar Street	Signalized	AM	5.7	A	Signalized	AM	5.4	A	No
			PM	6.8	A		PM	5.9	A	No
29	Coast Highway & Morse Street	Signalized	AM	9.0	A	Signalized	AM	7.5	A	No
			PM	9.8	A		PM	20.9	C	No
30	Morse Street & Freeman Street	SSSC	AM	9.0	A	SSSC	AM	9.0	A	No
			PM	10.0	B		PM	10.0	B	No
31	Morse Street & Ditmar Street	SSSC	AM	8.8	A	SSSC	AM	8.8	A	No
			PM	9.2	A		PM	9.2	A	No
32	Cassidy Street & Pacific Street	AWSC	AM	7.7	A	AWSC	AM	7.3	A	No
			PM	9.3	A		PM	8.7	A	No
33	Cassidy Street & Broadway Street	SSSC	AM	10.3	B	SSSC	AM	10.3	B	No
			PM	14.5	B		PM	14.5	B	No
34	Cassidy Street & Tremont Street	SSSC	AM	9.9	A	SSSC	AM	9.9	A	No
			PM	12.4	B		PM	12.4	B	No
35	Coast Highway & Cassidy Street	Signalized	AM	9.1	A	Signalized	AM	7.8	A	No
			PM	14.0	B		**PM**	**61.9**	**F**	**Yes**
36	Cassidy Street & Freeman Street	SSSC	AM	10.2	B	SSSC	AM	10.2	B	No
			PM	12.7	B		PM	12.7	B	No
37	Cassidy Street & Ditmar Street	AWSC	AM	8.1	A	AWSC	AM	7.9	A	No
			PM	9.5	A		PM	9.0	A	No
38	Cassidy Street & Stewart Street	AWSC	AM	9.3	A	AWSC	AM	8.9	A	No
			PM	13.2	B		PM	12.0	B	No
39	Vista Way & Broadway Street	SSSC	AM	7.4	A	SSSC	AM	7.4	A	No
			PM	7.6	A		PM	7.6	A	No
40	Coast Highway & Vista Way	Signalized	AM	22.7	C	Signalized	AM	24.2	C	No
			PM	37.0	D		PM	46.4	D	No
41	Vista Way & Freeman Street	SSSC	AM	12.2	B	SSSC	AM	12.2	B	No
			PM	15.3	C		PM	15.3	C	No
42	Vista Way & Ditmar Street	SSSC	AM	13.0	B	SSSC	AM	13.0	B	No
			PM	18.7	C		PM	18.7	C	No
43	Vista Way & Stewart Street	SSSC	AM	12.3	B	SSSC	AM	12.3	B	No
			PM	17.4	C		PM	17.4	C	No
44	Coast Highway & Eaton Street	SSSC	AM	12.8	B	SSSC	AM	12.0	B	No
			PM	14.3	B		PM	16.5	C	No
45	Coast Highway & Michigan Avenue	Signalized	AM	7.3	A	RBT	AM	6.7	A	No
			PM	9.0	A		PM	22.5	C	No
46	Coast Highway & West Street	SSSC	AM	--	--	RBT	AM	--	--	--
			PM	--	--		PM	--	--	--
47	Coast Highway & Kelly Street	SSSC	AM	--	--	SSSC	AM	--	--	--
			PM	--	--		PM	--	--	--

	Intersection	Existing Conditions without Project				Existing Conditions + Project				Impact
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	
Caltrans Intersections										
48	Harbor/Vandergrift Blvd & I-5 NB On-Ramp/San Rafael Drive	Signalized	AM	17.6	B	Signalized	AM	17.6	B	No
			PM	22.7	C		PM	22.7	C	No
49	SR 76 & I-5 SB On-Ramp	Signalized	AM	8.9	A	Signalized	AM	8.9	A	No
			PM	6.9	A		PM	6.9	A	No
50	SR 76 & I-5 NB On-/Off-Ramp	Signalized	AM	21	C	Signalized	AM	21.0	C	No
			PM	25.5	C		PM	25.5	C	No
51	Mission & I-5 SB Off-Ramp	Signalized	AM	23.0	C	Signalized	AM	23.0	C	No
			PM	35.0	C		PM	35.0	C	No
52	Oceanside & I-5 SB On-/Off-Ramp	Signalized	AM	46.6	D	Signalized	AM	46.6	D	No
			PM	43.3	D		PM	43.3	D	No
53	Oceanside & I-5 NB On-/Off-Ramp	Signalized	AM	34.2	C	Signalized	AM	34.2	C	No
			PM	39.2	D		PM	39.2	D	No
54	California & I-5 NB On-Ramp	AWSC	AM	8.9	A	AWSC	AM	8.9	A	No
			PM	8.7	A		PM	8.7	A	No
55	Cassidy & I-5 SB On-/Off-Ramp	SSSC	AM	11	B	SSSC	AM	11.0	B	No
			PM	11.2	B		PM	11.2	B	No
56	Vista Way & I-5 SB On-/Off-Ramp	Signalized	AM	50	D	Signalized	AM	50.0	D	No
			PM	174.2	F		PM	174.2	F	No

Notes:
A. Delay is expressed as an average seconds of delay per vehicle
B. LOS – Level of Service
C. AWSC – All-way stop control intersection
D. SSSC – Side-street stop control intersection
E. RBT – Roundabout
F. The minimum acceptable LOS is “D” for intersections 1-47
G. For intersections 48 through 56, Caltrans has established significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project’s contribution to be significant.
H. Existing volumes not available for intersections 46 and 47

SOURCE: IBI 2018.

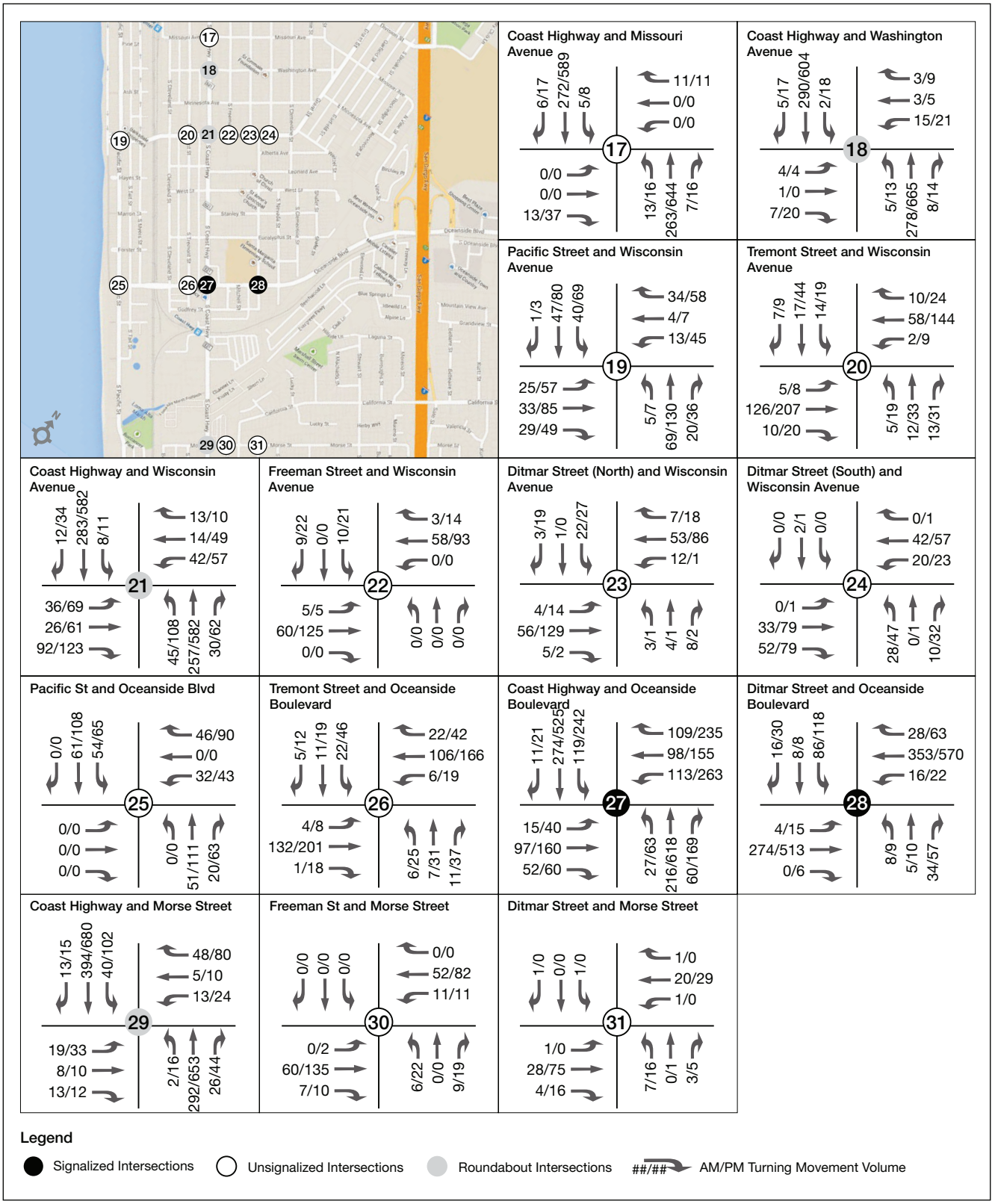


City of Oceanside Coast Highway Corridor Study. 130217

SOURCE: IBI Group, 2018

Figure 3.14-3a

Existing Conditions + Project Peak Hour Volumes – AM & PM

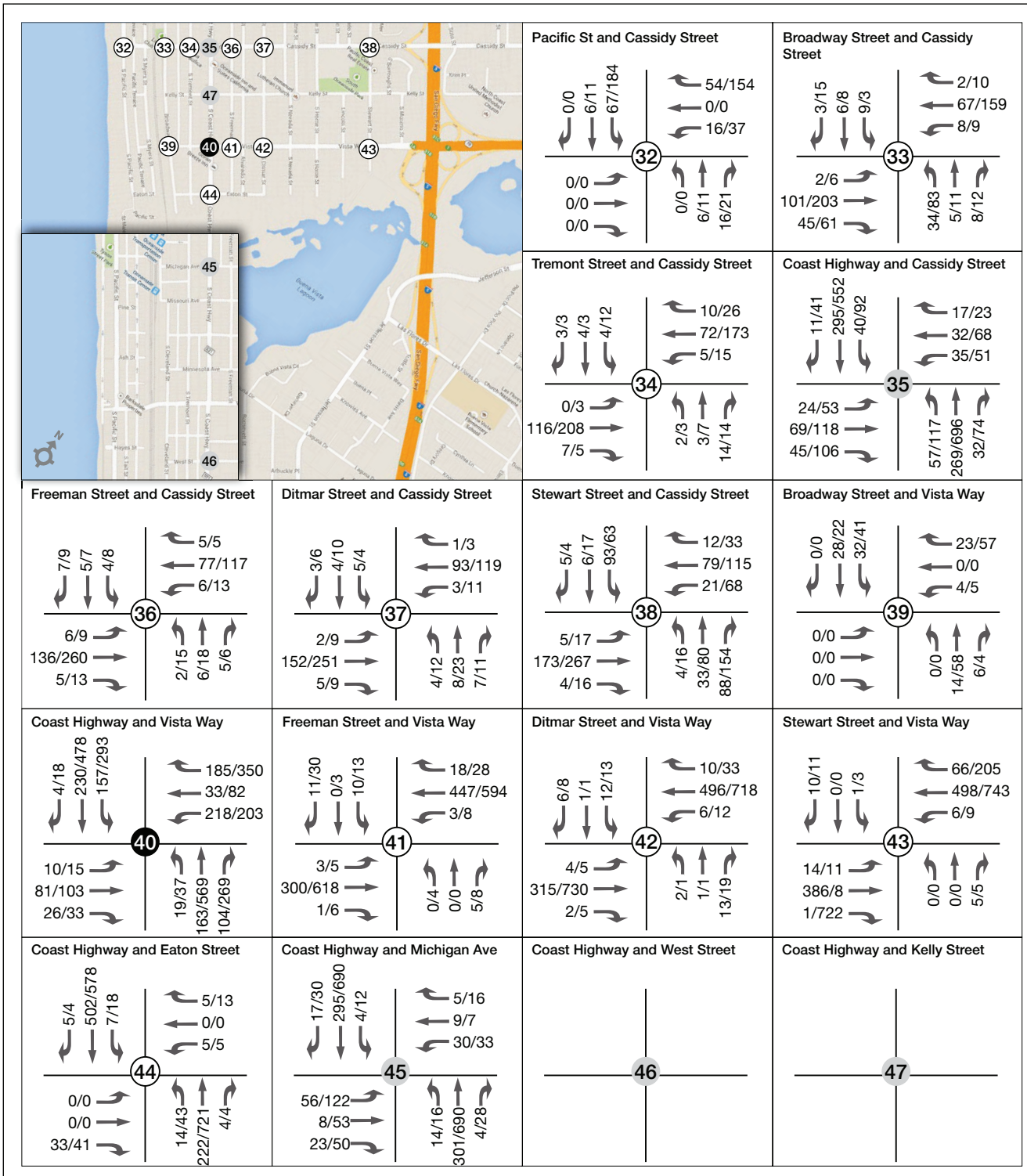


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-3b

Existing Conditions + Project Peak Hour Volumes – AM & PM

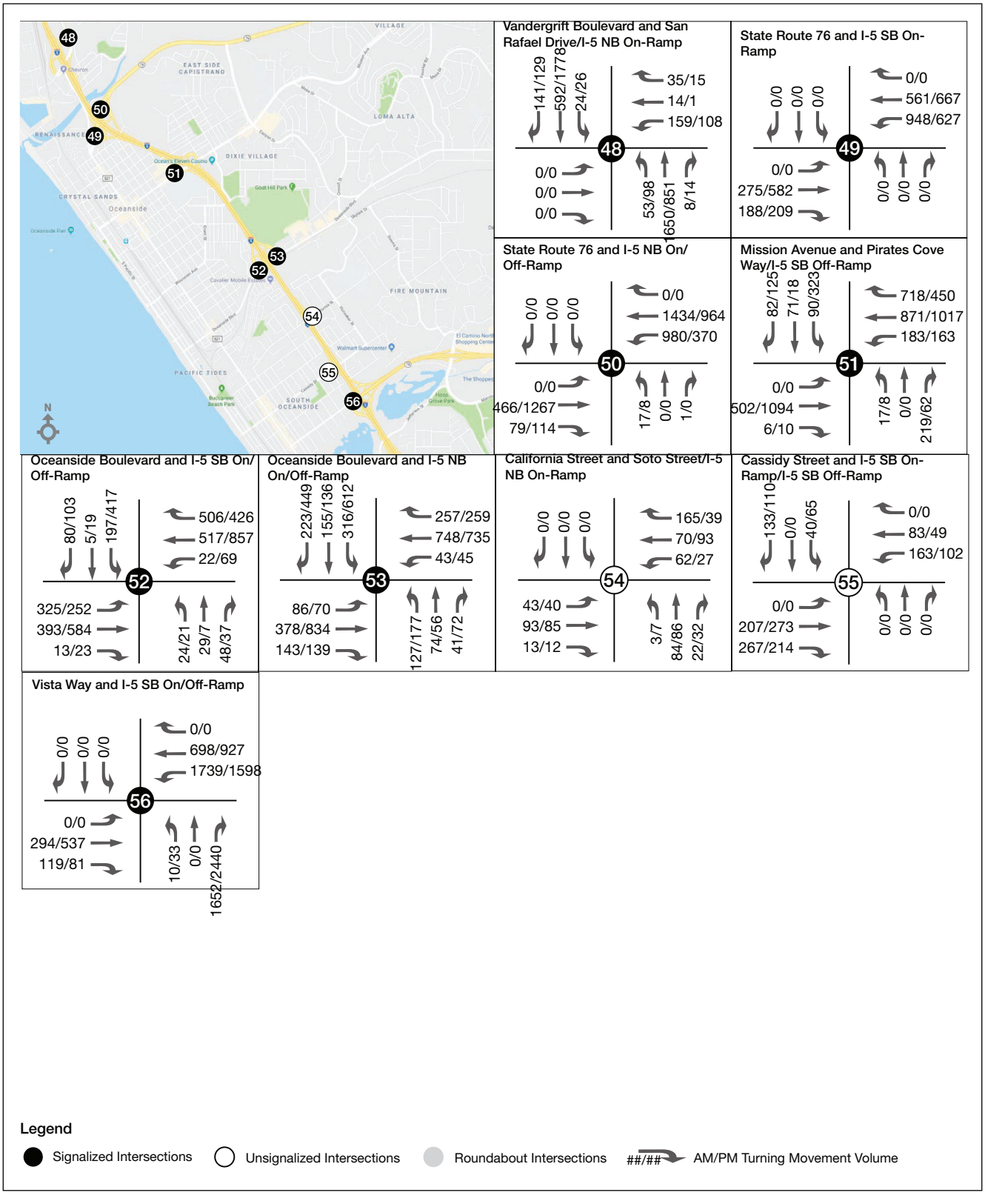


City of Oceanside Coast Highway Corridor Study. 130217

SOURCE: IBI Group, 2018

Figure 3.14-3c

Existing Conditions + Project Peak Hour Volumes – AM & PM



City of Oceanside Coast Highway Corridor Study. 130217

SOURCE: IBI Group, 2018

Figure 3.14-3d

Existing Conditions + Project Peak Hour Volumes – AM & PM

As shown in Table 3.14-4, implementation of the Complete Streets improvements would result in an unacceptable LOS (LOS E or LOS F) at two study intersections, both of which are locations where roundabouts would be installed:

27. Coast Highway & Oceanside Boulevard – LOS F during PM peak-hour

35. Coast Highway & Cassidy Street – LOS F during PM peak-hour

Thus, a potentially significant impact would occur at these two study intersections under the Existing Conditions + Project scenario.

Future Conditions without Project Scenario

As stated above, the Future Conditions without Project scenario was modeled using the existing configuration of Coast Highway (four lanes) and the future year 2035 land use condition under the City's General Plan based on the SANDAG forecast model land use assumptions. **Figures 3.14-4a** through **3.14-4d** illustrate the AM and PM peak-hour volumes for the 56 study intersections in the Future Conditions without Project scenario. **Table 3.14-5** summarizes the LOS and forecasted delay for the Future Conditions without Project scenario at the study area intersections.

TABLE 3.14-5
FUTURE CONDITIONS WITHOUT PROJECT AM AND PM PEAK-HOUR LEVELS OF SERVICE (LOS)

	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
City of Oceanside Intersections						
1	Coast Highway & I-5 Ramps / Harbor Drive	Signalized	31.1	C	**68.9**	**E**
2	Coast Highway & SR 76 Ramps	Signalized	12.7	B	25.6	C
3	Surfrider Way & Pacific Street	AWSC	10.4	B	19.5	C
4	Coast Highway & Surfrider Way	Signalized	16.4	B	17.1	B
5	Coast Highway & Civic Center Drive	Signalized	13.2	B	15.6	B
6	Coast Highway & Pier View Way	Signalized	19.2	B	8.7	A
7	Pier View Way & Horne Street	AWSC	9.4	A	17.6	C
8	Mission Avenue & Pacific Street	AWSC	9.5	A	19.4	C
9	Mission Avenue & Cleveland Street	Signalized	18.8	B	17.7	B
10	Coast Highway & Mission Avenue	Signalized	12	B	12.8	B
11	Mission Avenue & Horne Street	Signalized	6.9	A	10.7	B
12	Seagaze Street & Tremont Street	SSSC	9.8	A	17.1	C
13	Coast Highway & Seagaze Street	Signalized	15.8	B	22.7	C
14	Seagaze Street & Freeman Street	SSSC	10.1	B	15	B
15	Seagaze Street & Ditmar Street	AWSC	8.6	A	30.2	D
16	Seagaze Street & Clementine Street	SSSC	8.3	A	17.7	C
17	Coast Highway & Missouri Avenue	SSSC	10.8	B	15.7	C
18	Coast Highway & Washington Avenue	SSSC	9.9	A	13.8	B

Intersection		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay (sec)	LOS	Delay (sec)	LOS
19	Wisconsin Avenue & Pacific Street	AWSC	10.1	B	**51.3**	**F**
20	Wisconsin Avenue & Tremont Street	SSSC	10.8	B	14.9	B
21	Coast Highway & Wisconsin Avenue	Signalized	14.5	B	24.5	C
22	Wisconsin Avenue & Freeman Street	SSSC	11.5	B	19.4	C
23	Wisconsin Avenue & Ditmar Street (North)	SSSC	13.2	B	17.9	C
24	Wisconsin Avenue & Ditmar Street (South)	AWSC	9.5	A	23.7	C
25	Oceanside Boulevard & Pacific Street	AWSC	9.1	A	12.1	B
26	Oceanside Boulevard & Tremont Street	SSSC	14.3	B	**91**	**F**
27	Coast Highway & Oceanside Boulevard	Signalized	26.2	C	32.1	C
28	Oceanside Boulevard & Ditmar Street	Signalized	14.9	B	15.3	B
29	Coast Highway & Morse Street	Signalized	19.6	B	22.9	C
30	Morse Street & Freeman Street	SSSC	12.9	B	**112.9**	**F**
31	Morse Street & Ditmar Street	SSSC	9.5	A	11.5	B
32	Cassidy Street & Pacific Street	AWSC	8.6	A	16.8	C
33	Cassidy Street & Broadway Street	SSSC	16	C	**397.4**	**F**
34	Cassidy Street & Tremont Street	SSSC	10.1	B	13.1	B
35	Coast Highway & Cassidy Street	Signalized	18.5	B	20	C
36	Cassidy Street & Freeman Street	SSSC	21.4	C	**OVF**	**F**
37	Cassidy Street & Ditmar Street	AWSC	7.6	A	8.6	A
38	Cassidy Street & Stewart Street	AWSC	9.2	A	13.8	B
39	Vista Way & Broadway Street	SSSC	8.5	A	9.4	A
40	Coast Highway & Vista Way	Signalized	32.8	C	**78.9**	**E**
41	Vista Way & Freeman Street	SSSC	34	D	**OVF**	**F**
42	Vista Way & Ditmar Street	SSSC	26.2	D	**294.2**	**F**
43	Vista Way & Stewart Street	SSSC	22	C	**69.1**	**F**
44	Coast Highway & Eaton Street	SSSC	14.9	B	17.4	C
45	Coast Highway & Michigan Avenue	Signalized	4.7	A	5.4	A
46	Coast Highway & West Street	SSSC	9.6	A	11.2	B
47	Coast Highway & Kelly Street	SSSC	10	B	12.7	B
Caltrans Intersections						
48	Harbor/Vandegrift Blvd & I-5 NB On Ramp/San Rafael Drive	Signalized	15	B	37.4	D
49	SR 76 & I-5 SB On-Ramp	Signalized	4.8	A	4.4	A
50	SR 76 & I-5 NB On-/Off-Ramp	Signalized	17.1	B	27.3	C
51	Mission & I-5 SB Off-Ramp	Signalized	16.3	B	23.5	C
52	Oceanside & I-5 SB On-/Off-Ramp	Signalized	28.3	C	34.9	C
53	Oceanside & I-5 NB On-/Off-Ramp	Signalized	35.7	D	42.8	D
54	California & I-5 NB On-Ramp	AWSC	8.3	A	8.2	A
55	Cassidy & I-5 SB On-/Off-Ramp	SSSC	9.3	A	9.5	A
56	Vista Way & I-5 SB On-/Off-Ramp	Signalized	25.8	C	**88**	**F**

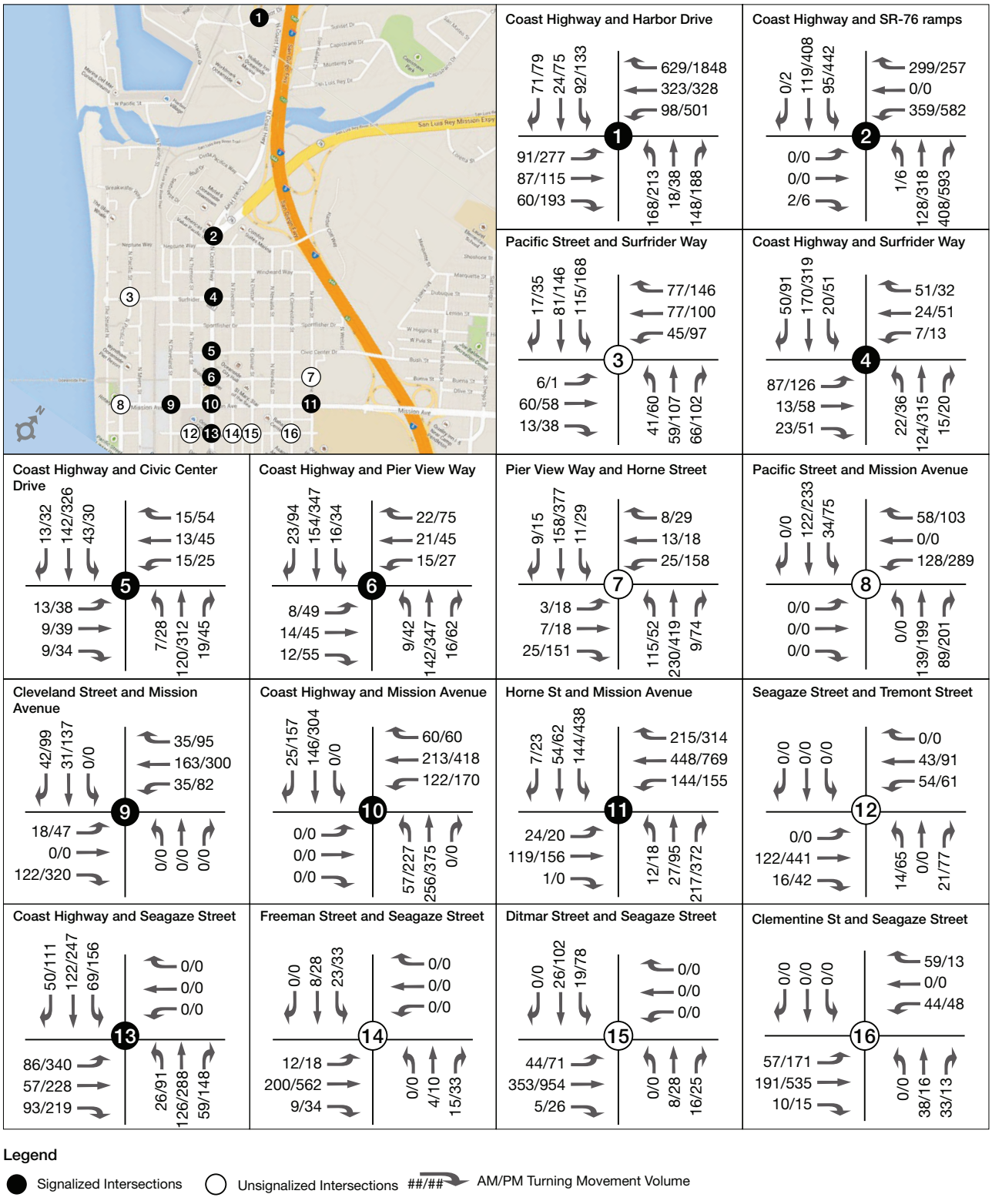
Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS

Notes:
A. Delay is expressed as an average seconds of delay per vehicle
B. LOS – Level of Service
C. AWSC – All-way stop control intersection
D. SSSC – Side-street stop control intersection
E. OVF – Overflow, Synchro is unable to calculate a level of delay
F. RBT – Roundabout
G. The minimum acceptable LOS is "D" for intersections 1-47
H. The minimum acceptable LOS is "C and D"; a change from C or D to a lower LOS will cause an impact for intersections 48-56; However, if pre-project LOS is a LOS D, and does not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant.

SOURCE: IBI 2018.

As shown in Table 3.14-5, all study intersections would operation at an acceptable LOS under the Future (2035) Conditions without Project scenario, with the exception of the following 11 intersections, which would operate at an unacceptable LOS:

1. Coast Highway & Harbor Drive / I-5 Ramps – LOS E during PM peak-hour
19. Wisconsin Avenue & Pacific Street – LOS F during PM peak-hour
26. Oceanside Boulevard & Tremont Street – LOS F during PM peak-hour
30. Morse Street & Freeman Street – LOS F during PM peak-hour
33. Cassidy Street & Broadway Street – LOS F during PM peak-hour
36. Cassidy Street & Freeman Street – LOS F during PM peak-hour
40. Coast Highway & Vista Way – LOS E during PM peak-hour
41. Vista Way & Freeman Street – LOS F during PM peak-hour
42. Vista Way & Ditmar Street – LOS F during PM peak-hour
43. Vista Way & Stewart Street – LOS F during PM peak-hour
56. Vista Way & I-5 SB On-/Off-Ramp – LOS F during PM peak-hour

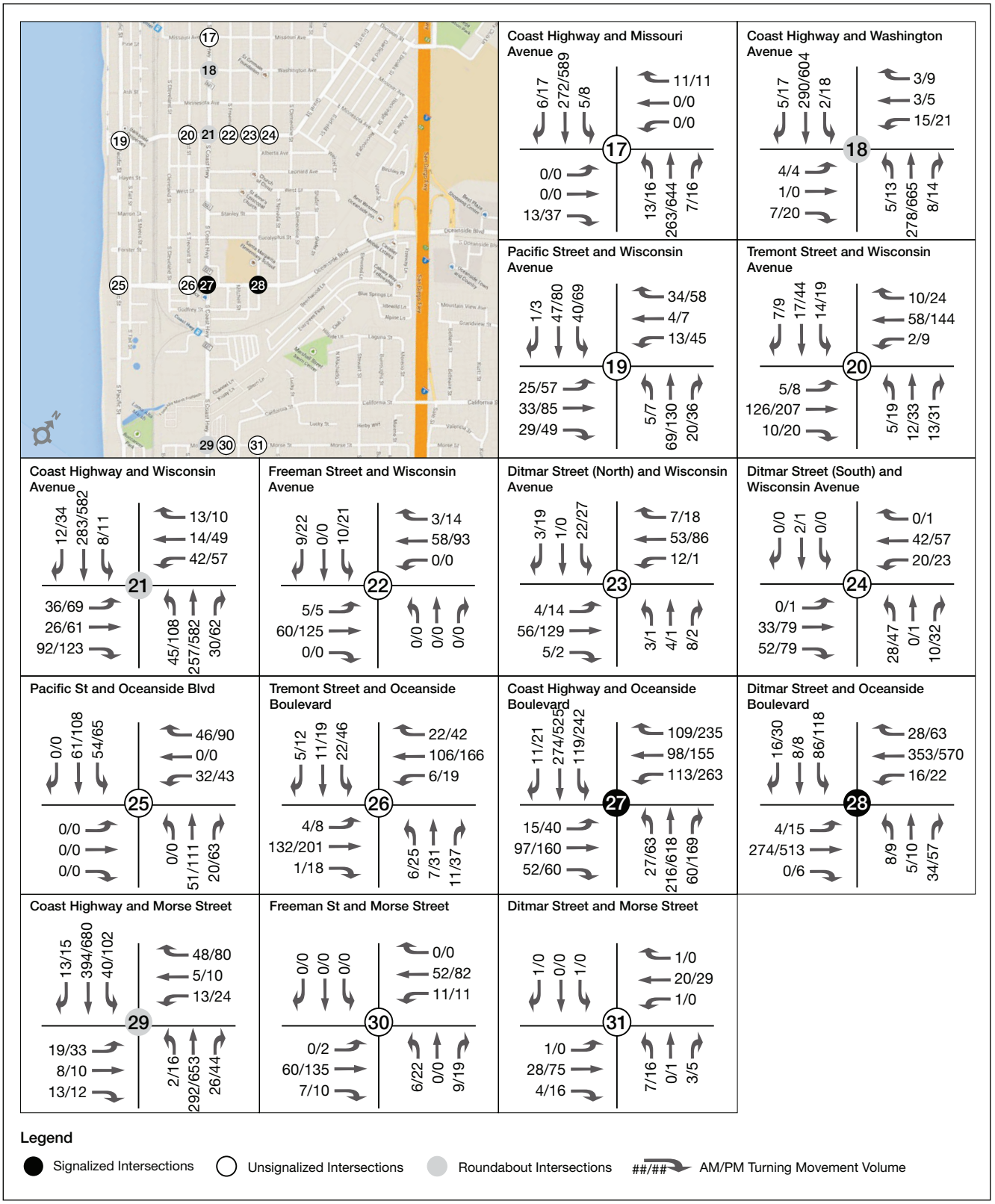


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-4a

Future Conditions without Project Peak Hour Volumes – AM & PM

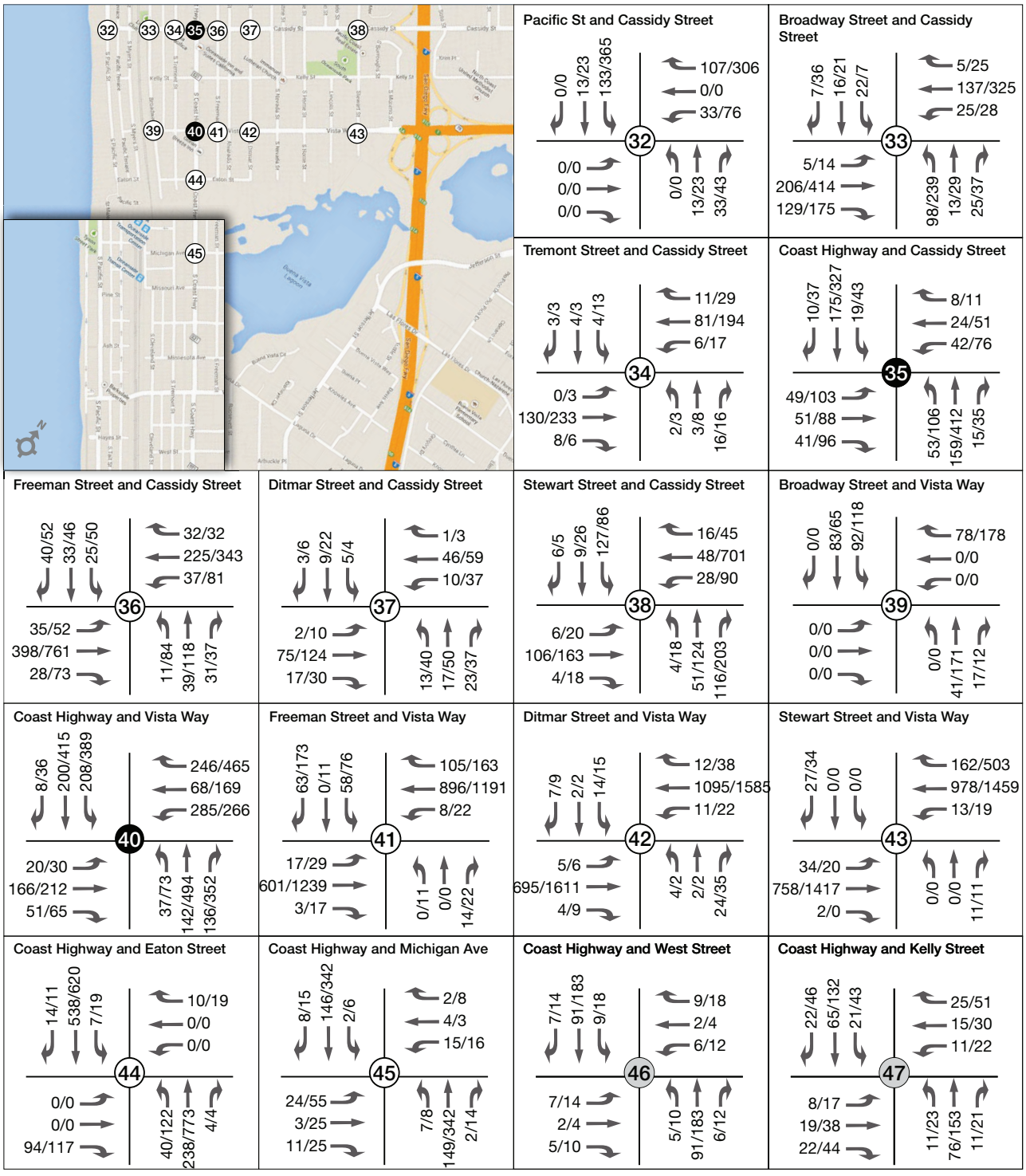


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-4b

Future Conditions without Project Peak Hour Volumes – AM & PM

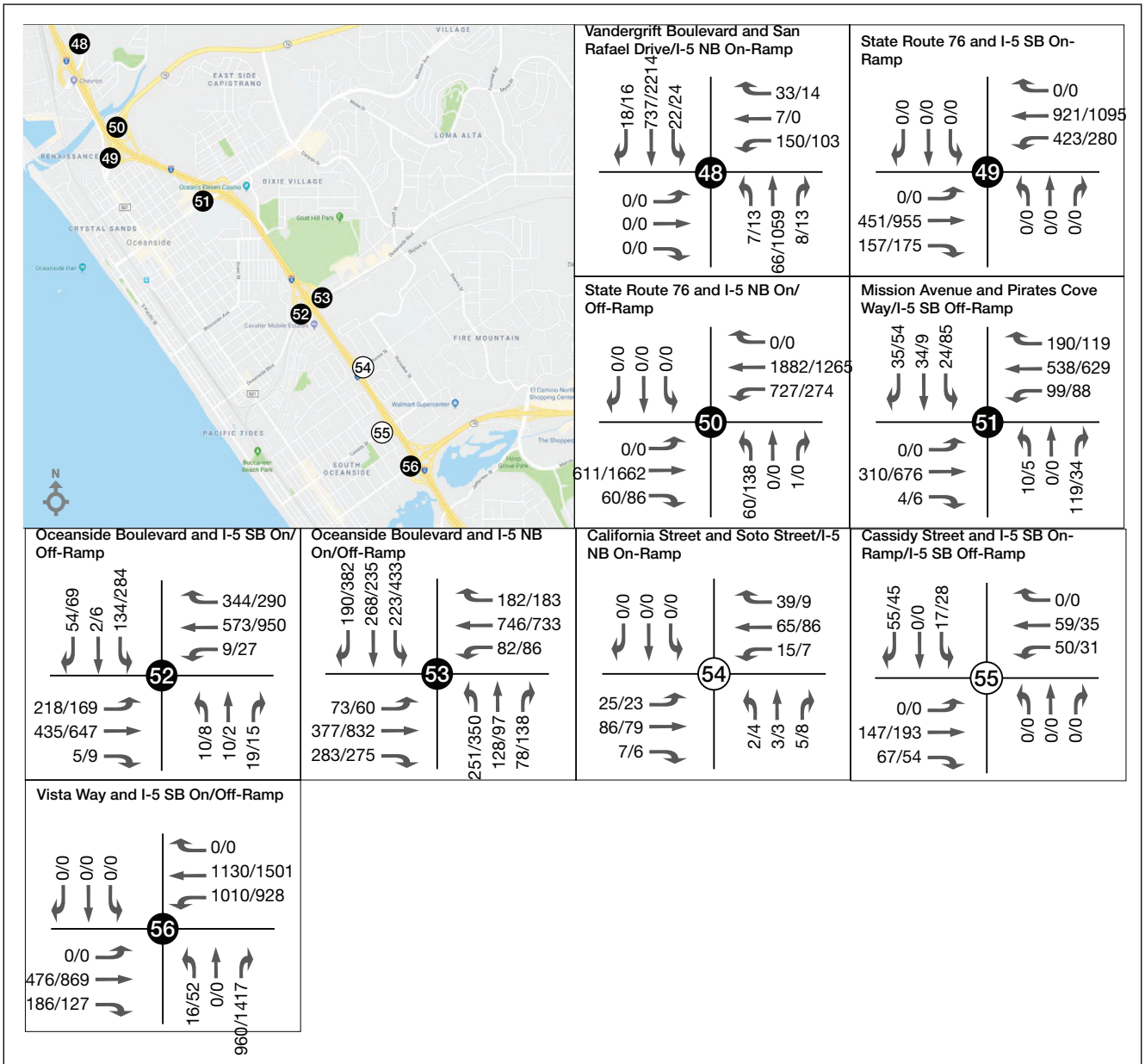


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-4c

Future Conditions without Project Peak Hour Volumes – AM & PM



City of Oceanside Coast Highway Corridor Study. 130217

SOURCE: IBI Group, 2018

Figure 3.14-4d

Future Conditions without Project Peak Hour Volumes – AM & PM

Future Conditions + Project Scenario

The Future Conditions + Project scenario was modeled using the proposed reconfiguration of Coast Highway with implementation of the Complete Streets improvements and the future Incentive District land use condition, which accounts for development and/or redevelopment that may occur under the Incentive District. **Figures 3.14-5a** through **3.14-5d** illustrate the AM and PM peak-hour volumes for the 56 study intersections in the Future Conditions + Project scenario. **Table 3.14-6** summarizes the LOS and delay for both the Future Conditions with and without Project scenarios at the study area intersections. As stated above, the City has established a minimum acceptable LOS of LOS D for intersections during peak-hour operations (i.e., LOS E or LOS F are unacceptable service levels), which applies to intersections 1 through 47. For intersections 48 through 56, Caltrans has established significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant.

TABLE 3.14-6
FUTURE CONDITIONS + PROJECT AM AND PM PEAK-HOUR LEVELS OF SERVICE (LOS)

		Future Conditions without Project				Future Conditions + Project				
Intersection		**Traffic Control**	**Peak Hour**	**Delay (s)**	**LOS**	**Traffic Control**	**Peak Hour**	**Delay (s)**	**LOS**	**Impact**
City of Oceanside Intersections										
1	Coast Highway & I-5 Ramps / Harbor Drive	Signalized	AM	31.1	C	Signalized	AM	29.8	C	No
			PM	68.9	E		PM	53.7	D	No
2	Coast Highway & SR 76 Ramps	Signalized	AM	12.7	B	RBT	AM	3.0	A	No
			PM	25.6	C		PM	17.8	C	No
3	Surfrider Way & Pacific Street	AWSC	AM	10.4	B	AWSC	AM	9.7	A	No
			PM	19.5	C		PM	14.6	B	No
4	Coast Highway & Surfrider Way	Signalized	AM	16.4	B	RBT	AM	5.8	A	No
			PM	17.1	B		**PM**	**71**	**F**	**Yes**
5	Coast Highway & Civic Center Drive	Signalized	AM	13.2	B	RBT	AM	7.3	A	No
			PM	15.6	B		PM	30.6	D	No
6	Coast Highway & Pier View Way	Signalized	AM	19.2	B	RBT	AM	7.1	A	No
			PM	8.7	A		**PM**	**46.4**	**E**	**Yes**
7	Pier View Way & Horne Street	AWSC	AM	9.4	A	AWSC	AM	8.9	A	No
			PM	17.6	C		PM	11.9	B	No
8	Mission Avenue & Pacific Street	AWSC	AM	9.5	A	AWSC	AM	9.3	A	No
			PM	19.4	C		PM	17.6	C	No
9	Mission Avenue & Cleveland Street	Signalized	AM	18.8	B	Signalized	AM	13.0	B	No
			PM	17.7	B		PM	14.8	B	No
10	Coast Highway & Mission Avenue	Signalized	AM	12.0	B	Signalized	AM	15.2	B	No
			PM	12.8	B		PM	30.6	C	No

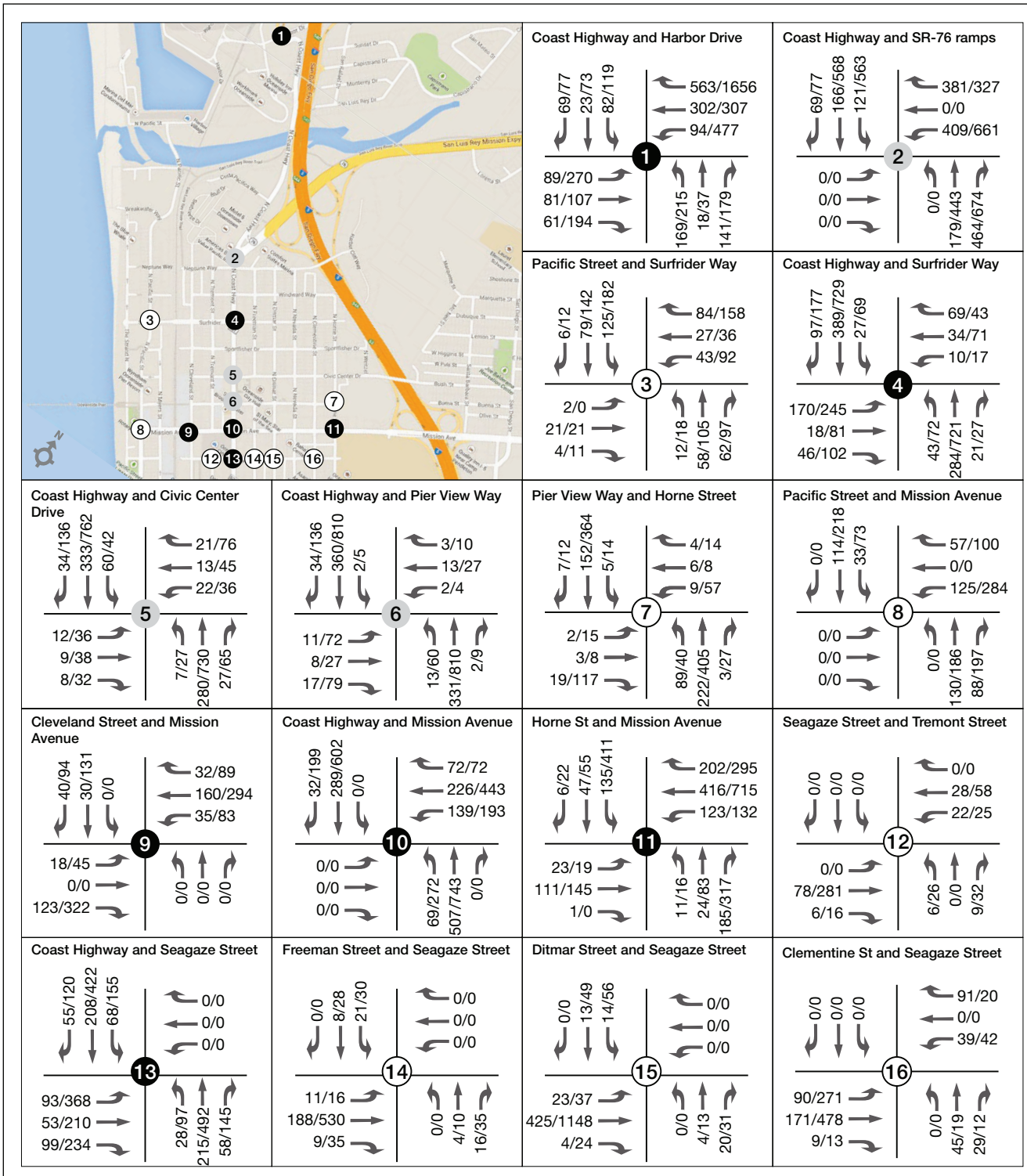
Intersection		Future Conditions without Project				Future Conditions + Project				
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	Impact
11	Mission Avenue & Horne Street	Signalized	AM	6.9	A	Signalized	AM	13.3	B	No
			PM	10.7	B		PM	12.8	B	No
12	Seagaze Street & Tremont Street	SSSC	AM	9.8	A	SSSC	AM	9.1	A	No
			PM	17.1	C		PM	11.2	B	No
13	Coast Highway & Seagaze Street	Signalized	AM	15.8	B	Signalized	AM	13.1	B	No
			PM	22.7	C		PM	16.7	B	No
14	Seagaze Street & Freeman Street	SSSC	AM	10.1	B	SSSC	AM	10.0	B	No
			PM	15.0	B		PM	14.4	B	No
15	Seagaze Street & Ditmar Street	AWSC	AM	8.6	A	AWSC	AM	8.7	A	No
			PM	30.2	D		**PM**	**38**	**E**	**Yes**
16	Seagaze Street & Clementine Street	SSSC	AM	8.3	A	SSSC	AM	8.2	A	No
			PM	17.7	C		PM	14.3	B	No
17	Coast Highway & Missouri Avenue	SSSC	AM	10.8	B	SSSC	AM	10.0	A	No
			PM	15.7	C		PM	13.3	B	No
18	Coast Highway & Washington Avenue	SSSC	AM	9.9	A	RBT	AM	5.9	A	No
			PM	13.8	B		PM	12.9	B	No
19	Wisconsin Avenue & Pacific Street	AWSC	AM	10.1	B	AWSC	AM	9.7	A	No
			PM	51.3	F		PM	20.4	C	No
20	Wisconsin Avenue & Tremont Street	SSSC	AM	10.8	B	SSSC	AM	12.7	B	No
			PM	14.9	B		PM	30.8	D	No
21	Coast Highway & Wisconsin Avenue	Signalized	AM	14.5	B	RBT	AM	8.5	A	No
			PM	24.5	C		**PM**	**57.8**	**F**	**Yes**
22	Wisconsin Avenue & Freeman Street	SSSC	AM	11.5	B	SSSC	AM	10.9	B	No
			PM	19.4	C		PM	14.9	B	No
23	Wisconsin Avenue & Ditmar Street (North)	SSSC	AM	13.2	B	SSSC	AM	13.1	B	No
			PM	17.9	C		PM	17.9	C	No
24	Wisconsin Avenue & Ditmar Street (South)	AWSC	AM	9.5	A	AWSC	AM	9.7	A	No
			PM	23.7	C		PM	26.5	D	No
25	Oceanside Boulevard & Pacific Street	AWSC	AM	9.1	A	AWSC	AM	9.2	A	No
			PM	12.1	B		PM	12.6	B	No
26	Oceanside Boulevard & Tremont Street	SSSC	AM	14.3	B	SSSC	AM	13.9	B	No
			PM	91	F		PM	42.1	E	No
27	Coast Highway & Oceanside Boulevard	Signalized	AM	26.2	C	RBT	AM	11.2	B	No
			PM	32.1	C		**PM**	**254**	**F**	**Yes**
28	Oceanside Boulevard & Ditmar Street	Signalized	AM	14.9	B	Signalized	AM	15.3	B	No
			PM	15.3	B		PM	16.5	B	No
29	Coast Highway & Morse Street	Signalized	AM	19.6	B	Signalized	AM	10.8	B	No
			PM	22.9	C		**PM**	**134.8**	**F**	**Yes**

Intersection		Future Conditions without Project				Future Conditions + Project				
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	Impact
30	Morse Street & Freeman Street	SSSC	AM	12.9	B	SSSC	AM	10.5	B	No
			PM	112.9	F		PM	16.8	C	No
31	Morse Street & Ditmar Street	SSSC	AM	9.5	A	SSSC	AM	9.3	A	No
			PM	11.5	B		PM	10.9	B	No
32	Cassidy Street & Pacific Street	AWSC	AM	8.6	A	AWSC	AM	8.6	A	No
			PM	16.8	C		PM	17	C	No
33	Cassidy Street & Broadway Street	SSSC	AM	16.0	C	SSSC	AM	11.6	B	No
			PM	397.4	F		PM	26.5	D	No
34	Cassidy Street & Tremont Street	SSSC	AM	10.1	B	SSSC	AM	10.3	B	No
			PM	13.1	B		PM	12.7	B	No
35	Coast Highway & Cassidy Street	Signalized	AM	18.5	B	RBT	AM	9.4	A	No
			PM	20.0	C		**PM**	**166.3**	**F**	**Yes**
36	Cassidy Street & Freeman Street	SSSC	AM	21.4	C	SSSC	AM	11.0	B	No
			PM	OVF	F		PM	26.1	D	No
37	Cassidy Street & Ditmar Street	AWSC	AM	7.6	A	AWSC	AM	7.5	A	No
			PM	8.6	A		PM	8.5	A	No
38	Cassidy Street & Stewart Street	AWSC	AM	9.2	A	AWSC	AM	8.9	A	No
			PM	13.8	B		PM	12.4	B	No
39	Vista Way & Broadway Street	SSSC	AM	8.5	A	SSSC	AM	8.0	A	No
			PM	9.4	A		PM	8.4	A	No
40	Coast Highway & Vista Way	Signalized	AM	32.8	C	Signalized	AM	35.5	D	No
			PM	78.9	E		PM	66.3	E	No
41	Vista Way & Freeman Street	SSSC	AM	34	D	SSSC	AM	16.8	C	No
			PM	OVF	F		PM	49.4	E	No
42	Vista Way & Ditmar Street	SSSC	AM	26.2	D	SSSC	AM	25.2	D	No
			PM	294.2	F		**PM**	**OVF**	**F**	**Yes**
43	Vista Way & Stewart Street	SSSC	AM	22	C	SSSC	AM	22.1	C	No
			PM	69.1	F		PM	66.8	F	No
44	Coast Highway & Eaton Street	SSSC	AM	14.9	B	SSSC	AM	16.3	C	No
			PM	17.4	C		PM	33.5	D	No
45	Coast Highway & Michigan Avenue	Signalized	AM	4.7	A	RBT	AM	6.4	A	No
			PM	5.4	A		PM	19.4	C	No
46	Coast Highway & West Street	SSSC	AM	9.6	A	RBT	AM	4.9	A	No
			PM	11.2	B		PM	7.3	A	No
47	Coast Highway & Kelly Street	SSSC	AM	10.0	B	RBT	AM	5.6	A	No
			PM	12.7	B		PM	10.2	B	No

Intersection		Future Conditions without Project				Future Conditions + Project				Impact
		Traffic Control	Peak Hour	Delay (s)	LOS	Traffic Control	Peak Hour	Delay (s)	LOS	
Caltrans Intersections										
48	Harbor/Vandergrift Blvd & I-5 NB On-Ramp/San Rafael Drive	Signalized	AM	15.0	B	Signalized	AM	16.6	B	No
			PM	37.4	D		PM	45.6	D	No
49	SR 76 & I-5 SB On-Ramp	Signalized	AM	4.8	A	Signalized	AM	4.9	A	No
			PM	4.4	A		PM	4.7	A	No
50	SR 76 & I-5 NB On-/Off-Ramp	Signalized	AM	17.1	B	Signalized	AM	18.4	B	No
			PM	27.3	C		PM	30.9	C	No
51	Mission Ave & I-5 SB Off-Ramp	Signalized	AM	16.3	B	Signalized	AM	17.2	B	No
			PM	23.5	C		PM	23.1	C	No
52	Oceanside - I-5 SB On-/Off-Ramp	Signalized	AM	28.3	C	Signalized	**AM**	**38.2**	**D**	**Yes**
			PM	34.9	C		**PM**	**46.0**	**D**	**Yes**
53	Oceanside & I-5 NB On-/Off-Ramp	Signalized	AM	35.7	D	Signalized	AM	36.4	D	No
			PM	42.8	D		PM	47.3	D	No
54	California & I-5 NB On-Ramp	AWSC	AM	8.3	A	AWSC	AM	8.0	A	No
			PM	8.2	A		PM	8.1	A	No
55	Cassidy & I-5 SB On-/Off-Ramp	SSSC	AM	9.3	A	SSSC	AM	9.3	A	No
			PM	9.5	A		PM	9.5	A	No
56	Vista Way - I-5 SB On-/Off Ramp	Signalized	AM	25.8	C	Signalized	AM	32.7	C	No
			PM	88	F		**PM**	**89.9**	**F**	**Yes**

Notes:
A. Delay is expressed as an average seconds of delay per vehicle
B. LOS – Level of Service
C. AWSC – All-way stop control intersection
D. SSSC – Side-street stop control intersection
E. OVF – Overflow, Synchro is unable to calculate a level of delay
F. RBT – Roundabout
G. The minimum acceptable LOS is "D" for intersections 1-47
H. For intersections 48 through 56, Caltrans has established significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant.

SOURCE: IBI 2018.

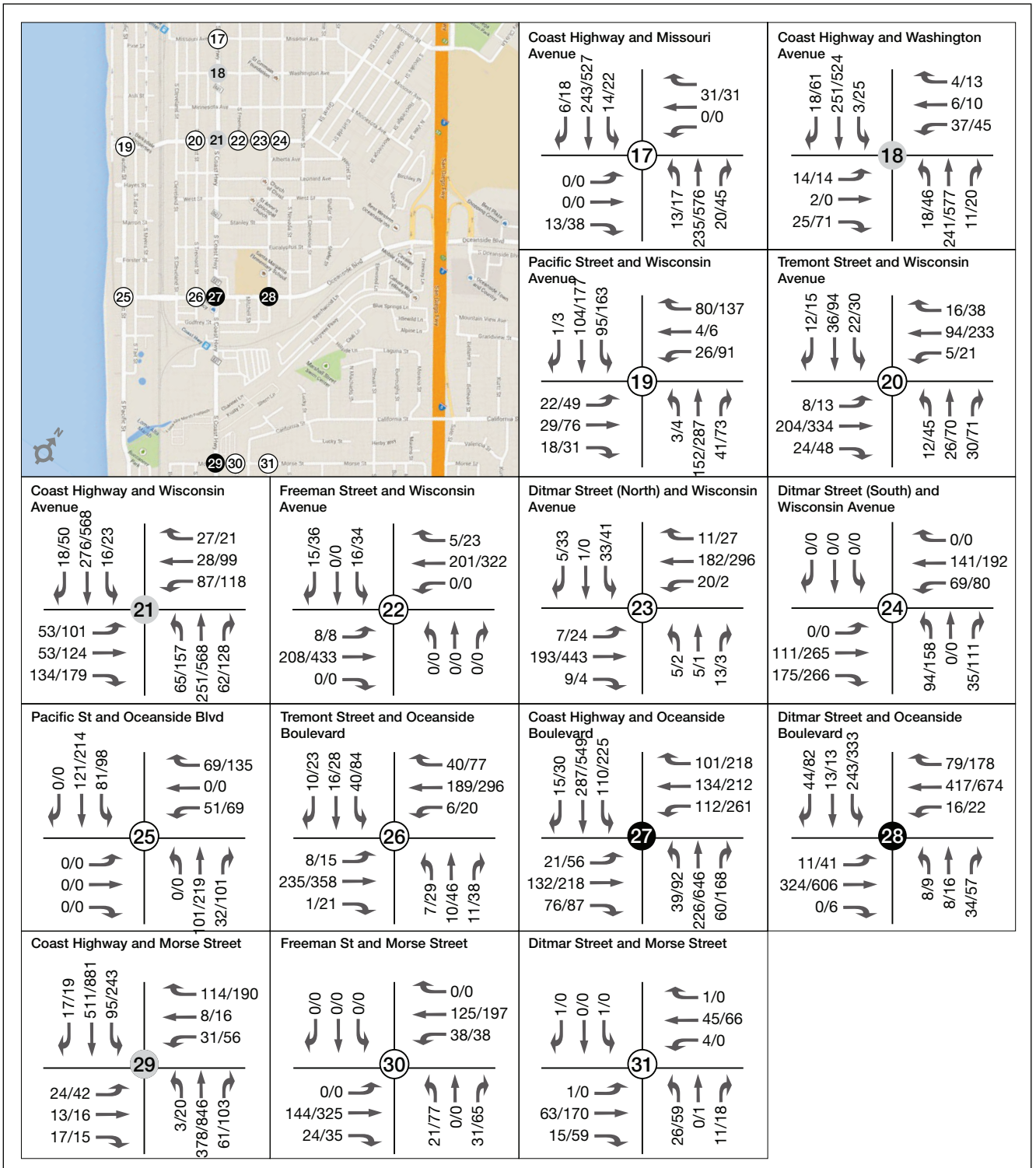


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-5a

Future Conditions + Project Peak Hour Volumes – AM & PM

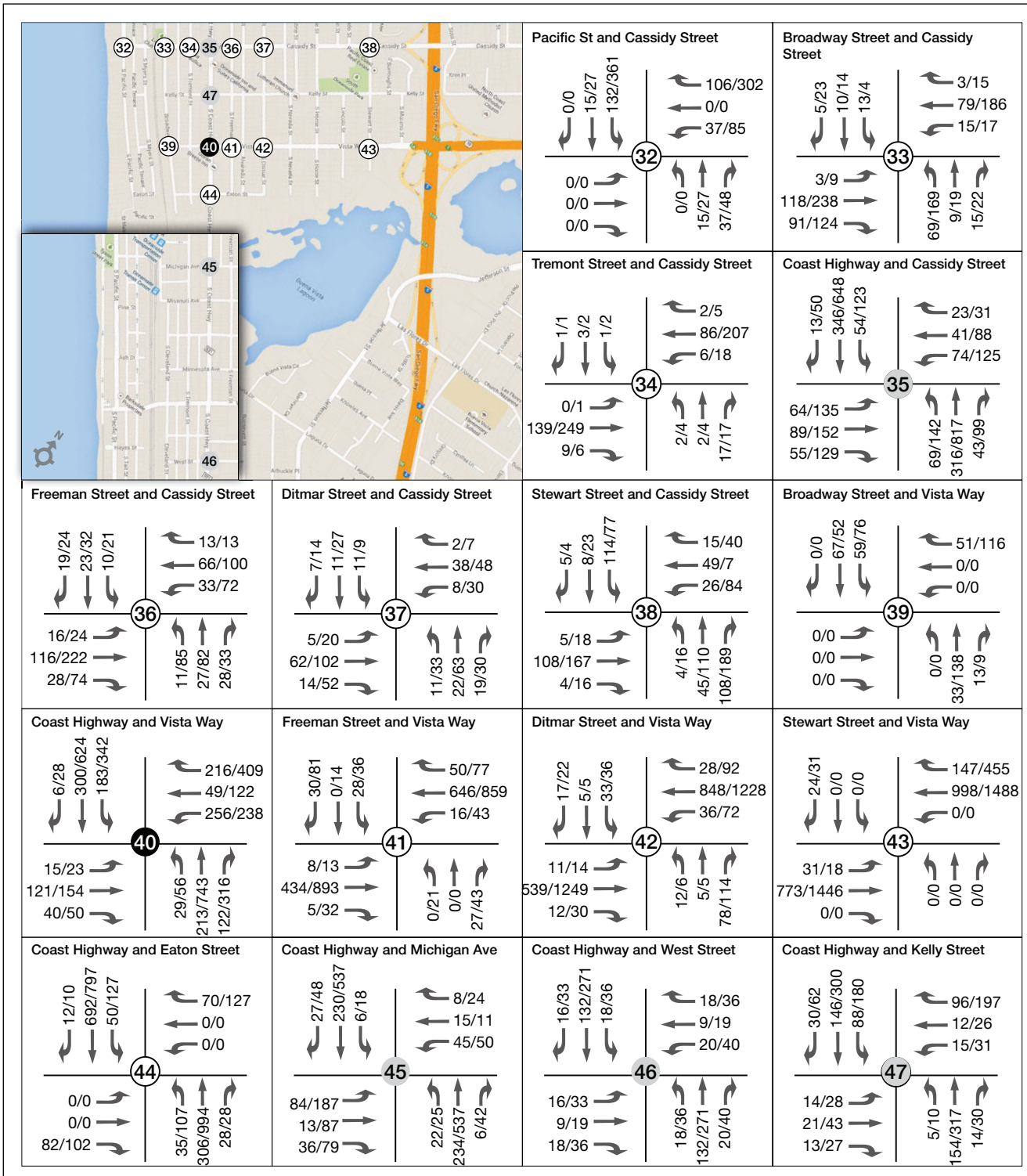


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-5b

Future Conditions + Project Peak Hour Volumes – AM & PM

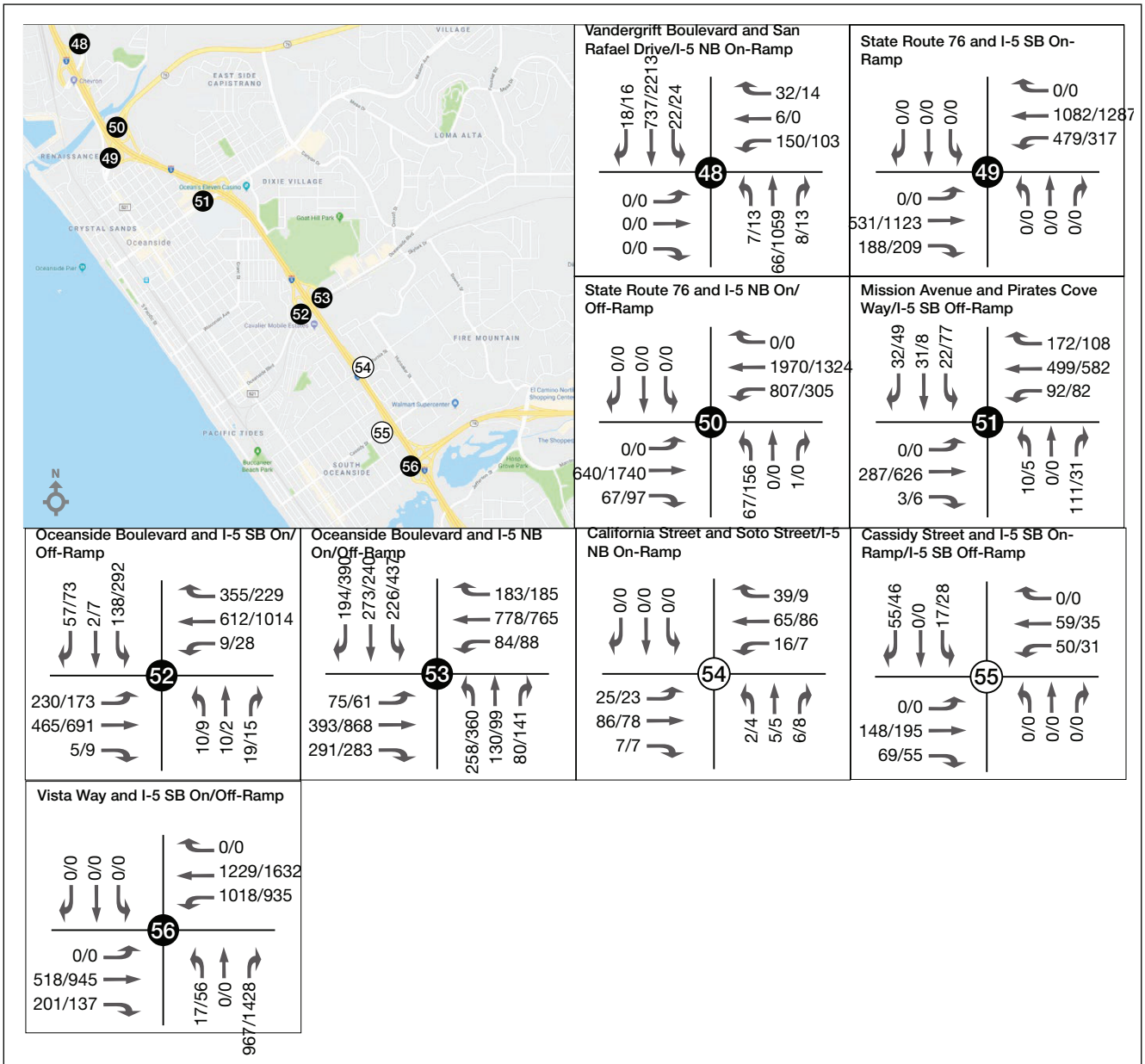


SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-5c

Future Conditions + Project Peak Hour Volumes – AM & PM



SOURCE: IBI Group, 2018

City of Oceanside Coast Highway Corridor Study. 130217

Figure 3.14-5d

Future Conditions + Project Peak Hour Volumes – AM & PM

As shown in Table 3.14-6, 46 of the 56 study intersections would operate at an acceptable LOS with implementation of the proposed project in the Future Conditions + Project scenario. The following ten study intersections would operate deficiently based on the applicable threshold stated above under the Future Conditions + Project scenario.

4. Coast Highway & Surfrider Way – LOS F during PM peak-hours
6. Coast Highway & Pier View Way – LOS E during PM peak-hours
15. Seagaze Street & Ditmar Street – LOS E during PM peak-hours
21. Coast Highway & Wisconsin Boulevard – LOS F during PM peak-hours
27. Coast Highway & Oceanside Boulevard – LOS F during PM peak-hours
29. Coast Highway & Morse Street – LOS F during PM peak-hours
35. Coast Highway & Cassidy Street – LOS F during PM peak-hours
42. Vista Way & Ditmar Street – LOS F during PM peak-hours
52. Oceanside Boulevard & I-5 Southbound On-/Off-Ramps – LOS D during AM and PM peak-hours
56. Vista Way & I-5 Southbound On-/Off-Ramps – LOS F during PM peak-hours

Roadway Segment Analysis

A roadway segment analysis, consistent with the City of Oceanside's Traffic Study Guidelines, is provided in the Appendix A of the TIA (located in Appendix G of this EIR). The roadway segment analysis includes analysis of existing and forecasted Average Daily Traffic (ADT) traffic volumes for various road segments located throughout the traffic study area. A peak-hour roadway segment LOS analysis was also completed for the same roadway segment locations. The City's Circulation Element requires that if a roadway is calculated to operate at LOS E on an average daily basis, then an arterial peak-hour analysis should be performed following the most recent version of the HCM methodology. The peak-hour roadway segment analysis, together with the daily analysis, was completed to satisfy this requirement.

The roadway segment analysis did identify segments of Coast Highway that are forecasted to operate at LOS E or F on an average daily basis in the Future (2035) + Project conditions. In these cases, the City requires that projects implement mitigation measures intended to enhance traffic operations and progression through the corridor during the peak traffic hours. These measures typically include, but are not limited to, installation of roundabouts, traffic signal timing or coordination enhancements, and minimizing conflicting traffic movements. These measures are all part of the base Coast Highway Corridor project, which includes the installation of roundabouts throughout the corridor, specifically to enhance traffic flow, as well as elimination of traffic signals and the construction of a raised median in several sections of the roadway. These project elements are consistent with the City's Circulation Element LOS analysis methodology used to improve peak-hour traffic flows along roadway segments. With the implementation of these project elements, LOS is projected to be acceptable on all study road segments during the peak-hour periods.

Vehicle Miles Traveled Analysis

Senate Bill 743 (SB 743) was approved on September 27, 2013 by Governor Brown. SB 743 requires public agencies in the State of California to change how transportation impacts are assessed under CEQA and identified vehicle miles traveled (VMT) as the primary metric for determining transportation impacts for new development projects. Because new metrics and guidelines in response to SB 743 have not yet been adopted by the state or by the City of Oceanside, the VMT analysis in this report is presented for reference purposes only. The traditional intersection LOS analysis already presented remains the current metric used by the City of Oceanside to determine transportation impacts under CEQA.

The Governor's Office of Planning and Research (OPR) has provided a preliminary recommendation that new development projects be subject to a threshold of generating VMT per capita or VMT per employee 15 percent below that of existing development. This is consistent with state goals regarding reductions in VMT. Local jurisdictions have the option of adopting more stringent standards for VMT reduction; however, as previously stated, the City of Oceanside has not yet adopted a VMT standard.

This informational VMT analysis used the 15 percent reduction from existing development threshold, as recommended by OPR. The project proposes changes to both the land uses and transportation system within the project area. The land use changes that would be anticipated to occur with implementation of the future project with adoption of the Incentive District could result in development levels above those currently forecasted for the corridor by SANDAG in the regional growth forecast. However, the projected growth beyond the current SANDAG model forecast that could occur under the incentives provided by the Incentive District is consistent with the City's existing General Plan. Importantly, the type of development that is being proposed and incentivized by the Incentive District is consistent with SANDAG's smart growth principles, in that the development would provide a mix of uses that help to reduce reliance on automobile trips, reduce VMT, and promote trips using transit and active transportation modes. Further, the Complete Streets improvements proposed to Coast Highway, including the reduction of the number of automobile traffic lanes, addition of bicycle lanes, and improvement of the active transportation environment, would all contribute to potentially reducing VMT within the Coast Highway corridor.

The VMT analysis was conducted using the SANDAG regional travel demand model, which considers a variety of factors related to the land use and transportation condition to determine mode of travel choice and VMT. The VMT forecasts used in this analysis were developed for the Existing Conditions, Future Conditions without Project, and Future Conditions + Project scenarios to assess the impact of the potential project in the TIA study area.

Table 3.14-7 summarizes the per capita VMT forecasts generated using the SANDAG model. When comparing the two future scenarios at a per capita level (population), the Future Conditions + Project scenario generates a lower VMT per capita by approximately 10 percent when compared to the baseline Future Conditions without Project condition. This result is expected as the project seeks to promote smart growth with strategies such as encouraging and emphasizing multi-modal transportation to increase access and mobility.

The forecasted 4 percent reduction in VMT between the Existing (Model Base Year, 2008) and the Future Conditions + Project scenario does fall short of the 15 percent reduction target identified in the OPR guidelines. However, the Future Conditions + Project scenario does help to substantially reduce VMT from the 2008 base year condition and in particular the Future Conditions without Project scenario. Per the draft OPR guidelines, mitigation measures to further reduce project-generated VMT would be focused on strategies that would further reduce or eliminate automobile trips. These strategies could include parking demand management, transportation demand management (promotion of transit use, carpool incentives, etc.), and further improvements to the roadway to promote travel by bicycling and walking.

TABLE 3.14-7
VEHICLE MILES TRAVELED PER CAPITA FORECASTS

Scenario	Forecast Daily VMT per Capita	Percentage Change from Existing (Year 2008)
Year 2008 (Model Base Year)	6.56	n/a
Year 2035 Future No Project	7.02	+7.0%
Year 2035 Future Conditions + Project	6.33	-3.5%

NOTE: Year 2008 base scenario includes the entire SANDAG region.

SOURCE: SANDAG – Series 12 Regional Growth Forecasts; IBI 2018.

Mitigation Measures:

The following mitigation measures have been identified for the Existing Conditions + Project and Future Conditions + Project scenarios. To reiterate, the City has established a minimum acceptable LOS of LOS D for intersections during peak-hour operations (i.e., LOS E or LOS F are unacceptable service levels), which applies to intersections 1 through 47. For intersections 48 through 56, Caltrans has established significance thresholds for intersections during the peak hour to consider a change from LOS C to LOS D or worse as a significant impact. However, if conditions without the project are LOS D and conditions do not degrade to a lower LOS with the project, Caltrans does not consider the project's contribution to be significant.

Existing Conditions + Project Scenario

MM Complete Streets TR-1: In order to mitigate the deficient LOS at the two study area intersections under the Existing Conditions + Project scenario, the City shall implement the following measures to improve intersection operations to an acceptable LOS. The City shall include the project modifications in the Complete Streets construction plans or completed prior to the finalization of the construction plans. The improvements shall be completed either prior to or concurrent with the Complete Streets improvements.

The specific measures for the two degraded study intersections in the Existing Conditions + Project scenario are as follows:

	Location	Mitigation Measure	Additional Comments	Mitigated Conditions		Reduced to Less than Significant
				Delay (sec)	LOS	
27	Coast Hwy & Oceanside Blvd	Maintain Existing Traffic Signal	Merging of two lanes into one lane would occur north of intersection before Wisconsin Avenue	41.2	D	**Yes**[1]
35	Coast Hwy & Cassidy St	Maintain Existing Signal	No other adjustments required	19.2	B	**Yes**

Note:
[1] Since Intersection 27 is in the City's jurisdiction, LOS D is considered an acceptable LOS.

SOURCE: IBI 2018

Future Conditions + Project Scenario

MM Complete Streets TR-2: In order to mitigate the deficient LOS at the seven degraded study area intersections predicted under the Future Conditions + Project scenario, the City shall implement the following measures to improve intersection operations to an acceptable LOS. The City shall include the project modifications in the Complete Streets construction plans prior to the finalization of the construction plans. The improvements shall be completed either prior to or concurrent with the Complete Streets improvements. The nine mitigation measures for the eight degraded study intersections in the Future Conditions+ Project scenario are in the following summary table. The Oceanside Boulevard and I-5 SB On-/Off-Ramps intersection has two specific measures to address both the AM and PM peak hours.

	Location	Mitigation Measure	Additional Comments	Mitigated Conditions		Reduced to Less than Significant
				Delay (sec)	LOS	
4	Coast Hwy & Surfrider Way	Maintain Existing Traffic Signal	None	19.6	B	Yes
6	Coast Hwy & Pier View Way	Maintain Existing Traffic Signal	None	8.7	A	Yes
15	Seagaze St & Ditmar St	Convert AWSC to Traffic Signal	None	13.2	B	Yes
27	Coast Hwy & Oceanside Blvd	Maintain Existing Traffic Signal	None	47.4	D	Yes
29	Coast Hwy & Morse St	Maintain existing Traffic Signal	None	25.9	C	Yes

	Location	Mitigation Measure	Additional Comments	Mitigated Conditions		Reduced to Less than Significant
				Delay (sec)	LOS	
35	Coast Hwy & Cassidy Street	Maintain existing Traffic Signal	Implementation of this mitigation measure won't fully mitigate the project's impacts to this intersection	66.4	E	No
42	Vista Way & Ditmar St	Convert SSSC to Traffic Signal	None	18.3	B	Yes
52	Oceanside Blvd & I-5 SB On-/Off-Ramps (AM Peak-Hour)	Southbound configuration will include two left turn lanes and a shared thru-right lane with a storage length of 100 feet	None	33.9	C	Yes
52	Oceanside Blvd & I-5 SB On-/Off-Ramps (PM Peak-Hour)	Southbound configuration will include two left turn lanes and a shared thru-right lane with a storage length of 100 feet	Implementation of this mitigation measure won't fully mitigate the project's impacts to this intersection	44.2	D	No[1]

Note:
[1] Under the Future Conditions without Project scenario, Intersection 52 (PM Peak-Hour) would operate at LOS C. Under the Future Conditions + Project scenario, this intersection would be degraded to LOS D, which is considered a significant impact under Caltrans guidelines. While the mitigation measure would reduce delay by 1.8 seconds, this intersection would still operate at LOS D and remain deficient.

SOURCE: IBI 2018

Significance Determination: Implementation of MM Complete Streets TR-1 would improve operations at the two degraded intersections under the City's jurisdiction to an acceptable LOS in the Existing Conditions + Project Scenario.

Implementation of MM Complete Streets TR-2 would improve operations at seven of the ten study intersections to an acceptable LOS. Project impacts to these seven study intersections would be less than significant with mitigation incorporated under the Future Conditions + Project scenario. Although there are feasible mitigation measures for the following two intersections, implementation of the mitigation measures would not fully mitigate the impact of the project to these two intersections:

35. Coast Hwy & Cassidy St
52. Oceanside Boulevard & I-5 Southbound On-/Off-Ramps (PM peak-hour)

Therefore, even with incorporation of mitigation, the project's impact to these intersections would still be significant and unavoidable in the Future Conditions + Project scenario. In addition, there are no feasible mitigation measures that would reduce project impacts to a less than significant level at the following two intersections:

21. Coast Highway & Wisconsin Avenue
56. Vista Way & I-5 Southbound On-/Off-Ramps

In order to improve impacts to Coast Highway and Cassidy Street (Intersection 35) to a better operating condition than under the Future Conditions + Project scenario, this intersection would need to maintain the existing traffic signal. However, doing so would disrupt the flow of traffic along Coast Highway due to the roundabout north of the intersection at Morse Street and immediately south of the intersection at Kelly Street. Even with maintaining the traffic signal, LOS would not be improved to an acceptable level. Furthermore, a signalized intersection is also not a viable solution as this intersection is integral to the continuity of the Complete Streets improvements throughout the corridor. For these reasons, project impacts to the intersection of Coast Highway and Cassidy Street would remain significant and unavoidable under the Future Conditions + Project scenario.

In order to improve impacts to Coast Highway and Wisconsin Avenue (Intersection 21) to an operating condition that is less than significant under the Future Conditions + Project scenario, the capacity of the single-lane roundabout would need to be increased to a two-lane roundabout. However, the mid-corridor intersection at Coast Highway and Wisconsin Avenue has limited right-of-way, which prevents the installation of a two-lane roundabout. Further, a signalized intersection is also not a viable solution as this intersection is integral to the continuity of the Complete Streets improvements throughout the corridor. For these reasons, project impacts to the intersection of Coast Highway and Wisconsin Avenue would remain significant and unavoidable under the Future Conditions + Project scenario.

In order to improve impacts to Oceanside Boulevard and I-5 Southbound On-/Off-Ramps (PM Peak-Hour) (Intersection 52) to an operating condition that is less than significant under the Future Conditions + Project scenario, lane modifications would be required to construct new through traffic lanes on Oceanside Boulevard at this location. This type of improvement was determined to be infeasible due to the proximity of the roadway to the adjacent Sprinter rail tracks to the south and the proximity of the intersection to the I-5 overpass above Oceanside Boulevard. The roadway right-of-way below the freeway overpass is very constrained and would not accommodate roadway widening. While the intersection is forecast to operate at an unacceptable level of service per Caltrans guidelines, the intersection conditions would not cause significant queuing of vehicles on the southbound off-ramp and would not impact mainline traffic conditions on I-5. For these reasons, project impacts to the intersection of Oceanside Boulevard and I-5 Southbound On-/Off-Ramps (PM Peak-Hour) would remain significant and unavoidable under the Future Conditions + Project scenario.

In order to improve impacts to Vista Way and I-5 Southbound On-/Off-Ramps (Intersection 56) to an operating condition that is less than significant under the Future Conditions + Project scenario, lane modifications would be required to construct new through traffic lanes in either the westbound or eastbound directions on Vista Way/SR 78. The addition of a westbound through lane at this location was determined to be infeasible due to the limited right-of-way available on Vista Way west of the intersection. Furthermore, with the recent road diet installed by the City along Vista Way east of this intersection, lane modifications would be inconsistent with the vision and goals of the City. Moreover, the addition of an eastbound through lane was also found to be infeasible. The configuration of the traffic lanes and bridge to the east of the intersection is not compatible with three eastbound through lanes on Vista Way. Caltrans and SANDAG have

plans to reconfigure the I-5/SR 78/Vista Way interchange in the future, where the proposed reconfiguration would address the significant traffic impact identified for the intersection at Vista Way and I-5 Southbound On-/Off-Ramp. However, while this is currently in Caltrans and SANDAG's long-term plans, funding is not guaranteed with enough certainty to include the improvements in a CEQA-required future analysis scenario. Therefore, project impacts to the intersection of Vista Way and I-5 Southbound On-/Off-Ramps would remain significant and unavoidable under the Future Conditions + Project scenario.

Issue 2: Would implementation of the project result in a change in air traffic pattern, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Oceanside Municipal Airport is located approximately 2 miles east of the project area. According to the Oceanside Municipal Airport Land Use Compatibility Plan, a small portion of the northern end of the project area is located within "Review Area 2" and is therefore subject to airspace protection, notification of overflight, and limits to height of structures; however, the project area is not within specific safety zones subject to precise compatible development guidelines, including those that apply to traffic patterns. Further, future development within the Incentive District area is not located within Review Area 2, and the project does not propose new development or redevelopment within the Oceanside Municipal Airport Influence Area. Therefore, the project would not affect traffic patterns at the Oceanside Municipal Airport and impacts would be less than significant.

Mitigation Measure: No mitigation measures are required.

Significance Determination: Less than significant

Issue 3: Would implementation of the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As previously discussed in Chapter 2, Project Description, the Complete Streets improvements include the reconfiguration of Coast Highway from four lanes to two lanes along with 12 roundabout intersections, mid-block crosswalks, continuous bike lanes, and streetscaping. Concern was raised at the public scoping meeting (June 23, 2016) about the safety of roundabouts for drivers and pedestrians, especially blind and visually impaired pedestrians. The proposed intersection roundabouts would be designed and constructed to the applicable City roadway and circulation standards and to the requirements of the Americans with Disabilities Act (ADA). The roundabouts would be designed to allow for semi-trucks, buses, recreational vehicles, and other large vehicles to safely travel through the intersection. While drivers could initially be unfamiliar with how to drive through roundabouts, drivers' comfort with and knowledge of roundabout operations would improve over time with the continued use of the roadway facilities.

Additionally, the Complete Streets improvements are intended to increase pedestrian accessibility and safety within the Coast Highway corridor. The proposed intersection roundabouts would reduce vehicle speeds as well as create a more free-flowing circulation system. In addition to the intersection roundabouts, the mid-block crosswalks and traffic calming measures would further reduce vehicle speeds and improve pedestrian safety within the Coast Highway corridor. While the proposed traffic calming and pedestrian safety measures are conceptual at this time, such measures could include, but are not limited to, flashing lights and signs that indicate when pedestrians are in the mid-block crosswalks, reducing speeds to 15 miles per hour for vehicles entering the roundabouts, and incorporating additional speed limit signage throughout the corridor.

To address the public concern for safety measures specific to blind and visually impaired pedestrians, an accessibility study was prepared to identify additional design features that the City could incorporate into the Complete Streets improvements. The National Cooperative Highway Research Program (NCHRP) Report 674, Crossing Solutions at Roundabouts and Channelized Turn Lanes for Pedestrians with Vision Disabilities, addresses issues with crossing safety at roundabouts for blind and visually impaired pedestrians (NCHRP 2011). The NCHRP Report recommended that the following design features be considered in the roundabout design process to help improve the safety for blind and visually impaired pedestrians:

- Design the roundabout to ensure that vehicles entering the roundabout are restricted to a maximum travel speed of 15 miles per hour.
- Incorporate an audible surface treatment such as a metal plate or rumble strip in the roadway pavement that automobiles would travel over prior to approaching the pedestrian crossing. This feature would provide pedestrians with an audible cue about an approaching vehicle.
- Incorporate a pushbutton-activated crossing warning system such as a rectangular rapid flashing beacon at pedestrian crossings that pedestrians would be able to activate to alert drivers to their presence.
- Provide raised crosswalks that improve the visibility of pedestrians and force drivers to reduce their travel speed when entering the roundabout.

While the design of the Complete Streets improvements, including the roundabouts, is preliminary, the City of Oceanside would evaluate and consider the additional design features identified above during final design stages of the project. Therefore, implementation of the Complete Streets improvements would not substantially increase hazards through a design feature.

The Future with Project land use condition, with adoption of the Incentive District, would allow for an increase in residential, office, hotel, and retail/restaurant uses within the corridor. While the project area is primarily zoned for commercial uses, the potential increase of residential, office, hotel, and retail/restaurant uses would be consistent with surrounding land uses within the city. Therefore, the Incentive District would not create incompatible uses within the project area and city overall.

Mitigation Measure: No mitigation measures are required.

Significance Determination: Less than significant

Issue 4: Would implementation of the project result in inadequate emergency access or impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of Oceanside General Plan Public Safety Element includes evacuation routes for people who are forced from their homes during a disaster. The main through streets and highways within the City would be the primary relocation routes, and schools would serve as refuge centers capable of providing food and shelter (City of Oceanside 2002). Coast Highway, including within the project area, is a designated evacuation route for the city.

The project would be phased so all construction activities would not occur simultaneously throughout the corridor. However, construction of the Complete Streets improvements would require temporary interference along Coast Highway and the 12 cross-streets where the intersection roundabouts are proposed. Temporary interferences would include partial lane closures, construction vehicles and equipment entering and exiting the project area, and pedestrian and/or bicycle lane closures. The partial lane and intersection closures along Coast Highway and proposed intersections could potentially result in temporary impacts to emergency access. There is the chance that temporary emergency access impacts could occur during an evacuation. Thus, a potentially significant impact associated with inadequate emergency access could occur during construction of the complete street improvements.

The Oceanside Fire Department would continue to be part of the design process of the Complete Streets improvements, ensuring that the lane reduction and new roundabouts would accommodate large fire engines and response times for emergency services. Coast Highway's reconfiguration would allow for heavy vehicle radii for turning and U-turns. The roundabouts would be constructed to allow access for semi-trucks, waste management trucks, and firetrucks. In addition, Coast Highway's center median would be constructed with low curbs, approximately two feet wide, to allow left turning access to fire trucks and police mid-block. Therefore, impacts associated with adequate emergency access during operation of the Complete Streets improvements would be less than significant.

Future development and redevelopment projects which may occur under the Incentive District could include construction and/or operational activities that could result in temporary interferences along the Coast Highway corridor or surrounding roadways. Temporary interferences could include, but are not limited to, temporary lane closures during periods of loading and/or unloading of trucks, construction vehicles and equipment entering and exiting the project sites, and other construction activities, such as trenching for utility connections, near roadways within the project area. Similar to the Complete Streets improvements, future development and redevelopment under the Incentive District could potentially result in temporary

interferences and impacts to emergency access, including during an evacuation, creating a potentially significant impact.

Mitigation Measure:

MM Complete Streets TR-3: Prior to the start of construction of the Complete Streets improvements, the City shall require the construction contractor to prepare a Traffic Control Plan. The Traffic Control Plan will show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during construction to guide motorists safely through the construction area and allow for adequate access and circulation to the satisfaction of the City. The Traffic Control Plan will be prepared in accordance with the City's traffic control guidelines and will be prepared to ensure that access will be maintained to individual properties, and that emergency access will not be restricted. The Traffic Control Plan will ensure that congestion and traffic delay are not substantially increased as a result of the construction activities. In addition, the City shall provide written notice at least 2 weeks prior to the start of construction to owners/occupants along streets to be affected during construction.

During construction, the City will maintain continuous vehicular and pedestrian access to residential driveways from the public street to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access will be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the City shall notify the owner or occupant of the closure of the driveway at least 5 working days prior to the closure. The Traffic Control Plan shall include provisions to ensure that the construction of the Complete Streets improvements does not interfere unnecessarily with the work of other agencies such as emergency service providers, mail delivery, school buses, and municipal waste services.

MM Incentive District TR-1: Prior to submittal of grading plans for development and redevelopment projects under the Incentive District that would result in temporary interferences along roadways within the project area, project applicants and/or private developers shall prepare a Traffic Control Plan for approval by the City Transportation Division. The Traffic Control Plan will show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during construction to guide motorists safely through the construction area and allow for adequate access and circulation to the satisfaction of the City. The Traffic Control Plan will be prepared in accordance with the City's traffic control guidelines and to ensure that access will be maintained to individual properties, and that emergency access will not be restricted. The Traffic Control Plan will ensure that congestion and traffic delay are not substantially increased as a result of the construction activities. In addition, the project applicants and/or private developers shall provide written notice at least 2 weeks prior to the start of construction to owners/occupants along streets to be affected during construction.

During construction, continuous vehicular and pedestrian access to residential driveways from the public street to the private property line will be maintained, except where necessary construction precludes such continuous access for reasonable periods of time. Access will be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the project applicants and/or private developers shall notify the owner or occupant of the closure of the driveway at least 5 working days prior to the closure. The Traffic Control Plan shall include provisions to ensure that the

construction does not interfere unnecessarily with the work of other agencies such as emergency service providers, mail delivery, school buses, and municipal waste services.

Significance Determination: Less than significant with mitigation

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Issue 5: Would implementation of the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The type of development and redevelopment proposed and incentivised under the Incentive District would be consistent with SANDAG's smart growth principles in that the development would provide a mix of land uses that would help to reduce reliance on automobile trips, reduce VMT, and promote trips using transit and active transportation modes. Additionally, the Complete Streets improvements include the addition of continuous bicycle lanes throughout the project area and improvement of the active transportation environment to increase the accessibility and efficiency of alternative transportation within the project area. Since the Complete Streets improvements would be established through restriping of the roadway to create a two-lane highway with larger shoulder areas, approximately 16 feet wide, access to bus stops and pedestrian safety would be improved, as the project would separate these alternative transportation facilities away from the vehicle lanes. Furthermore, restriping efforts would clearly mark parking spaces and bus stops so bus service would not be impacted. Implementation of the proposed project would provide residential, retail, and commercial uses along Coast Highway to create a walkable, pedestrian-friendly corridor. Mid-block crosswalks would be constructed and painted to allow for safe crossing points across Coast Highway. The proposed intersection roundabouts would reduce vehicle speeds throughout the corridor to further increase the safety of pedestrians and cyclists. Further, the proposed project would not conflict with any existing transit stops or transit locations. Therefore, the proposed project would result in less than significant impacts associated with alternative transportation and pedestrian facilities.

Mitigation Measure: No mitigation measures are required.

Significance Determination: Less than significant
